



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 60
Shangri La Hotel, Chiang Mai, Thailand; 2012-10-22/27

SOURCE: V.S. Umamaheswaran, Recording Secretary, and Mike Ksar, 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: 2013-05-31

DISTRIBUTION: SC 2/WG 2 members and Liaison organizations

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International Organization for Standardization
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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 N4353
2013-05-23

Title:	Unconfirmed minutes of WG 2 meeting 60 Shangri La Hotel, Chiang Mai, Thailand; 2012-10-22/27
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:

[4315](#) 1st Call for meeting 60 in Chiang Mai, Thailand; Mike Ksar; 2012-08-10

The meeting started at 10:00h.

Mr. Michel Suignard: Our convener Mr. Mike Ksar could not be here; he could not travel for personal reasons. I will be acting as the convener for this meeting, if there are no objections. I will let our host Mr. Martin Hosken introduce the logistics etc.

Mr. Martin Hosken: Welcome to Thailand. As you came in you were asked to sign for some events we have organized for Wednesday. The associated information was sent as part of the updated logistics document. Please sign up for the events. There are plenty of places to eat around the hotel. There is a night market nearby, which is a centre of tourism for Chiang Mai. You are in a good location. Self-serve coffee is provided. A printer is available in the room; just walk up to it and print your document. Wireless network is available - cookies have to be turned on in your browser. Payap University staff members are available to assist you. The hotel staff can also assist you.

Mr. Michel Suignard: Thank you. For document management, please send a copy to Mr. Mike Ksar as well as to myself. I will put them on the agenda. So far we have all the documents.

1.1 Roll Call

Input document:

[4101](#) Experts List – post Helsinki meeting 58; Ksar; 2012-02-02

Dr. Umamaheswaran has printed the experts list. Please sign in and update your information and suggestions for any other deletions or additions. Also, give your business cards to Dr. Umamaheswaran to ensure your information is correctly recorded in the attendance list.

The following **23** attendees representing **8** national bodies, and **3** liaison organizations were present at different times during the meeting.

Name	Representing	Affiliation
Phawinee PINTONG	.Host	Linguistic Institute, Payap University
Wipanee CHUAMSAKUL	.Host	Linguistic Institute, Payap University
LU Qin	.IRG Rapporteur	Hong Kong Polytechnic University
Yoshiki MIKAMI	.SC2 Chair	Nagaoka University of Technology
Toshiko KIMURA	.SC2 Secretary	IPSJ/ITSCJ
Bear S. TSENG	.TCA – Liaison	Academia Sinica
Lin-Mei WEI	.TCA – Liaison	Chinese Foundation for Digitization Technology
Alain LABONTÉ	Canada; Editor 14651; SC35 - Liaison	Independent
V. S. (Uma) UMAMAHESWARAN	Canada; Recording Secretary	IBM Canada Limited
CHEN Zhuang	China	Chinese Electronics Standardization Institute
ZHANG Yan	China	Tsing Hua University, Beijing

Name	Representing	Affiliation
ZHAO Liming	China	Tsing Hua University, Beijing
Tero AALTO	Finland	CSC-IT Center for Science
Erich FICKLE	Invited Expert	Payap University, Chiang Mai, Thailand
Tim EVES	Invited Expert	SIL International, Thailand
Michael EVERSON	Ireland; Contributing Editor	Evertime
Tetsuji ORITA	Japan	IBM Japan Limited
Harsha WIJAYAWARDHANA	Sri Lanka	Sri Lanka Information & Communication Technology Agency
Martin HOSKEN	UK; Host (Thailand)	SIL International, Thailand
Ken WHISTLER	USA; Contributing Editor	SAP America, Inc.
Michel SUIGNARD	USA; Project Editor; Acting Meeting Convener	Independent
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. Ken Whistler, Mr. Michel Suignard and Ms. Deborah Anderson volunteered to assist Dr. V.S. Umamaheswaran with the preparation and review of the draft meeting resolutions.

2 Approval of the agenda

Input document:

[4328](#) Draft Agenda – meeting 60; Mike Ksar; 2012-10-17

The draft agenda in document [N4328](#) was printed out and circulated.

Mr. Michel Suignard: I have the following updates to the printed copy you have:

- Summary of voting for PDAM 2.2 should be removed from 6; it is duplicated in 7.5
- 7.4.11.2 - feedback on Sidham is moved to 9.2.5 along with contributions related to ballot
- 7.4.11.1 moves up to 7.4.11 – becomes FYI.
- 9.1.5 (ignore)
- 9.2.4.4 – document N4288 Rovas NB position - change the title of contribution to Rovas Working Group position
- 9.2.5 – feedback on Siddham document N4369 is new, and was posted not long ago
- 10.1 – remove document N4206; the revised contribution is document N4362 in 19.2.18 on Medieval East-Slavic musical notation.
- 10.2.16.3 new contribution onTangut - feedback from China - document N4370 is posted to WG2 site.

This is the time to identify any further changes.

The main objectives of this meeting are to address the ballot comments and progress Amendments 1 and 2. A new edition may be initiated.

We will review the meeting resolutions on Friday starting at 10:00h. The SC2 plenary will be on Friday afternoon - possibly ending by 16:00h. The OWG-Sort meets Thursday afternoon. Wednesday afternoon is reserved for trips organized by our host. We will discuss IRG related items on Wednesday morning. Other ad hoc meetings will be arranged as needed, as the meeting progresses.

Disposition: The agenda is approved as amended. It was also updated and posted to the WG 2 website as new topics or contributions were identified as the meeting progressed.

All the changes made during the meeting are included in the appropriate sections in these minutes. Some agenda items have been reorganized or renumbered. Agenda items that were not discussed have been deleted in these minutes, and any relevant documents are grouped to be carried forward. The following table of contents reflects the items that were discussed.

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3 Approval of minutes of meeting 59

Input document:

[4253](#) Meeting 59 Draft Minutes; Uma; 2012-09-12

There was no feedback on the draft minutes that were posted.

Disposition: Approved as written.

4 Review action items from previous

Input document:

[4253-AI](#) Action Items from Meeting 59 Draft Minutes; Uma; 2012-09-12

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 51, and, 53 to 56 have been either completed or dropped. Status of outstanding action items from previous meetings 52 and 57 to 59 are listed in the tables below.

4.1 Outstanding action items from meeting 52, Redmond, WA, USA, 2008-04-21/25

Item	Assigned to / action (Reference resolutions in document N3454, and unconfirmed minutes in document N3453 for meeting 52 - with any corrections noted in section 3 in the minutes of meeting 53 in document N3553)	Status
AI-52-7	Ireland (Mr. Michael Everson)	
	To take note of and act upon the following items:	
a.	M52.5 (Principles for Dandas): WG2 adopts the principles guiding the encoding of Dandas in Brahmic scripts from document N3457, and instructs its ad hoc group on P&P to incorporate these into its document on Principles and Procedures (along with the additions from resolution M52.4 above). WG2 further invites the Irish national body to investigate and report on the current practice on use of currently encoded Dandas in relevant scripts towards finalizing the list of scripts and their corresponding Dandas. (Mr. Michael Everson indicated he will provide some text to include in the P&P document at meeting 58.) M53 to M59 – in progress.	In progress

4.2 Outstanding action items from meeting 57, Busan, Korea (Republic of), 2010-10-04/10

Item	Assigned to / action (Reference resolutions in document N3904, and unconfirmed minutes in document N3903 for meeting 57 – with any corrections noted in section 3 in the minutes of meeting 58 in document N4103)	Status
AI-57-8	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
b.	M57.27 (Khitan): With reference to documents N3918 and N3925 on Khitan, WG2 endorses the ad hoc report in document N3942, and invites China to submit a revised proposal addressing the feedback received to date. M58 and M59 – in progress	In progress.
c.	M57.28 (Chinese Chess symbols): With reference to document N3910 on Chinese Chess Symbols, WG2 invites China to submit a revised proposal addressing the feedback received during meeting M57 and any further national body feedback received prior to WG2 meeting M58. M58 and M59 – in progress.	Closed; supersede by later AI.

4.3 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-58-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
b.	to address the concerns in document N4075 on potential duplication and on possible use of IVS-s as method to encode z-variants, and provide feedback to WG2. M58 and M59 – in progress	In progress.
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 and M59 – in progress	In progress.
AI-58-9	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
a.	M58.31 (Chinese Chess symbols): With reference to proposal from China in document N3910, WG2 invites China to submit a revised proposal taking into consideration the feedback comments received in documents N3966 and N3992. M58 and M59 – in progress	In progress.
b.	M58.30 (Naxi Dongba pictographs): With reference to proposal from China in document N4043, WG2 endorses the ad hoc report in document N4112, and invites China to submit a revised proposal taking into consideration the recommendations in the ad hoc report. M58 and M59 – in progress.	In progress.

4.4 New action items from meeting 59, Mountain View, CA, USA, 2012-02-13/17

Item	Assigned to / action (Reference resolutions in document N4254, and unconfirmed minutes in document N4253 for meeting 59 (this document you	Status
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	are reading).	
AI-59-1	Recording Secretary - Dr. V.S. UMAmaheswaran	
a.	To finalize the document N4254 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N4254 .
b.	To finalize the document N4253 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N4253 .
AI-59-2	Convener - Mr. Mike Ksar	
	To take note of and act upon the following items:	
a.	<i>M59.21 (Roadmap snapshot):</i> WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N4186) to the WG2 web site and communicate the same to SC2 secretariat.	Completed; see document 02n4219.pdf
b.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-59-10 - items a to f - below.)	Completed.
AI-59-3	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>M59.01 (Disposition of ballot comments of PDAM 1.2):</i> WG2 accepts the disposition of PDAM 1.2 ballot comments in document N4239 . The following significant changes are noted: <ul style="list-style-type: none"> a. A78F LATIN LETTER MIDDLE DOT is moved out for processing in the next Amendment. b. 109 characters in the OLD HUNGARIAN block 10C80 to 10CFF, with unchanged block name and character names, and a revised font from document N4196, are moved out for processing in the next Amendment. c. 1F37E FORK AND KNIFE WITH BLACK PLATE is moved out for processing in the next Amendment. d. 2BF4 and 10 Arrows in the range 1F880-1F889 are deleted unifying them with other symbols e. Two combining characters FE2B COMBINING MACRON LEFT HALF BELOW and FE2C COMBINING MACRON RIGHT HALF BELOW, from document N4131, are added f. 1F678 SANS-SERIF HEAVY LOW DOUBLE COMMA QUOTATION MARK ORNAMENT is added g. 43 Wingdings and other symbols are added h. Various symbols were reordered or reassigned code positions i. Several of the Arrows were renamed j. Glyphs for several encoded Arrows in the Arrows block and in the first column in Miscellaneous Symbols and Arrows block, and some other symbols in different blocks were updated The final code positions, glyphs and names are in the charts in document N4244 .	
b.	<i>M59.02 (Progression of Amendment 1):</i> WG2 instructs its project editor to prepare and to forward the final text of Amendment 1 to the 3 rd Edition, which will include the changes arising from resolutions M59.01 above, along with the final disposition of comments, to the SC2 secretariat for a DAM ballot. The (unchanged) target starting dates are - DAM 2012-03 and FDAM 2012-11.	Completed – items a and b; see document 02n4222.pdf and zipped file 02n4223.zip .
c.	<i>M59.03 (IDS Syntax in Annex I):</i> WG2 accepts the proposal from the US national body in document N4234 to remove the deficiency and align the definition of IDS with the current practice, and instructs its project editor to modify the text in Annex I accordingly.	
d.	<i>M59.04 (Emoji variants):</i> WG2 accepts the 214 standard variants for Emoji as described in document N4182 for inclusion in the next amendment to the standard.	
e.	<i>M59.05 (Named USIs for characters for Uyghur and Chaghatay):</i> With reference to request for NUSIs from China in document N4218 and the proposed alternative NUSIs in document N4231 from SEI, WG2 accepts the proposed 9 language-neutral NUSIs from document N4231 for inclusion in the next amendment to the standard. WG2 further invites China to work with experts from the Unicode	

	Consortium in preparing a Unicode Technical Note to assist the Uyghur and Chaghatay users in implementation using the standard.	
f.	<i>M59.06 (Characters from PDAM 1.2 ballot comments for next Amendment):</i> WG2 accepts the following characters proposed in national body ballot comments, from the disposition of ballot comments in document N4239 to be encoded in the next amendment: <ul style="list-style-type: none"> - 3 characters 1F594 to1F596 from Irish comment T.6 item a - 2 characters 2B74 and 2B75 from Irish comment T.1 item c - 92 characters from US comment T.6 item c, and, - 2 characters 1F4F8 and 1F3C5 from US comment T.6 item d. 	
g.	<i>M59.07 (Psalter Pahlavi script):</i> WG2 accepts to create a new block named Psalter Pahlavi in the range 10B80 to 10BAF, and populate it with 29 characters in code positions 10B80 to 10B91, 10B99 to 10B9C, and 10BA9 to 10BAF, with their glyphs and character names as shown on page 6 in document N4040. The script is a right-to-left script.	
h.	<i>M59.08 (Mahajani script):</i> WG2 accepts to create a new block named Mahajani in the range 11150 to 1117F, and populate it with 39 characters in code positions 11150 to 11176, with their glyphs and character names as shown on page 11 in document N4126.	
i.	<i>M59.09 (Grantha script):</i> WG2 accepts to create a new block named Grantha in the range 11300 to 1137F, and populate it with 82 characters in code positions 11301 to 11303, 11305 to 1130C, 1130F to 11310, 11313 to 11328, 1132A to 11330, 11332, 11333, 11335 to 11339, 1133C to 11344, 11347, 11348, 1134B to 1134D, 11357, 1135E to 11363, 11366 to 1136C, and 11370 to 11374, with their glyphs and character names as shown on pages 4 to 8 in document N4135, and 1135D GRANTHA SIGN PLUTA with its glyph from document N4136. Some of these characters are combining marks.	
j.	<i>M59.10 (Modi script):</i> WG2 accepts to create a new block named Modi in the range 11600 to 1165F, and populate it with 79 characters in code positions 11600 to 11644, and 11650 to 11659, with their glyphs and character names as shown on pages 20 and 21 in document N4034. Some of these characters are combining marks.	
k.	<i>M59.11 (Mende script):</i> WG2 accepts to create a new block named Mende in the range 1E800 to 1E8CF, and populate it with 197 characters in code positions 1E800 to 1E8C4, with their glyphs and character names as shown on pages 7 to 11 in document N4167. Mende is a right-to-left script.	
l.	<i>M59.12 (Playing Card additions):</i> WG2 accepts to add 23 Playing Card symbols at 1F0BF, and 1F0E0 to 1F0F5, with their names and glyphs from pages 9 to 11 in document N4089.	
m.	<i>M59.13 (Myanmar Extended-B additions):</i> WG2 accepts to add 24 Myanmar Extended-B characters at A9E7 to A9FE, with their names and glyphs from pages 9 to 11 in document N3976.	
n.	<i>M59.14 (Caucasian Albanian script):</i> WG2 accepts to create a new block named Caucasian Albanian in the range 10530 to 1056F, and populate with 53 characters in code positions 10530 to 10563 and 1056F with their names and glyphs from pages 6 in document N4131 (with modified glyph for 1056F as shown in the chart in document N4245).	
o.	<i>M59.15 (Pahawh Hmong script):</i> WG2 accepts to create a new block named Pahawh Hmong in the range 16B00 to 16B8F, and populate with 126 characters in code positions 16B00 to 16B45, 16B50 to 16B59, 16B5B to 16B61, 16B63 to 16B77, and 16B7E to 16B8F, with their names and glyphs as shown in document N4245.	
p.	<i>M59.16 (Miscellaneous character additions):</i> WG2 accepts to encode the following 37 characters in the standard: <ul style="list-style-type: none"> a. 111C9 SHARADA EKAM, in the Sharada block, with its glyph from page 1 in document N4158. b. 2 combining marks in the Vedic Extensions block: 1CF8 VEDIC TONE RING ABOVE, and 1CF9 VEDIC TONE DOUBLE RING ABOVE with their glyphs from page 1 in document N4134. c. 061C ARABIC LETTER MARK (from document N4180) in the Arabic block, 	

	<p>with its glyph as a dashed box with 'ALM' inside it.</p> <p>d. 1107F BRAHMI NUMBER JOINER in the Brahmi block, with its glyph from page 2 in document N4166.</p> <p>e. 0C34 TELUGU LETTER LLLA, in the Telugu block, with its glyph from page 1 in document N4214.</p> <p>f. 2 characters in the Ancient Greek Numbers block: 1018B GREEK ONE QUARTER SIGN 1018C GREEK SINUSOID SIGN with their glyphs from page 1 in document N4194.</p> <p>g. 101A0 GREEK SYMBOL TAU RHO, in the Ancient Symbols block, with its glyph from page 1 in document N4194.</p> <p>h. 2 characters in the Cyrillic Supplement block: 0528 CYRILLIC CAPITAL LETTER EN WITH LEFT HOOK, and 0529 CYRILLIC SMALL LETTER EN WITH LEFT HOOK, with their glyphs from page 1 in document N4137.</p> <p>i. 4 characters in the Cyrillic Supplement block: 052A CYRILLIC CAPITAL LETTER DZZHE 052B CYRILLIC SMALL LETTER DZZHE 052C CYRILLIC CAPITAL LETTER DCHE 052D CYRILLIC SMALL LETTER DCHE with their glyphs from page 1 in document N4199.</p> <p>j. 2 characters in the Cyrillic Supplement block: 052E CYRILLIC CAPITAL LETTER EL WITH DESCENDER 052F CYRILLIC SMALL LETTER EL WITH DESCENDER with their glyphs from page 1 in document N4219.</p> <p>k. 4 characters in the Myanmar Extended-A block: AA7C MYANMAR SIGN TAI LAING TONE-2 AA7D MYANMER SIGN TAI LAING TONE-5 AA7E MYANMAR LETTER SHWE PALAUNG CHA AA7F MYANMAR LETTER SHWE PALAUNG SHA with their glyphs from document N3976.</p> <p>l. 8 characters in the Runic block: 16F1 RUNIC LETTER K 16F2 RUNIC LETTER SH 16F3 RUNIC LETTER OO 16F4 RUNIC LETTER FRANKS CASKET OS 16F5 RUNIC LETTER FRANKS CASKET IS 16F6 RUNIC LETTER FRANKS CASKET EH 16F7 RUNIC LETTER FRANKS CASKET AC 16F8 RUNIC LETTER FRANKS CASKET AESC with their glyphs from page 1 in document N4013.</p> <p>m. 5 characters in the Latin Extended-D block: A796 LATIN CAPITAL LETTER B WITH FLOURISH A797 LATIN SMALL LETTER B WITH FLOURISH A7AB LATIN CAPITAL LETTER REVERSED OPEN E A7AC LATIN CAPITAL LETTER SCRIPT G A7F7 LATIN EPIGRAPHIC LETTER SIDEWAYS I with their glyphs from page 1 in document N4030.</p> <p>n. A7AD LATIN CAPITAL LETTER L WITH BELT in the Latin Extended-D block with its glyph from page 1 in document N4228.</p> <p>o. 2 characters in the Kana Supplement block: 1B002 HIRAGANA LETTER SMALL KO 1B003 KATAKANA LETTER SMALL KO with their glyphs from document N3987.</p>	
<p>q.</p>	<p><i>M59.17 (Subdivision of work):</i> WG2 instructs its convener and project editor to create a subdivision proposal (document N4248) for creation of Amendment 2 to ISO/IEC 10646 3-rd edition, to incorporate characters and scripts accepted for encoding in resolutions M59.03 to M59.16 above. WG2 notes that the subdivision proposal includes provisions for including additional characters or new scripts during the ballot resolution phase towards agile processing of PDAMs and speeding up the work of WG2 between face to face meetings. The target starting dates are: PDAM 2012-03, DAM 2012-11 and FDAM 2013-07.</p>	

r.	<i>M59.18 (PDAM 2 to 3rd edition):</i> WG2 instructs its project editor to create the text of for Amendment 2 to the 3-rd edition of ISO/IEC 10646, incorporating the characters accepted for encoding per M59.17 above on subdivision of work, and send it to SC2 secretariat for a PDAM ballot. The consolidated charts are in document N4245 .	Completed – items c through r; see document 02n4224.pdf and zipped file 02n4225.zip .
s.	With reference to document N4173 - IRG Errata Report , to check for possible Source-Mapping changes that we can request IRG to review and put a solution in place.	In progress.
AI-59-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
a.	Document N4230 as feedback on the IRG P&P document, Annex on UNC-s.	Noted. To be completed in IRG 39.
b.	<i>M59.19 (Old Hanzi and IRG):</i> WG2 accepts the proposals from China, TCA and Japan, and instructs the IRG, to remove Old Hanzi related tasks from the scope of work items of the IRG, effective after IRG meeting 38, 2012-06-18/22. Mature Old Hanzi proposals, when available, can be submitted directly to WG2.	Completed; see documents N4348 and, N4357 .
AI-59-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps with the results from this meeting.	Completed; see document N4320 .
AI-59-6	Lithuanian (Mr. Algidas Krupovnickas)	
	To take note of and act upon the following items:	
a.	<i>M59.20 (Lithuanian):</i> With reference to various documents on Lithuanian, WG2 accepts the recommendation from the Lithuanian ad hoc group in document N4242 . WG2 will <i>not</i> take action to encode additional characters as was proposed in N4191 . Instead the recommendation is to continue using the defined USI sequences in the standard. WG2 invites national bodies and liaison organizations to alert their software implementers to take special care to properly process the USIs in the standard that are used to represent various characters in languages worldwide, including Lithuanian. WG2 further invites the Lithuanian national body to refer to the ad hoc report in document N4242 for details.	Noted.
AI-59-7	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
a.	<i>M59.05 (Named USIs for characters for Uyghur and Chaghatay):</i> With reference to request for NUSIs from China in document N4218 and the proposed alternative NUSIs in document N4231 from SEI, WG2 accepts the proposed 9 language-neutral NUSIs from document N4231 for inclusion in the next amendment to the standard. WG2 further invites China to work with experts from the Unicode Consortium in preparing a Unicode Technical Note to assist the Uyghur and Chaghatay users in implementation using the standard.	In progress.
AI-59-8	Unicode Liaison (Mr. Peter Constable)	
a.	<i>M59.05 (Named USIs for characters for Uyghur and Chaghatay):</i> With reference to request for NUSIs from China in document N4218 and the proposed alternative NUSIs in document N4231 from SEI, WG2 accepts the proposed 9 language-neutral NUSIs from document N4231 for inclusion in the next amendment to the standard. WG2 further invites China to work with experts from the Unicode Consortium in preparing a Unicode Technical Note to assist the Uyghur and Chaghatay users in implementation using the standard.	In progress.
AI-59-9	Liaison representative to JTC1/SC35 (Alain Labonté)	
a.	With reference to request for missing Latin letters from SC35 in document N4068 , and the associated request from German national body in document N4149 , to communicate that they have not presented the needed evidence of use of these characters in plain text.	Completed.
AI-59-10	All national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	Revised Unicode Technical Standard UTS 37 version 3.1 (SC2 N4208), which is referenced in ISO/IEC 10646 3 rd edition.	Noted.
b.	the Old Permic script proposed in document N4177 .	In PDAM 2.2.
c.	the (Old) Uyghur script proposed in document N4226 .	Noted. No feedback.

d.	the proposal using standardized variants for stabilizing CJK compatibility ideographs under normalization in document N4246 and the associated data file N4246-A.pdf , and the concerns expressed in the feedback document N4247.	Noted; see documents N4309 and N4275.
e.	the proposal for Nautical Chart Symbols in document N4221 after checking with their national or regional hydrographic organizations who would be interested.	Noted.
f.	(The following documents are being carried forward; there was no discussion on any of these at meeting 59.) N4132 - Afaka; N3928 - Ahom; N3236 - Anatolian Hieroglyphs; N4016 - Balti 'B'; N3842 - Balti scripts; N4121 - Bhaiksuki; N4147 - Code chart for Anatolian Hieroglyphs; N4140 - Dhimal; N3848 - Dhives Akuru; N4119 - Diwani Numerals Model; N4122 - Diwani Siyaq Numbers; N4179 - Early Dynastic Cuneiform characters; N4079 - English Phonotypic Alphabet (EPA); N3841 - Gondi scripts; N4123 - Indic Siyaq; N4130 - Introducing 'Khatt-i Baburi'; N4028 - Jenticha; N4018 - Khambu Rai; N4019 - Khema; N4037 - Kirat Rai; N3762 - Kpelle; N3768 - Landa; N3961 - Logographic Pau Cin Hau; N4036 - Magar Akkha; N4032 - Marchen; N4118 - Model for Numerals of the Ottoman Siyaq System; N4117 - Model for Raqm Numerals; N4160 - Mongolian Square; N4128 - Moon; N4027 - Multani; N3598 (N3705 and N3719) - Nūshu 2 nd Revision; N3695 - Obsolete Simplified Chinese Characters; N3288 - Old Yi; N4124 - Ottoman Siyaq ; N4125 - Persian Siyaq; N3874 - Pyu; N4033 , N4033A , N4033B , N4083 and N4094 - Report on Tangut; N4185 - Siddham; N4077 - Sources for the Encoding of Jurchen; N3963 - Tikamuli; N3811 - Tolong Siki; N4025 - Tulu; N4176 - Warang Citi; N4146 - Woleai; N4044 - Wolof Alphabet of Assane Faye; N3864 - Zou; ; N4178 - Additions and corrections to Sumero-Akkadian Cuneiform; N4156 - Annotations for Bengali ISSHAR; N4168 and N4163 - Azerbaijani Manat currency sign; N4148 - Bengali annotations; N4212 - Combining decimal digits above; N4207 - Disunifying Emoji symbols for the Western zodiac; N4213 - Four historic Latin letters for Sakha (Yakut); N4011 - Heraldic hatching characters; N4208 - Historic currency signs of Russia; N4162 - Latin letters used in the Former Soviet Union; N4210 - Linguistic Doubt Marks; N4209 - Low One Dot Leader; N4206 - Medieval East-Slavic Musical Notation; N4174 - Metrical symbols; N4157 - Sign ANJI for Bengali; N4215 - TELUGU LETTER RRRRA; N4211 - Two Greek modifier letters for Critical Apparatuses; N4195 - Unifon characters.	Noted.
g.	on a quick survey regarding Apple Symbol Fonts in document N4127 (to the author).	Noted. Feedback in document N4270.
h.	Activities under Script Encoding Initiative (SEI) project on minority scripts (see document N4220), and to contact Dr. Debbie Anderson with names of any scholars who may be interested in any of the several minority scripts under investigation towards encoding.	Noted.
i.	M59.20 (Lithuanian): With reference to various documents on Lithuanian, WG2 accepts the recommendation from the Lithuanian ad hoc group in document N4242. WG2 will <i>not</i> take action to encode additional characters as was proposed in N4191. Instead the recommendation is to continue using the defined USI sequences in the standard. WG2 invites national bodies and liaison organizations to alert their software implementers to take special care to properly process the USIs in the standard that are used to represent various characters in languages worldwide, including Lithuanian. WG2 further invites the Lithuanian national body to refer to the ad hoc report in document N4242 for details.	Noted.
j.	M59.22 (Future meetings): WG2 meetings: - Meeting 60 - 2012-10-22/26, Chiang Mai, Thailand (N4255 - Logistics and N4255-A - Invitation); (colocated with SC2 meeting 18) - Meeting 61 – 2013-06-10/14, Vilnius, Lithuania (pending confirmation of dates); Berlin, Germany (as backup, pending confirmation) - Meeting 62 – 4th Quarter 2013; Looking for host. IRG meetings: - IRG Meeting 38, Gyeongju, Korea, 2012-06-18/22 - IRG Meeting 39, Hanoi, Vietnam (venue changed from Hong Kong S.A.R.), 2012-11-12/16	

5 JTC1 and ITTF matters

5.1 Publication of 3rd edition of 10646 – 2012-06-01

The third edition has been published. See [Publicly available standards from the ITTF web site](#).

6 SC2 matters:

6.1 SC2 program of work and business plan

Input document:

[4345](#) SC2 Business Plan; SC2 Secretariat; 2012-10-05

The latest program of work is available from SC2 website - [Program of Work](#).

These are for information to WG2. There was no discussion.

6.2 Disposition of ballot comments on 10646: 2012/DAM 1

Input documents:

[4316](#) Summary of Voting on ISO/IEC 10646: 2012/DAM 1, Information technology; SC2 Secretariat; 2012-08-30

Comments are in: [N4316-DIN](#), [N4316-NSAI](#), [N4316-RO](#), and [N4316-ANSI](#)

[4346](#) DAM 1 disposition of comments; Michel Suignard; 2012-10-10

Supporting input documents which were covered during the discussion of disposition of comments:

[4296](#) Request to change the names of three Teuthonista characters under ballot; Irish National Body; 2012-07-25

[4272](#) Naming error for U+0709 SYRIAC SUBLINEAR COLON SKEWED RIGHT; Debbie Anderson & Peter Constable; 2012-05-08

4368 Withdrawn; Karl Pentzlin; 2012-10-17

The results of the JTC1 ballot were as: For all the P-members - 15 had voted Positive, One voted Negative and 17 had Abstained. The totals for ALL JTC1 members were: 18-2-21. Ireland and Romania had voted negative. There were comments from Germany, Ireland, Italy, Romania, the UK and the USA.

6.2.1 Germany: Positive with comments

T.1 - Germany proposes changes to three code positions AB53 to AB55; rationale is provided in document N4296 (in agenda item 9.1?)

Also requested in Ireland comment T.1.

Mr. Michel Suignard: I don't think these are controversial. It has side effects.

Mr. Michael Everson: Their code positions may be another consideration.

Disposition: Accept the proposed name changes.

T.2 - Germany proposes glyph changes for six code positions A79A .. A79F (.. volapuk digraphs).

References Irish comment E.1 to PDAM 2; see also Irish comment E4.

Mr. Michel Suignard: The comment should have been marked 'editorial'. The proposed glyph changes are already in PDAM 2.2. If we accept these in Amendment 1, it will affect the disposition of comments for Amendment 2.2.

Dr. Ken Whistler: If the changes are already in 2.2, why bother in DAM1?

Mr. Michel Suignard: It makes my life simpler, by changing the glyphs in charts in Amendment 1.

Disposition: Accept the proposed glyph changes for six characters.

6.2.2 Ireland: Negative

T.1 - Ireland requests name changes for AB53 .. AB55.

See also Germany comment T.1.

Disposition: Already accepted (for Germany comment T.1).

E.1 to E.5 -

Ireland has proposed glyph corrections or new glyphs for several characters - 0D01, 1DED, 1DF0, 2B64, 2B6A, 2B6C, A79A to A79F (same as in Germany comment T.2), AB53, AB54, and AB55 along with the rationale.

Disposition: Accept in principle - with the condition that new fonts incorporating these changes be made available to the project editor.

Mr. Michael Everson: Ireland changes its vote to Accepted.

6.2.3 Italy: Abstention

Italy abstained - due to lack of answers from those concerned.

Disposition: Noted.

6.2.4 Romania: Negative

T1 - Proposes that the block name "Old Hungarian" is not adequate for encoding per se, and specialists discuss and arrive at a consensus.

Disposition: Out of scope; Amendment 1 text does not include 'Old Hungarian' it had been moved out to another Amendment.

6.2.5 United Kingdom: Positive with comments

Project editor: The comments identical to those made for PDAM 2 ballot (see document SC2 N4237), because these comments are out of scope and extensive they are not reproduced here.

Disposition: Out of scope - comments are not related to Amendment 1 text.

6.2.6 USA: Positive with comments

T.1 - US requests addition of urgently needed character TURKISH LIRA SIGN at code position 20BA, with the rationale provided in document N4258.

Mr. Michel Suignard: This is one of the urgently needed characters, with pressing matters from Turkish Central bank. The UTC has accepted it for Unicode 6.2. Even though technical comments are not normally accepted at FDAM stage, we have evidence of urgency.

Dr. Ken Whistler: As part of the background, it is already implemented and is published in Unicode 6.2. It will be damaging for ISO/IEC 10646 not proceed with it.

Mr. Michael Everson: It will be ridiculous not to be synchronized.

Dr. Umamaheswaran: Procedure wise I think we cannot go straight for publication if we add Turkish Lira sign.

Mr. Michel Suignard: We may have to check with SC2 secretary.

Mr. Peter Constable: The procedures do not seem to enforce that due to technical changes we should proceed with another ballot. We may decide not to proceed for due diligence.

Disposition: Accepted in Amendment 1 (check with SC2 secretariat re: progression).

T.2 - U.S. requests the addition of SYRIAC SUBLINEAR COLON SKEWED LEFT as a formal name alias for U+0709 SYRIAC SUBLINEAR COLON SKEWED RIGHT.

The original proposal authors have confirmed that the name of the character is an error and hence a formal name alias is warranted. The history of the encoding of this character is in document N4272.

Disposition: The character name was wrong .. but we cannot change the name. Accept the proposed Name Alias as the solution.

6.2.7 Progression of Amendment 1

Ms. Toshiko Kimura: There were negative ballots on this Amendment, and there will be technical changes. In this case, you would need to issue an FDAM ballot. It will be a two months ballot.

Relevant Resolution:

M60.01 (Disposition of ballot comments of DAM1): WG2 accepts the disposition of DAM 1 ballot comments in document N4346. The following significant changes are noted:

Change in names:

- AB53 from LATIN SMALL LETTER STRETCHED X to LATIN SMALL LETTER CHI
- AB54 from LATIN SMALL LETTER STRETCHED X WITH LOW RIGHT RING to LATIN SMALL LETTER CHI WITH LOW RIGHT RING, and
- AB55 from LATIN SMALL LETTER STRETCHED X WITH LOW LEFT SERIF to LATIN SMALL LETTER CHI WITH LOW LEFT SERIF

Addition:

- 20BA TURKISH LIRA SIGN with its glyph from document N4273.

WG2 also accepts changing of glyphs to match the names for four characters 2BCC to 2BCF as noted in document N4363.

The final code positions, glyphs and names are in the charts in document N4381.

See section 12.1 on page 47 for the progression of Amendment 1.

7 WG2 matters

7.1 Possible ad hoc meetings

- a. Webdings / Windings
- b. Nūshu Lunch time on Tuesday.
- c. Tangut
- d. Old Hungarian
- e. Mende numbers
- f. Middle dot

7.2 SC2 ballot comments for PDAM 2

Input documents:

- [4335](#) Summary of Voting/Table of Replies PDAM 2; SC2 Secretariat; 2012-06-26
[4349](#) BSI Late comments on SC2 N4228 – PDAM 2; SC2 Secretariat; 2012-07-10

25 SC2 member bodies had responded, 6 did not. There were 13 approvals, 4 disapprovals and 8 abstentions. Comments were received from Egypt, Sri Lanka, Indonesia, Ireland, Japan, UK and USA.

The comments were disposed off by the project editor via email discussions and not a face to face meeting. A PDAM 2.2 text was issued as a result.

7.3 Disposition of Comments PDAM 2

Input document:

- [4306](#) Proposed Disposition of Comments AMD 2; Michel Suignard; 2012-08-02

Mr. Michel Suignard: (Briefly scrolled through document N[4306](#).) Pages 2 and 3 of this document summarize the changes. This disposition of ballot comments on PDAM 2, was done through email discussions - not at a face to face meeting. Part of this document addresses the ballot comments in pages 2 and 3. Some new repertoires and new format characters are added. A new version of PDAM was produced based on this document, and sent out for PDAM 2.2 ballot. Some unresolved items from the PDAM 2 dispositions will be brought up during the discussion. If you have any questions you can come back to me.

Disposition: Capture, for the record, changes in PDAM 2.2 from PDAM 2, summarizing what is in N[4306](#).

Relevant Resolution:

M60.03 (Disposition and progression of PDAM 2): WG2 notes the disposition of ballot comments on PDAM 2 (SC2 N[4228](#)) in document N[4306](#) and the subsequent text of PDAM 2.2 (SC2 N[4239](#)), that were generated between WG2 meetings 59 and 60. There were 14 character deletions, and 276 character additions, to the 900 in PDAM 2, several glyph changes, name changes and reallocation of code positions, as detailed on pages 1 to 8 in document N[4306](#) resulting in a net of 1162 characters in PDAM 2.2.

7.4 Contributions addressed and included in PDAM 2.2

The following (sorted list of) documents were in support of ballot comments for PDAM 2, and used in drafting text of PDAM 2.2 (document N[4314](#)). (They were included under separate items 7.4.1 to 7.4.17 in the agenda, but are collapsed into the following list in these minutes):

- [4157](#) Proposal to Encode the Sign ANJI for Bengali in ISO/IEC 10646; Anshuman Pandey; 2011-10-21
[4259](#) Final proposal for encoding the Warang Citi script in the SMP of the UCS; UC Berkeley Script Encoding Initiative - Everson; 2012-04-19
[4263](#) Revised proposal for encoding the Old Permic script; UC Berkeley Script Encoding Initiative - Michael Everson; 2012-04-26
[4269](#) Proposal to Encode the SUTRA MARK for Sharada; Anshuman Pandey; 2012-05-03
[4271](#) Proposal to add ARABIC LETTER ZAIN WITH INVERTED V ABOVE; Lorna Priest (SIL); 2012-05-09
[4275](#) Proposed Additions to ISO/IEC 10646; USNB; 2012-06-20
[4277](#) Proposal for additions and corrections to Sumero-Akkadian Cuneiform; UC Berkeley Script Encoding Initiative - Authors: Michael Everson and Steve Tinney; 2012-07-31
[4279](#) Proposal to add Combining Up Tack Above; David Starner & Michael Everson; 2012-07-31
[4294](#) Proposal to Encode the Siddham Script; Anshuman Pandey; 2012-07-23
[4297](#) Proposal for the addition of ten Latin characters; Michael Everson, Denis Jacquerye, Chris Lilley; 2012-07-26
[4298](#) Additional evidence of use of Pahawh Hmong clan logographs; UC Berkeley Script Encoding Initiative (Universal Scripts Project) – Michael Everson; 2012-07-24

- [4307](#) Proposal for Two Phonetic Characters; Luanne von Schneidmesser (Senior Editor, Dictionary of American Regional English, University of Wisconsin-Madison), Lewis Lawyer (C. Phil., Dept. of Linguistics, UC Davis), Ken Whistler (Sybase), and Deborah Anderson (SEI, UC Berkeley); 2012-07-12
- [4308](#) Proposal for one historic currency character, MARK SIGN; Nina Marie Evensen, Deborah Anderson; 2012-07-24
- [4310](#) A Proposal for Bidi Isolates in Unicode; Aharon Lanin, Mark Davis, and Roozbeh Pournader; 2012-07-31
- [4311](#) Proposal for Nine Mende Digit Characters; Debbie Anderson – SEI UC Berkeley; 2012-08-01
- [4313](#) More Proposed Additions to ISO/IEC 10646; USNB Debbie Anderson; 2012-08-03
- [4319](#) Comments on Webdings in PDAM 2.2; US NB – Debbie; 2012-09-10
- [4333](#) Proposal to change the glyph for Brahmi Letter LLA (U+11034); Andrew Glass; 2012-07-31

7.5 SC2 ballot comments for PDAM 2.2

Input documents:

- [4343](#) Results of voting PDAM 2.2; SC2 Secretariat; 2012-10-05
Comments are in: [4343-DIN](#), [4343-NSAI](#), and [4343-ANSI](#).

26 SC2 members responded and 4 did not. 13 had approved, 3 had disapproved and 10 had abstained. Germany, Ireland and USA had commented.

7.6 Disposition of ballot comments on 10646 PDAM 2.2

Input documents:

- [4343](#) Results of voting PDAM 2.2; SC2 Secretariat; 2012-10-05
Comments are in: [4343-DIN](#), [4343-NSAI](#), and [4343-ANSI](#)
- [4334](#) Draft disposition of comments on SC2 N 4239 (PDAM 2.2 text to ISO/IEC 10646 3rd edition); Michel Suignard; 2012-10-15

Supporting input documents which were covered during the discussion of disposition of comments:

- [4319](#) Comments on Webdings in PDAM 2.2; US NB – Debbie; 2012-09-10
- [4363](#) Status of encoding of Wingdings and Webdings Symbols; Michel Suignard – Project Editor; 2012-10-13
- [4340](#) Comments in Response to Irish Comments on Middle Dot- related to PDAM 2.2; Ken Whistler; 2012-09-28

Input document:

- [4339](#) Examples of Collation Tailoring for U+00B7 MIDDLE DOT – related to PDAM 2.2; Ken Whistler; 2012-09-21

Output document:

- [4377](#) Final disposition of comments on PDAM 2.2; Michel Suignard; 2012-10-24
- [4384](#) Status of encoding of Wingdings and Webdings Symbols; Michel Suignard, 2012-11-06

Mr. Michel Suignard: Discussion has to happen on 'beyond DAM2'. My plan is to go for a CD of next edition. It will bundle the two amendments plus additions. We need to determine what to put in the next edition. Items which may not be controversial could be added. An example is CJK Ext-E. Possibly more additions from this meeting. I would like to also consider mature candidates for first amendment of next edition – create a bucket to carry forward. DAM1, PDAM 2, CD of next edition and a new bucket - are the four possible categories.

Dr. Ken Whistler: I suggest you use the same document number for disposition of comments removing the word (Draft) for the final version to avoid confusion of proposed versus final dispositions.

7.6.1 Germany: Negative

T1 - Germany requests a name change for 20BB MARK SIGN to OLD MARK SIGN to disambiguate it from 2133, a cross reference to 2133 and an annotation, along with rationale.

US comment E.2 is on the same subject.

Mr. Michel Suignard: The name change is probably acceptable. The annotation is editorial. The proposed cross reference may also be acceptable.

Discussion:

- a. Dr. Ken Whistler: The proposed annotation needs fixing. It is marked as a cross referencing. The annotation should say 'early reference to ..'. We can have an additional annotation to 2133 - 'this is a representation of Mark currency ...'.
- b. Mr. Michael Everson: There is already an annotation in 2133.
- c. Mr. Michel Suignard: We could have a plain cross reference to 2133. 'Early representation of the Mark Currency used in Nordic countries.'
- d. Mr. Michael Everson: I think the name should be changed to Nordic Mark Sign instead of Old Mark Sign.

Disposition: Accept in principle. Change the name from Mark Sign to Nordic Mark Sign. Add cross ref to

2133. Add an annotation 'early representation of the Mark currency used in Denmark and Norway'.

Germany was happy with the draft disposition to change their ballot.

7.6.2 Hungary: Abstention

General comments - explained that a consensus could not be reached within the national body.

Mr. Michel Suignard: Hungary is still abstaining. Their comment could be important while reviewing other contributions.

Disposition: Noted. (See also output of Hungarian ad hoc in document [N4374](#); the above comments were taken into consideration by the ad hoc.)

7.6.3 Ireland: Negative

T1 - Ireland reiterates its support for A78F LATIN LETTER MIDDLE DOT and opposes further attempts to delay or prevent the encoding of this character. Provides some suggestions to address other national body objections.

Mr. Michel Suignard: Ireland has essentially the same comment that was in PDAM 2.

Dr. Ken Whistler: The US has newer documents on the topic.

An ad hoc met and tried to reconcile the different view points regarding encoding of Middle Dot.

Mr. Michel Suignard: Each side presented their views. Some of the main parties to this discussion were not present. However, there was no consensus. All the experts may be at the next WG2 meeting. As editor I would like to get as many yes votes as possible. The comments from Ireland and UK were Noted. The US vote was Negative. It is the responsibility of the proposer to prove that it is needed.

Discussion:

- a. Mr. Michael Everson: The requestors have been waiting for this character for almost three years.
- b. Mr. Michel Suignard: As I have done in the past, I will delay the character to the next ballot.
- c. Mr. Peter Constable: If the decision of the editor is that there is no consensus, he can remove it from the ballot and postpone it.
- d. Mr. Michael Everson: The argument posted against the character inclusion is not appropriate. The arguments have been going on for almost three years. We are not being respectful of the user community.
- e. Mr. Michel Suignard: I don't like the situation either. The next ballot is a DAM and it has to be stable. We will move it out of the DAM 2.2 and into the CD. We had a consensus to include it in the Amendment 2.2 at the WG2 level.
- f. Mr. Alain LaBonté: Sustained opposition should be resolved with all possible efforts. The project editor has the ultimate decision to make.
- g. Mr. Michael Everson: We have tried to come with alternative solutions to the opposition.
- h. Dr. Umamaheswaran: The ad hoc was given the task, and they could not resolve this issue.
- i. Mr. Peter Constable: There is a difference between adding something to the CD which is at the WG level. Whereas the item put into the DIS stage is that we have consensus at the SC level from national bodies.
- j. Mr. Martin Hosken: A procedural question - what is the difference between the PDAM and DAM level?
- k. Dr. Umamaheswaran: After DAM there can be an FDAM if needed.
- l. Mr. Peter Constable: The DAM level is at JTC1 level; will need broad review at national body level.
- m. Mr. Michel Suignard: As the project editor the Middle Dot stays at the Committee level. If by the next meeting a consensus is reached we can consider including it in FDAM stage.

Disposition: Middle Dot gets out of Amendment 2.2 and moved to the next ballot which will be the CD. See item h. in relevant resolution *M60.05* on page 27.

T.2 - Ireland requests that the numbers from 10CF9 ..10CFD be shifted down to 10CFA ..10CFE, filling the gap, with references to documents [N4225](#) and [N4268](#).

Mr. Michel Suignard: In PDAM 2 Ireland had made some comments .. we did not fill the void in the chart. The comment in PDAM 2.2 is to fill the gap. The Rovas working group seems to have

some evidence for the character that was vacated. Do we want to keep the gap for 500?

Discussion:

- a. Mr. Michael Everson: The specific reference Ireland made was to document N4225 which had 5000, 10000 etc. which in my opinion are more recent inventions. 500 is not used by one of the large users. It would be safer to leave 500 for future encoding.
- b. Dr. Deborah Anderson: I was looking at N4367 revised proposal - section 5.3.2 on page 18, they give an example of 500.
- c. Mr. Michael Everson: They are asking for spaces for future standardization for other numbers. If you look at older documents there is no 500.
- d. Dr. Umamaheswaran: Is there any reason why they should be kept together?
- e. Mr. Michel Suignard: No. We can always open the gap if needed.

Disposition: Accepted. See also discussion under section 9.2.1 on page 24, and the ad hoc report in document N4374.

T.3 - Ireland requests that one character, PAHAWH HMONG CLAN SIGN PHAB, be added to the PDAM, and that the characters be arranged in Pahawh Hmong alphabetical order, with reference to document N4298.

See also comment TE3 from US.

Mr. Michel Suignard: I suggest acceptance.

Discussion:

- a. Mr. Michael Everson: If the clan names are spelled out, this is how they would be sorted.
- b. Dr. Deborah Anderson: Stage 3 group is happy with it if Stage 2 group is happy with it.

Disposition: Accept. Add one character and Reorder.

T.4 - Ireland proposes encoding of Mende numbers 1E89D0 ..1E91F be reviewed, suggesting decomposed model is not what the proposers want, referencing document N4167.

Mr. Michel Suignard: There were two models for numbers. One of these model was accepted in PDAM 2.2. Current Amendment 2.2 content is not sufficient. We may have to add all of them or components to complete all the required numbers. There are two options.

Discussion:

- a. Dr. Ken Whistler: A set of numbers 1 to 9 has been added
- b. Dr. Umamaheswaran: Are the current set of accepted numbers in the PDAM 2.2 affected by the model discussion?
- c. Mr. Peter Constable: We could go ahead with Ireland's suggestion.
- d. Mr. Michel Suignard: I prefer not to do it.

(An ad hoc group with Mr. Martin Hosken as the lead discussed the options.)

- a. Mr. Michael Everson: The ad hoc met and discussed the Mende numbers. There are atomic, combining and ligature models; there was no consensus on the combining and ligature etc. Document N4167 had multiplier being the combining character below. That was used. The ad hoc report is document N4375; it contains the recommendations and the code charts for Mende Numbers etc.
- b. Dr. Ken Whistler: I agree this was a great ever ad hoc.
- c. Mr. Michel Suignard: I would propose we use this as the base for disposition of Irish comment.

Disposition: Accept seven new characters; the Mende block is extended to absorb the Mende Number block and gets extended to take new characters. Mende Numbers block is removed. See document N4375.

See item c. in relevant resolution M60.05 on page 27.

Action item: Roadmap to be updated to reflect the above.

T.5 - Ireland requests moving 1F3CF RACE CAR to 1F3CE.

Disposition: Accept.

T6 - Ireland requests several name changes or moving of characters in the 1F68 block. (See also comment GE7 from US.)

- a. Change name of 1F6CD TWO SHOPPING BAGS to either SHOPPING BAGS or SHOPPING

Disposition: Accept - The new name would be 'SHOPPING BAGS'.

- b. Move 1F6D0 BELLHOP BELL to 1F6CE

Disposition: Accept.

- c. Move 1F6E7 SMALL AIRPLANE to 1F6E8

Disposition: Accept in principle; moved to 1F6E9.

- d. Move 1F6EE SATELLITE to 1F6F0
Move 1F6F2 ONCOMING FIRE ENGINE to 1F6F1
Move 1F6F4 DIESEL LOCOMOTIVE to 1F6F2

Disposition: Accept all three.

T.7 - Ireland requests two character additions, along with additional annotations to one character already on the ballot in the 1F68 block, along with some rationale:

- 1F6E6 MILITARY AIRPLANE
 - military airport
- 1F6E7 UP-POINTING AIRPLANE
 - commercial airport
- 1F6E8 SMALL AIRPLANE
 - airfield

Mr. Michel Suignard: I propose only partial acceptance. The rationale provided is encroaching on webdings/windings discussion. The middle symbol cannot be unified with the webdings symbol because it uses the side view.

Mr. Michael Everson: We could add three new characters; calling them Up-Pointing Airplane.

Disposition: Accept in principle. These were taken up as part of discussions on Webdings/Windings. The net was three additions:

- 1F6E6 UP-POINTING MILITARY AIRPLANE
 - 1F6E7 UP-POINTING AIRPLANE
 - 1F6E8 UP-POINTING SMALL AIRPLANE,
- and previously proposed SMALL AIRPLANE is moved to 1F6E9.

E.1 - Ireland requests clarification of the note to 061C ARABIC LETTER MARK. It states "similar to RLM but with right-to-left Arabic".

Dr. Ken Whistler: I propose the annotation to be "similar to RLM but standing in for an Arabic character". This will avoid discussion about properties in names lists etc.

Disposition: Accepted with modified annotation.

E.2 - Ireland requests that the two characters at 1CF8-1CF9 be represented with the correctly sized dotted circle.

Mr. Michael Everson: The dotted circles are our own standard convention. It was added in a rush by the editor.

Disposition: Will be fixed with correct font.

E.3 - Ireland requests some kind of annotation which will explain what the character name for 2069 "POP DIRECTIONAL ISOLATE" means.

Mr. Michel Suignard: The charts are not the place to describe character behaviour. See Annex F and section 16.3 for explanatory text.

Discussion:

- a. Dr. Ken Whistler: I think the sub head in the nameslist should be 'bidirectional format characters', instead of 'annotation additions'.
- b. Mr. Michel Suignard: It will influence other items in the names list. They are in the same block as the other bidi characters.
- c. Dr. Ken Whistler: The correct thing to do is to point to the bidi algorithm.
- d. Mr. Michael Everson: The intent of the comment was to have some meaning to POP etc.
- e. Dr. Ken Whistler: POP etc. is already used.
- f. Mr. Peter Constable: POP is in the programming context - PUSH and POP.

Mr. Michael Everson: Ireland withdraws the comment.

E.4 - Ireland requests glyph changes for 20BA and 20BB.

Mr. Michel Suignard: 20BB - Mark Sign was discussed earlier with comment T.1 from Germany. The glyph change is also requested by the US. The Turkish Lira Sign is of a different category. Disposition: Accept the proposed change for 20BB (with new name Nordic Mark Sign). Change for the glyph of 20BA - Turkish Lira Sign is not accepted.

E.5 - Ireland requests corrections to fix the winding errors in A9F2 and A9F5.

Disposition: Accept in principle, provided the correct font is made available to the project editor.

E.6 - Ireland requests corrections to fix the winding errors in AA7E and AA7F.

Disposition: Accept in principle, provided the correct font is made available to the project editor.

E.7 - Ireland requests a glyph change for 101A0, to one of two proposed glyphs.

Dr. Deborah Anderson: The experts I consulted with agree with the Right Hand side one. Disposition: Accept in principle - glyph with straight bar across the middle is to be used - corrected font to be provided to the project editor.

E.8 - Ireland requests corrections to fix the winding error in 11034.

Disposition: Accept in principle, provided the correct font is made available to the project editor.

E.9 - Ireland requests glyph changes for 1F3CB WEIGHT LIFTER, 1F3CD MOTORCYCLE and 1F43F CHIPMUNK

Disposition: Ad Hoc on Webdings and Windings discussed this comment. The first one is already updated in the charts - no change. The proposed change for Chipmunk is acceptable - after some minor design issues are addressed. Proposed change for Motor Cycle is not accepted.

E.10 - Ireland requests glyph changes for 1F6CD TWO SHOPPING BAGS, 1F6E7 SMALL AIRPLANE and 1F6F4 DIESEL LOCOMOTIVE

Disposition: Ad Hoc on Webdings and Windings discussed this comment. Replacement glyphs for the first two will be lighter versions of the original design. The proposed glyph was accepted for the Locomotive.

Mr. Michael Everson: Ireland changes its vote to Acceptance.

7.6.4 USA: Negative

TE.1 - The U.S. requests the removal of A78F LATIN LETTER MIDDLE DOT; rationale is in document [N3678](#); suggests alternatives of using already encoded modifier letter, U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON or 00B7 MIDDLE DOT.

See also comment T1 from Ireland and comment T2 from UK on the PDAM 2 ballot.

(See output of ad hoc on Middle Dot and discussion on it on page 16.)

Disposition: Middle Dot gets out of Amendment 2.2 and moved to the next ballot which will be the CD. See item h. in relevant resolution *M60.05* on page 27.

TE.2 - The U.S. requests the addition of 1032F OLD ITALIC LETTER TTE, as proposed in document [N4046](#).

Mr. Michel Suignard: This comment is same as was made for PDAM 2. US was supposed to discuss with other interested experts.

Discussion:

- a. Dr. Deborah Anderson: The person who proposed this is preparing a contribution.
- b. Mr. Michael Everson: The users of Old Italic do not want to be unified with the script containing this.

Disposition: Not Accepted.

TE.3 - the U.S. requests the proposer of document N4298 to provide an indication that the glyphs and order of the Pahawh Hmong clan logographs are definitive.

See also Ireland comment T.3.

Dr. Ken Whistler: we are satisfied with the evidence provided (along with Ireland T.3).

Disposition: Noted.

TE.4 - The U.S. requests the removal of 2B74 - LEFT RIGHT TRIANGLE-HEADED ARROW TO BAR, and 2B75 - UP DOWN TRIANGLE-HEADED ARROW TO BAR.

Mr. Michel Suignard: In PDAM 2 disposition, these two characters were kept with a request for further input on their demonstrated use. No further input has been received.

Discussion:

- a. Dr. Ken Whistler: They were moved from Amendment 1 to Amendment 2.
- b. Mr. Michel Suignard: Even in Amendment 2 PDAM 2 US asked it to be removed. But we kept it in.
- c. Mr. Michael Everson: I think it completes the set based on some other arrows with heads etc.
- d. Dr. Ken Whistler: These do NOT complete the set. Like the keyboard symbols for TAB. A double-headed arrow does NOT complete the set which has Directions. They are unattested and are confusing.
- e. Mr. Peter Constable: It may be filling a set but not consistent with semantics of other members in that set.

Disposition: Accept the request; remove the two characters; keep the holes in the chart.

TE.5 - Miscellaneous symbols and pictographs: The U.S. requests changes to the glyphs, names, and characters as documented in document N4319.

Disposition: Ad hoc met and has partially accepted.

Dr. Ken Whistler: Ad hoc discussion will be reflected in the charts for Amendment 2.2 as well as in the Webding/Winding document.

(Other comments GE.7 and TE.8 to TE.12 are also covered in the referenced document.)

TE.6 - Transport and Map symbols: The U.S. requests changes to the glyphs, names, and characters as documented in document N4319.

(If TE.1., TE.4., TE.5. and TE.6 are accommodated, the USNB will change its vote to approve.)

Disposition: Ad hoc met and has partially accepted.

GE.7 - General comments on Webdings: The U.S. has commented on some considerations for when to encode distinct symbols, when to unify etc.

Disposition: Noted. Ad hoc considered this comment. Document N4363 helps in this process and in the analysis.

TE.8 - The US requests reverting 3 picture frame glyphs, and reverting (or revising) one SHIP AND OCEAN which was unified with SHIP Symbol to their earlier versions in PDAM 2.1; the rationale is stated.

Disposition: Accepted the request for the 3 picture frame glyphs; accepted in principle the SHIP - a new glyph is needed. Ad hoc considered this.

TE.9 - The U.S. requests reviewing the symbols for several symbols with terrains in them - CITYSCAPE, DESERT ISLAND, HOUSE BUILDINGS, DERELICT HOUSE BUILDING, HOUSE BUILDING, FACTORY, UMBRELLA ON GROND, PARK, TENT, RAILWAY, BED, NORTEAST-POINTING AIPLANE, METRO, (removed MOUNTAIN OR VOLCANO), TWO SHOPPING BAGS, AMBULANCE, DOCUMENT WITH PICTURE.

Disposition: Accepted in principle; needs new glyphs/fonts in some cases. Ad hoc considered these and has made recommendations, which are reflected in the final disposition of comments document N4377.

TE.11 - The U.S. has commented on Departing and Arriving Airplane symbols, Port Authority symbol proposed by Ireland.

Disposition: Noted .. Ad hoc considered these and the recommendations are captured in the final

TE.12 - The U.S. considers the new ALL-TERRAIN VEHICLE symbol proposed by Ireland as inappropriate to add at this time.

Disposition: Noted. Was not accepted by the editor.

E.1. The U.S. proposes reverting to the glyph for 1F374 FORK AND KNIFE to what was in PDAM 2.1.

Disposition: Accepted. A production error.

E.2. The U.S. proposes to replace the glyph for 20BB MARK SIGN with a proposed glyph reflecting the manuscript sources.

See also comment E4 from Ireland.

Disposition: Accepted.

Dr. Deborah Anderson: Based on the above dispositions of comments, the U.S. changes its vote to Acceptance.

The final disposition of comments will be in document [N4377](#).

See progression of Amendment 2 in section 12.2 on page 47.

7.7 Roadmap Snapshot

Input document:

[4320](#) Roadmap snapshot; Uma; 2012-09-12

Dr. Umamaheswaran explained the changes from the previous snapshot in document [N4186](#).

Relevant Resolution:

M60.21 (Roadmap snapshot): WG2 instructs its convener to post the updated snapshot of the roadmaps (in document [N4320](#)) to the WG2 web site and communicate the same to SC2 secretariat.

Side discussion: Collection ID for Unicode 6.2 ... 3rd edition + Turkish Lira, should be added as part of Amendment 1.

8 IRG status and reports

8.1 IRG Meeting 38 Summary Report

Input document:

[4356](#) IRG Meeting 38 Summary Report; IRG Rapporteur; 2012-10-10

[4348](#) IRG Meeting 38 Resolutions; IRG Rapporteur; 2012-06-12 (FYI for WG2)

Dr. Lu Qin presented the summary report.

Item 1: IRG meetings

Mr. Michel Suignard: You may want to think about rearranging the IRG meetings for me to be able to attend; not being so close to WG2 meeting.

Dr. Lu Qin: IRG 39 is already approved. It will be 11-15 Nov 2012, Hanoi. WG2 is requested to approve the following meetings - IRG 40 - HKSAR 2013-05-20/24 and IRG 41 - Japan 2013-11-18/22 (Tentative) (China is backup).

See relevant resolution M60.22 on page 49.

Item 2: CJK Extension E

5768 characters have been submitted to WG2 (see document [N4358](#)). IRG has already checked the evidences etc. Source references are also included. Mr. Michel Suignard should have received fonts. It has the information for the fonts related to multi-column charts.

Discussion:

- a. Mr. Michel Suignard: I got some fonts from China and Taiwan.

- b. Dr. Lu Qin: I asked the members of IRG to submit the fonts to editor. They had already sent the fonts to the IRG Technical Editor.
- c. Mr. Michel Suignard: I received the font from IRG Technical Editor (Wang XiaoMing). I will need the tool to extract the information. I am expecting source references for sources that are new in Extension E. In clause 23, we give descriptions of each source. I need the description for any new ones. We have one entry for Macau now.
- d. Dr. Lu Qin: The information is in the IRG P&P document. I can forward the information to you.

Item 3: CJK Extension F

Extension F – at the last meeting we called for submissions for Extension F. As of today indication of submissions have been received from Japan, SAT project (a separate group, from Japan), China, RO Korea and TCA; we also have indications from US/Unicode and Macau. We have not started the processing on these.

Discussion:

- a. Mr. Michel Suignard: Any one is free to submit their requests to IRG.
- b. Dr. Lu Qin: It is not restricted. For example, SAT is not one of the member bodies. The P&P has a limit of maximum 4000 characters. IRG members have to keep their submissions to the limit. We do not have a schedule yet. We will discuss the schedule in IRG meeting 39.
- c. Mr. Michel Suignard: Are there any Urgently Needed Characters (UNCs) in these?
- d. Dr. Lu Qin: None of these are UNCs. If Macau is going to standardize – MSCS (Macau SCS) similar to HKSCS – there may be some UNCs. They have not submitted the details yet.

Item 4: Font submission guidelines

The IRG members were asked to follow that from the project editor.

Item 5: Stroke count

In response to request for Total Strokes from WG2, because these are locale dependent, IRG had lengthy discussion. Total stroke count is not going to be feasible. Radical stroke counts are counted differently.

Dr. Umamaheswaran: I would like to know what is the impact on the wordings requesting total stroke count in the WG2 proposal summary form.

Action item: Dr. Umamaheswaran to work offline with Mr. Michel Suignard and Dr. Lu Qin.

Item 6: IRG Principles and Procedures

PnP document will be updated for UNC. Another item was on the First Stroke - it was decided that it was easier for the technical editor should assign the First Stroke instead of asking individual members to submit that. It is locale dependent. Another item was T-source updates. PnP document will be updated and finalized at meeting 39.

Item 7: First Stroke

Elaborates on the First Stroke related item (above for PnP). To maintain consistency for IRG internal unification and review, Technical Editor will assign the first stroke.

Item 8: UNCs

Annex C of IRG PnP is updated for UNCs. A limit of 30 ideographs is included. IRG has some latitude on this number.

Discussion:

- a. Mr. Michel Suignard: Limit of 30 may be small. Extension D was bigger than 30. As part of extension D, truly UNC were just the HKSCS characters.
- b. Dr. Lu Qin: We do have some discretion on the limit; but we do not want to open it up.

Item 9:-11: Old Hanzi

Per WG2 decision, Old Hanzi group was to be dissolved. The work done so far within IRG Old Hanzi group has been submitted to WG2. (Item 8.4 in the agenda - document [N4357](#)). There were three IRG resolutions related to Old Hanzi.

Item 12

The IRG WDS will include additional examples.

Item 13

Dr. Lu Qin: TCA source updates; several corrections have been identified for T-source. The TB ...TF are later than 1992. See details in Appendix to [N4356](#). The request is for project editor to take note.

Action item:

Editor is to take note to correct the content in standard for source references for TCA in clause 23.1; per document [N4356](#).

8.2 CJK Ext. E – version 8.1

Input documents:

[4358](#) CJK Ext. E – version 8.1 – 5768 characters; IRG Rapporteur; 2012-10-10
(also [N4358-A](#), [N4358-B](#))

Document [N4358](#) contains the summary form. [N4358-A](#) contains the charts. Source references are in the charts and in .xls (document [N4358-B](#)).

Mr. Michel Suignard: I do not know if all the source references used in these charts are identified. I would like to have a list of source references to ensure that no new sources are identified. From a cursory look of these, most of these I already know about.

Discussion:

- a. Dr. Lu Qin: I will confirm that there are no new sources are added.
- b. Mr. Michel Suignard: We had in the past every time a new extension was added we had an accompanying document explaining the sources used with that extension; in the past there were new sources. It is nice to have a list of these.
- c. Dr. Lu Qin: I will provide the list of sources used in Extension E.
- d. Mr. Michel Suignard: You seem to be using a different format for the source references from what is in the clause 23.2 of the standard. I have to decipher your format versus what the standard uses. The radical column has 2F000; should be 2F00 only. The Index is used in the standard format. The radical is mapped to the index correctly.
- e. Mr. Chen Zhuang: In 2F00n, the last digit n = 0 is not simplified radical; n=1 is simplified radical. IRG PnP has the information.
- f. Dr. Lu Qin: The Index can be generated for you.
- g. Mr. Michel Suignard: There is a notation in the standard we use for indicating the simplified versus not simplified radical. There is no accompanying information towards assisting in production. E Field is remaining strokes. Dr. Ken Whistler provided a sorted list of all the sources by sorting the columns in the spread sheet.

Action item: Lu Qin to provide a list of sources used in Extension E, using the same format for sources as in clause 23.2 of the standard.

(It will be submitted as part of Extension –E information).

Disposition: Accept 5768 Ext-E CJK Ideographs; in the range 2B820 ..2CEAF (using up to A7). The glyphs will be according to charts in document [N4358-A](#), with source references as identified in document [N4358-B](#); the fonts have been sent in to the editor. The roadmap is already corrected.

See relevant resolution M60.07 below.

Relevant Resolution:

M60.07 (CJK Unified Ideographs Extension E): WG2 accepts to create a new block named CJK Unified Ideographs Extension E in the range 2B820 to 2CEAF and populate it with 5768 characters in code positions 2B820 to 2CEA7, with their glyphs and source references as shown in the attachments to document [N4358](#).

8.3 Old Hanzi Principles & Procedures

Input document:

[4357](#) Old Hanzi Principles & Procedures – version 3; IRG Rapporteur; 2011-11-09

There was no discussion.

Action item: National bodies are invited to provide feedback.

8.4 Activity Report from TCA

Input document:

[4286](#) Activity Report form TCA; TCA; 2012-06-14

Mr. Bear Tseng: Document N[4286](#) is for information to IRG; not for WG2.

9 Script contributions related to ballots:

9.1 Items related to Amendment 1 (DAM1)

9.1.1 Proposal to encode the Turkish Lira sign

Input documents:

[4258](#) Proposal to encode the Turkish lira sign; Michael Everson; 2012-04-17

[4273](#) Proposal to Encode the Turkish Lira Symbol in the UCS; N. Sacit Ulurmak, Central Bank of Turkey; 2012-04-27

There is a comment from Ireland; in reference document N[4345](#) .. E.4 from page 5.

There are a number of comments on discussion list about the Glyphs – typophile.

Discussion:

- h. Dr. Umamaheswaran: I think we should get a position from Turkish central bank.
- i. Mr. Michel Suignard: We had similar situation with the Euro sign.
- j. Dr. Ken Whistler: I think we should not lead on this change. We should wait for what becomes the best practice in Turkey. I would suggest we stick with the glyph in the request from Turkey as it is. Appropriate time may be the CD stage, by which time users will have more experience with it.
- k. Mr. Michel Suignard: We can postpone the change – it will be in Amendment 1 - FDAM1. We still have time for future change if there is evidence.

9.1.2 Status of encoding Webdings/Wingdings Symbols)

Input document:

[4363](#) Status of encoding of Wingdings and Webdings Symbols; Michel Suignard – Project Editor; 2012-10-13

Mr. Michel Suignard: Document N[4363](#) is a base document that can be used as a dictionary for the various Webdings and Windings. While preparing it some errors were discovered in Amendment 1. The document is up to date as of pre PDAM 2.2 ballot. It is a useful as a reference and it is for your information. It shows why some unification happened. Some glyph changes have been made. The ad hoc on Webdings/Windings used it as a reference. It will be modified based on some more discussions. It has a section on cross references between UCS code point and the source of the symbol. This section, if deemed useful, and asked to be included by some entity such as a national body, can be added to the standard, similar to what was done for Emoji.

Discussion:

- a. Mr. Peter Constable: You said if some entity asked for it.
- b. Mr. Michel Suignard: Yes; only if it is asked for – because it involves lot of work for me.
- c. Dr. Ken Whistler: I don't think this cross reference is as critical as the Emoji. It could be a Technical note or another way of preserving the information.
- d. Mr. Michael Everson: A UTN would be more appropriate.
- e. Mr. Michel Suignard: It is also a living document. A UTN would be OK by me. It is a lot of work to maintain it. It allowed me to discover some errors in Amendment 1. 2BCC-2BCF described under Accuracy – item 2 on page 20 of document N[4363](#). Refer page 42 in Amendment 2 for information. Check the chart of Amendment 1 text.

Disposition:

Accept to change the glyphs to match the names – for the four characters 2BCC – 2BCF.

Progression of Amendment 1: The options were either issue an FDAM or go to Publication. Postponed till checking with SC2 secretary. See section 12.1 on page 47.

9.2 Items related to Amendment 2 (PDAM 2.2)

9.2.1 Hungarian in Amendment 2.2

Input documents (considered during the discussion and in the ad hoc):

[4267](#) Declaration of Support for the Advancement of the Encoding of the old Hungarian Script; Miklós Szondi; 2012-04-28

- [4268](#) Consolidated proposal for encoding the Old Hungarian script in the UCS; Michael Everson & André Szabolcs Szelp; 2012-05-06
- [4274](#) Contemporary Rovas in the word processing; Tamás Somfai; 2012-05-25
- [4288](#) Rovas NB position; Hungarian NB; 2012-06-26
- [4367](#) Revised proposal for encoding the Rovas; Jenő Demeczky, Gábor Hosszú, Tamás Rumi, László Sípos, & Erzsébet
- [4371](#) Additional information about the name of the Rovas script; Jenő Demeczky, György Giczi, Gábor Hosszú, Gergely Kliha, Borbála Obrusánszky, Tamás Rumi, László Sípos, & Erzsébet Zelliger; 2012-10-21

Mr. Michel Suignard: One could argue that Old Hungarian would pass based on disposition of comments. Is it good enough based on various contributions? The country cannot make up its mind. They have abstained twice. There is a very vocal group providing their opinion. Other national bodies are looking at it and are not comfortable. My concern is that we really do have a consensus from the experts group. My opinion is that it should be moved out of Amendment 2, and decide where to place it; most likely in the amendment into the next CD of fourth edition. I want opinion.

Discussion:

- a. Mr. Peter Constable: As an individual expert, if we decide to remove from Amendment 2.2 because we feel there is not adequate consensus, we should not have any projected target date. We should put the onus on Hungarian national body before SC2 takes any action on it.
- b. Mr. Michael Everson: It is not possible to arrive at consensus because the authors of the contributions are not linguists. They were given enough opportunity to arrive at a consensus with the current proposals. They were not able to attend the various WG2 meetings. In Hungary there are legitimate users of the script. They are not able to use the standard because since Dublin meeting there has been no consensus. The new contribution says the name change to Rovas etc. would be acceptable to Hungarian NB, but the Hungarian NB has no consensus. There is also argument about some of the characters with glyph variants etc. The bibliography does not reference other proposals made by other experts such as myself and Dr. Deborah Anderson etc. We have shown with the mapping exercise we have done, the set of characters they want is a subset of what we have proposed. On the character names, the names attested in the primary source – Nicholsburg document etc. They are complaining about fonts also. They have stated that their goal is to stop standardization of Old Hungarian. Hungarian national body has not arrived at any consensus yet. However, I do not think the groups are going to arrive at any consensus. If it ever goes into a future amendment we will have to wait for more.
- c. Mr. Peter Constable: The fact is that there is a debate. If we are going to accept this now there are companies who are not going to implement because of the potential backlash.
- d. Mr. Harsha Vijayawardhana: When I look at the circulation there is perception of disagreement. What we do not understand is why the national body has not taken any position – they seem to have stated that they don't want to stop it. We feel we should listen to the group of experts who are not agreeing with what is in the standard. We should give the parties to come up with a consensus if some more time will be needed.
- e. Mr. Michel Suignard: Hungarian national body has not come up with a clear statement.
- f. Dr. Umamaheswaran: I think the two parties should be encouraged to come up with a better consensus.
- g. Mr. Peter Constable: The national body has not a serious objection. If we want to go ahead with the current proposal we could. One could interpret what Hungary national body has stated that no other group can speak for the national body, without expressing any objection to current content of amendment.
- h. Mr. Michel Suignard: I see the point of what Mr. Michael Everson says to some extent.
- i. Mr. Michael Everson: The national body has stated their position because they do not have a consensus. There are people teaching this script to different schools.
- j. Mr. Peter Constable: If we move ahead now, and let the Hungarian national body off the hook, then every one goes ahead implementing will be in an ongoing unambiguous situation. If the users really want it and they make a case to Hungarian national body and get the national body to make a decision, and that will give some incentive to the implementers.
- k. Mr. Michael Everson: I cannot support pushing this script off the ballot.

- l. Dr. Ken Whistler: What you are hearing though, that the ordinary software most people are using may not support this. The users may have to hack up a solution anyways, just like what they are doing now anyway. Even if we say that we are get it into the standard, even if there is no agreement in Hungary, they will need to do their own hacks anyway. What Mr. Peter Constable is communicating is that major software vendors may stay away from it.
- m. Mr. Martin Hosken: There is a lot to be said, from our experience with Cambodia, we are serving the national bodies in many respects
- n. Mr. Michel Suignard: The sad side of this issue is that a large subset of the characters is common. The controversial aspects are the names of the block and a set of extra characters. Outside of Hungary, there is a large section stating why we can't accept the name change to Rovas.
- o. Mr. Michael Everson: There are half the people who do support the current name.
- p. Mr. Peter Constable: Can the people who support what is in PDAM 2.2 live with a name change to Rovas?
- q. Mr. Michael Everson: One of the authors has written that name change would not be acceptable. I do not think they can live with the name change.
- r. Mr. Michel Suignard: We will not be going anywhere otherwise.
- s. Mr. Peter Constable: If we change as a compromise the block name could we proceed.
- t. Dr. Ken Whistler: The issue in Hungary will not change even if we come up with a proposed name change.
- u. Mr. Martin Hosken: Can we come up with a set of questions towards helping the Hungarian national body to arrive at some consensus?
- v. Dr. Ken Whistler: ISO does not work that way. As WG2 we may not be able to entertain that Hungarian national body is unable to come up with a position.
- w. Mr. Alain LaBonté: One way to force the issue on the Hungarian national body is take the script out of the ballot.
- x. Mr. Michael Everson: I see no way to present to the group that is opposing the Old Hungarian to accept the rest of the stuff. They will consider this as a victory to stop encoding the script.
- y. Dr. Ken Whistler: One could give them a reason to become part of being able to support its encoding. The explanation to the current supporters of the encoding can be that a name change would be able to take the encoding forward. You have already made the argument that the two parties in Hungary are not going to arrive at a consensus. We may be able go forward with a name change. What I hear as a consensus is WG2 does not want to run with the current content of PDAM 2.2 as it is. One way to move forward is to maintain the current repertoire and encoding but with some concession on the name change.
- z. Mr. Peter Constable: The worst case scenario is that we may end up encoding something that may be useless no matter what the name is. What matters most in the long run is the repertoire.
- aa. Mr. Martin Hosken: Another view is that the people who are opposed to current encoding would perceive it as an invitation to come to the committee and be able to participate.
- bb. Mr. Michel Suignard: In Amendment 1 there were many comments. Rovas was the most suggested as the alternate name.
- cc. Mr. Michael Everson: Could also be Hungarian Runic etc.
- dd. Mr. Alain LaBonté: There is an article from another group in French, with different potential names for it.
- ee. Mr. Michel Suignard: A proposed name change would be Rovas. Can we go forward with it?
- ff. Mr. Peter Constable: Do you think 'Hungarian' or 'Szekely' would be acceptable?
- gg. Mr. Michel Suignard: Rovas is what has been proposed.
- hh. Mr. Michael Everson: Rovas will certainly cause problems.
- ii. Dr. Deborah Anderson: One of the authors has suggested Hungarian Szekely script.
- jj. Mr. Michel Suignard: Original proposal had Hungarian Szekely Rovas.
- kk. Dr. Ken Whistler: Document N4288 states that the name MUST be Rovas. If you propose any other names you are not get them onside. The summary of the two sides is in the contributions in front of us. One group supports what is in PDAM 2.2. The other side says we do not agree with what is in the Amendment. One of the key points is that name MUST

be Rovas. If we want to go forward, one way is to consider the name change, and get the group on board.

- ll. Mr. Peter Constable: We have two choices. We have to take it out of Amendment 2.2 or go ahead with a name change to Rovas.
- mm. Mr. Michel Suignard: We can try to get a name change with the same repertoire into Amendment 2.2.
- nn. Mr. Michael Everson: You will get at least one negative ballot from Ireland if we do that in Amendment 2.

WG2 experts are to consider either pull the script out of Amendment 2 or proceed to DAM with name change to Rovas.

Ad Hoc report is in document [N4374](#).

Mr. Michael Everson: the report gives a review of the ballot comments. There will be an R version and will be translated to Hungarian also. There was no request for changes in the ballot comments. The report highlights the consensus in Helsinki. The ad hoc recommends no changes to the repertoire, from PDAM 2.2. I would like to thank the members of the ad hoc for comments on the ad hoc report. It summarizes the arguments proposed for and against the current choice of script names and character names etc. The ad hoc noted that it may not be possible to find an appropriate name to satisfy everyone. Considerations were given to use of Rovas in particular, and was considered that it will not satisfy all parties. Keeping the current Old Hungarian also would not satisfy all parties. The ad hoc thought simply removing the word 'Old' in front could satisfy all parties, in terms of script and character names. In terms of name differences alternate names in the form of annotations are recommended.

Mr. Peter Constable: The 500 character, it was in PDAM 2, but was removed in PDAM 2.2.

Disposition: Accept the ad hoc report as part of disposition of comments for PDAM 2.2. Note change of script and character names to 'Hungarian' from 'Old Hungarian', moving of four characters, and adding annotations to reflect character name differences.

See item a in the relevant resolution M60.05 below.

Relevant Resolution:

M60.05 (Disposition of ballot comments of PDAM 2.2): WG2 accepts the disposition of PDAM 2.2 ballot comments in document [N4377](#). The following significant changes are noted:

- a. Old Hungarian block:
 - Based on the Old Hungarian ad hoc report in document [N4374](#),
 - Replace 'Old Hungarian' in the names of the block and all the characters in the block with 'Hungarian',
 - Add annotations to names to address potential multiple names, and,
 - Shift down the 5 characters 10CF9..10CFD to 10CFA..10CFE.
- b. Pahawh Hmong block:
 - Split the Pahawh Hmong characters in the range 16B7E..16B8F, and rearrange them in the two ranges 16B7D..16B86 and 16B88..16B8F, and,
 - Add 16B87 PAHAWH HMONG CLAN SIGN PHAB (with its glyph from Irish ballot comment T.3).
- c. Mende and Mende Numbers blocks:
 - Based on the Mende Numbers ad hoc report in document [N4375](#),
 - Move the Mende digits from 1E8D1..1E8D9 in Mende Numbers block to 1E8C7..1E8CF in Mende block,
 - Delete the Mende Numbers block 1E8D0..1E8EF,
 - Extend Mende block by 1 column to end at 1E8DF, and,
 - Add 7 combining Mende number bases at 1E8D0..1E8D6.
- d. Changed the character names for:
 - 20BB from MARK SIGN to NORDIC MARK SIGN,
 - 1F6CD from TWO SHOPPING BAGS to SHOPPING BAGS,
 - 1F3CD from MOTORCYCLE to RACING MOTORCYCLE,
 - 1F3DE from PARK to NATIONAL PARK,
 - 1F6E4 from RAILWAY to RAILWAYS TRACK, and,
 - 1F6CC from BED to SLEEPING ACCOMMODATION.

- e. Moved with name change:
 - 1F3CF RACE CAR to 1F3CE RACING CAR.
- f. Moved without name change:
 - 1F6D0 BELLHOP BELL to 1F6CE,
 - 1F6EE SATELLITE to 1F6F0,
 - 1F6F2 ONCOMING FIRE ENGINE to 1F6F1,
 - 1F6F4 DIESEL LOCOMOTIVE to 1F6F2,
 - 1F6E7 SMALL AIRPLANE to 1F6E9, and,
 - 1F6E9 NORTHEAST-POINTING AIRPLANE to 1F6EA.
- g. Added following **10** characters (see final charts for glyphs):
 - 1F6E6 UP-POINTING MILITARY AIRPLANE,
 - 1F6E7 UP-POINTING AIRPLANE,
 - 1F6E8 UP-POINTING SMALL AIRPLANE,
 - 1F6F3 PASSENGER SHIP,
 - 1F3D6 BEACH WITH UMBRELLA,
 - 1F3D5 CAMPING,
 - 1F6CF BED,
 - 1F3D4 SNOW CAPPED MOUNTAIN,
 - 1F6EB AIRPLANE DEPARTING, and,
 - 1F6EC AIRPLANE ARRIVING.
- h. Deleted the following **3** characters:
 - A78F LATIN LETTER MIDDLE DOT in Latin Extended-D block (moved it into the text of next committee stage ballot),
 - 2B74 LEFT RIGHT TRIANGLE-HEADED ARROW TO BAR, and,
 - 2B75 UP DOWN TRIANGLE-HEADED ARROW TO BAR
- i. Several glyphs are changed arising out of disposition of the ballot comments above. The final code positions, glyphs and names are in the charts in document [N4380](#).

9.2.2 Feedback on Siddham proposal

Input documents:

- [4361](#) Feedback on Siddham proposal (WG2 N4294); Suzuki Toshiya; 2012-10-12
- [4369](#) Feedback on N4361 on Siddham; Debbie Anderson; 2012-10-22

Mr. Tetsuji Orita; Japan national body (in document [N4361](#)) is wondering about the glyph shapes between Korean / Japanese shapes etc. Should they be different code points or different glyph shapes?

Discussion:

- a. Dr. Ken Whistler: Document [N4361](#) is really asking a number of questions that need resolution. Document [N4369](#) contains the response: There are many many variants. A summary is to be found in Section 3 on page 2 and in Section 5. There is no need to represent style variants. Some of these are used only by a single master. Section 5 addresses the systematic regional variants versus personal preferences such as Japanese, Korean etc. The conclusion here is that these should be handled by fonts. It allows text to be represented consistently and allows the regional variants to be dealt with by fonts. It is consistent with what we have done in 10646 in several such scripts with regional variants.
- b. Mr. Michel Suignard: We can keep the script in the ballot. Mr. Suzuki Toshiya's questions have been responded to by one of the proposers of the script. Comments can be made in DAM 2 round.
- c. Dr. Deborah Anderson: On the history of this proposal - it has been going around for almost 9 months – and the proposal has been sent to Mr. Masahiro Sekiguchi also.
- d. Mr. Michel Suignard: Is that ok with Japan?

Action item: Experts to take note. Mr. Tetsuji Orita to communicate result of discussion to experts in Japan.

10 Script contributions not related to ballots

10.1 Carried forward

[N4016](#) - Balti 'B'; [N3842](#) - Balti scripts; [N4121](#) - Bhaiksuki; [N4140](#) - Dhimal; [N3848](#) - Dhives Akuru; [N4119](#) - Diwani Numerals Model; [N4122](#) - Diwani Siyaq Numbers; [N4079](#) - English Phonotypic Alphabet (EPA); [N4123](#) - Indic Siyaq ; [N4130](#) - Introducing 'Khatt-i Baburi'; [N4028](#) - Jenticha; [N4018](#) - Khambu Rai; [N4019](#) - Khema; [N4037](#) - Kirat Rai; [N3762](#) - Kpelle; [N3768](#) - Landa; [N3961](#) - Logographic Pau Cin Hau; [N4036](#) - Magar Akkha; [N4032](#) - Marchen; [N4118](#) - Model for Numerals of the Ottoman Siyaq System; [N4117](#) - Model for Raqm Numerals; [N4160](#) - Mongolian Square; [N4128](#) – Moon;; [N3695](#) - Obsolete Simplified Chinese Characters; [N3288](#) - Old Yi; [N4124](#) - Ottoman Siyaq ; [N4125](#) - Persian Siyaq; [N3874](#) - Pyu; [N4077](#) - Sources for the Encoding of Jurchen; [N3963](#) - Tikamuli; [N3811](#) - Tolong Siki; [N4025](#) - Tulu; [N4146](#) - Woleai; [N4044](#) - Zou; ; [N4156](#) - Annotations for Bengali ISSHAR; [N4168](#) and [N4163](#) - Azerbaijani Manat currency sign; [N4148](#) - Bengali annotations; [N4212](#) - Combining decimal digits above; [N4207](#) - Disunifying Emoji symbols for the Western zodiac; [N4213](#) - Four historic Latin letters for Sakha (Yakut); [N4011](#) - Heraldic hatching characters; [N4208](#) - Historic currency signs of Russia; [N4162](#) - Latin letters used in the Former Soviet Union; [N4210](#) - Linguistic Doubt Marks; [N4209](#) - Low One Dot Leader; [N4174](#) - Metrical symbols; [N4215](#) - TELUGU LETTER RRRRA; [N4211](#) - Two Greek modifier letters for Critical Apparatuses.

10.2 New Scripts or Blocks

10.2.1 Final proposal to encode Anatolian Hieroglyphs

Input document:

[4282](#) Final proposal to encode Anatolian Hieroglyphs; SEI - Michael Everson and Deborah Anderson; 2012-07-15

Mr. Michael Everson: Welcome to world of Animal Crackers. Ancient Hittites had the charming characters which looked like Animal Crackers. It is a hieroglyph script, and has logographs, readings etc. -- It is a complex script. A number of readings. Words could be written with pieces of the logographs in different ways. Word division character is used. The encoding is based on catalog of a number of different sources, including the original 1960 Emmanuel Laroche's work. Some of the characters were glyph variants of others. They are included for decipherment of texts by indo-European linguists. Character names are by catalog numbers. There is one productive combining mark to add RA or RI sound (U+145B1). It can be applied pretty much to any character. There are three characters having catalog numbers that have been given canonical decompositions. Tri or Tra 145B9 for example. The combining mark can be rendered horizontally or vertically. The script had other names. Anatolian Hieroglyphs is the generic one. We tried to make the names as concise as possible. There are cross references to other names. The proposal has been reviewed several times. We have the font based on drawings by Messrs. Marazzi and Laroche. The greyed lines are differences between earlier proposal and new proposal.

Discussion:

- a. Mr. Peter Constable: Directionality – there are some passing references to combining marks. It can be written left to right or right to left or boustrophedon. For modern texts we have standardized to linear form. With reference to combining marks - you mentioned some pre-composed ones. Sometimes it is attached to right or below etc. Can you give some examples of below?
- b. Mr. Michael Everson: On page 22, Figure 2, Sa ri, Figure 6 on page 25 and Figure 7 Tara for example. The reason for pre-composed form is because they are used in the catalogue directly. We have proposed decompositions.
- c. Dr. Ken Whistler: How is it different KSHA in Devanagari, which can be decomposed; and not coded separately? Why can't we do the same for the pre-composed ones?
- d. Mr. Michael Everson: if you are adding a combining character, we can do the same for pre-composed character with decompositions. The user community wants these with catalogue numbers. It is not the same as others such as Lithuanian etc. We have done for Chakma etc.

- e. Mr. Peter Constable: It is the case that if we are adding pre-composed, we have to provide a decomposition later. But it is not a given that the pre-composed form will be encoded if it can be represented by sequences.
- f. Dr. Ken Whistler: Why do the users require a single character encoding for the pre-composed characters in the catalogue? Why can't these be sequences?
- g. Mr. Michael Everson: The proposal has been coming down the pipe; we have discussed this. The user community is looking for atomic encoding for all the items in the catalogue; for example, 8389. It is a bad idea to go for sequences.
- h. Dr. Ken Whistler: Character 8389 can be represented by a sequence in the standard. We have Cuneiform catalogue characters which are represented by sequences.
- i. Mr. Michael Everson: The combining mark binds to base characters in certain ways.
- j. Mr. Peter Constable: Decomposition etc. adds complexity to encoding.
- k. Mr. Martin Hosken: How about searching operations etc. Looking for the symbols, click on it and it is simpler for the search operations etc.
- l. Mr. Michel Suignard: The open question is about three pre-composed characters and associated decomposition. What is the US position?
- m. Dr. Ken Whistler: Right now we are asking the question - why can't we use sequences for these three also when we are using sequences for many other combinations as well. We need not introduce the normalization complexity.
- n. Mr. Martin Hosken: The character picker would be use d; need not be generating sequences. Especially in search operations. The glyphs for catalogue numbers will not correspond to UCS code point.
- o. Dr. Ken Whistler: Putting three characters with normalization requirements is asking for trouble. For all other purposes it behaves using sequences, except for the three. I think it is wrong. There were bugs in ICU implementation for Chakma because the canonical equivalences were not considered in the implementation. My concern is that we are introducing complications and it is not clear to me that we are doing a service to the user community.
- p. Mr. Michel Suignard: I don't think it is a serious issue.
- q. Dr. Deborah Anderson: I will ask the experts and we can check if named sequences can be used for the three that exist in the catalogue.
- r. Mr. Martin Hosken: The issue will be that the user community has now to be cognizant about normalization.
- s. Mr. Michel Suignard: I would suggest we go with the full set, and ballot comments can be entertained.
- t. Dr. Deborah Anderson: The user community was OK with a UTN about character annotations, which can be edited independently.

Action item: Dr. Debbie Anderson and Mr. Michael Everson are to follow up with experts re: combining sequences for 144F0, B9 and F8 at the end of section 4 on page 3.

Disposition: Accept 583 hieroglyphs in a new block Anatolian Hieroglyphs 14400-1467F; the charts are on pages 9-11, the code points their names and glyphs from document N4282. It includes one combining character; for the next edition.

See relevant resolution M60.08 below.

Relevant Resolution:

M60.08 (Anatolian Hieroglyphs): WG2 accepts to create a new block named Anatolian Hieroglyphs in the range 14400 to 1467F, and populate it with 583 characters in code positions 14400 to 14646, with their names and glyphs as shown in document N4282.

10.2.2 Ahom Script

Input document:

[4321](#) Revised Proposal to add the Ahom Script; Martin Hosken, Stephen Morey; 2012-09-14

Mr. Martin Hosken: Ahom is a Brahmic script used in North East India. It is found in old dead material, but is being revived a little bit. It has interesting digits including a character for number 20. It is the revised proposal replacing earlier preliminary proposals. This revised proposal accommodates some of the comments from the UTC. There is no standard sort order. The sort order has been adjusted from before.

Discussion:

- a. Dr. Ken Whistler: Page 6 last paragraph, it says the relative block order is Consonant, Vowels and Medials and in the charts show different order. What does block order in sorting mean?
- b. Mr. Martin Hosken: Take Consonant, Vowel and Medial for sorting. The term block order is confusing perhaps.
- c. Dr. Ken Whistler: I would like to understand what is being asked for taking this into the default ordering tables in 14651. I would suggest specify the collation order in a format similar to other proposals, such as A<Z<1<0 kind of format.
- d. Dr. Deborah Anderson: I have some editorial changes that I can provide to Mr. Martin Hosken.
- e. Mr. Michel Suignard: Do these changes affect the repertoire? The document can be edited to address the other concerns. The font looks like hand written.
- f. Mr. Martin Hosken: The glyphs are like as shown. There is a font for the script. Mr. Michael Everson will assist in getting the fonts in place.
- g. Mr. Peter Constable: Section 2.1 – you have the combination UI for example. What is happening with Sign Virama here? Is it the way it is written here?
- h. Mr. Martin Hosken: We are discovering usage of Virama to get the final vowel. Leke is another example. Thai is an extreme example.
- i. Mr. Peter Constable: Why is that thing called a Virama? Are there other instances where it is used as a killer
- j. Mr. Martin Hosken: It is a letter with a killer property. I expect the preliminary proposals to be read.
- k. Mr. Michael Everson: Revised name for AHOM DIGIT ZERO to AHOM DIGIT NINE; AHOM NUMBER TEN and AHOM NUMBER TWENTY. If the Virama character does not have stacking behaviour it should be called a killer.
- l. Dr. Deborah Anderson: We had provided some feedback regarding the properties for Numbers and Digits. It is not reflected.
- m. Mr. Martin Hosken: I missed those. In Section 2, I will clarify there is no conjoining behaviour for Virama.
- n. Mr. Michel Suignard: We can await a revised document N4321R before end of the meeting.

Disposition: Accept 57 characters in a new block AHOM 11700 .. 1173F with glyphs, (revised) names and their code points from document N4321R for the next edition.

Relevant Resolution:

M60.09 (Ahom script): WG2 accepts to create a new block named Ahom in the range 11700 to 1173F, and populate it with 57 characters in code positions 11700 to 11719, 1171D to 1172B, and 11730 to 1173F, with their names and glyphs as shown in document N4321.

10.2.3 Multani Script

Input document:

[4159](#) Multani; Anshuman Pandey; 2012-09-25

Dr. Deborah Anderson: Document N4159 is a revision of an earlier proposal of 2011. It replaces several previous documents. It is a historic script, now obsolete. It was used to write Seraiki (also known by several other names) in Northern Punjab, Northern Sindh etc. There are no dependent vowel signs or conjuncts in the script. Numbers are NOT separately encoded. Gurumukhi digits are used. One section mark – punctuation. No dandas are shown in usage in any of the examples.

Disposition: Accept new block Multani 11280-112AF. Glyphs and names as in Figure 1 on document N4159 for the next edition.

Relevant Resolution:

M60.10 (Multani script): WG2 accepts to create a new block named Multani in the range 11280 to 112AF, and populate it with 38 characters in code positions 11280 to 11286, 11288, 1128A to 1128D, 1128F to 1129D, and 1129F to 112A9, with their names and glyphs as shown in document N4159.

10.2.4 Proposal for early dynastic Cuneiform

Input document:

[4278](#) Proposal for Early Dynastic Cuneiform; UC Berkeley Script Encoding Initiative - Authors: Michael Everson, C. Jay Crisostomo, and Steve Tinney; 2012-06-13

Mr. Michael Everson: Cuneiform is already encoded for the classical form. Earlier forms were not sufficiently examined in the previous proposal about 10 years ago. This contribution in document [N4278](#) addresses characters from earlier period. The glyphs chosen are harmonized with later period. Earlier forms look more pictorial; for example 124CE (a Fish). The glyph in the older form even looks more like a fish. A number of names have the form LAK-*nnn*. LAK is not a syllable – it is a catalog number. There are 197 characters proposed. These have been reviewed by experts – Messrs. Jay Cisostomo and Steve Tinney.

Discussion:

- a. Mr. Peter Constable: 124E4 – looks like a Weber Barbecue with coals fallen over. Curious to know how to deal with the widths of the glyphs.
- b. Mr. Michael Everson: The glyphs will be adjusted to fit within the boxes of the charts.
- c. Mr. Peter Constable: This proposal has been reviewed by the UTC and has been accepted.

Disposition: Accept 197 –characters in a new block Early Dynastic Cuneiform .. 12480..1254F, with character names and glyphs (adjusted) from document [N4278](#); for next edition.

Relevant Resolution:

M60.11 (Early Dynastic Cuneiform script): WG2 accepts to create a new block named Early Dynastic Cuneiform in the range 12480 to 1254F, and populate it with 197 characters in code positions 12480 to 12544, with their names and glyphs as shown in document [N4278](#).

10.2.5 Nūshu script

Input documents:

[4341](#) Updated proposal for encoding Nyushu (Nūshu); China NB - Zhao Liming; 2012-09-10

[4366](#) Input on encoding Nūshu; Michael Everson; 2012-10-19

Output document:

[4376](#) Nūshu ad hoc report; Nūshu ad hoc group; 2012-12-24

There was an ad hoc group to discuss the proposal and the feedback on it, with Mr. Tero Aalto as the lead.

Mr. Tero Aalto: We went through the proposals and comments. We arrived at some consensus on a few items. Some corrections will be done to the proposal.

Discussion:

- a. Mr. Peter Constable: Will a corrected document be made available at the end of this meeting.
- b. Mr. Michael Everson: I am making the two corrections – I am working on them. There are items such as checking if the character with nn strokes would be the correct one to use or not etc. It would be something we could check when it is under ballot.
- c. Mr. Peter Constable: Do we have any plans to initiate an amendment to the next edition at this meeting. There will be too many documents to deal with and maintain.
- d. Mr. Michel Suignard: Typically it would take at least one cycle before we can initiate an amendment for the 4th edition. I have no problem in generating a bucket document towards the first amendment for the 4th edition.
- e. Mr. Peter Constable: If the revised proposal goes into a bucket document there will not be a loss from time point of view.
- f. Mr. Michael Everson: There is nothing like a ballot to focus on a proposal.
- g. Mr. Tero Aalto: Besides the two corrections Mr. Michael Everson is making now, Dr. Deborah Anderson was mentioning a thorough check of the revised proposal for any further errors.
- h. Mr. Michael Everson: An example such as Fang being Fang-13 or Fang-42 etc. would end in a name change and possibly reordering.
- i. Dr. Ken Whistler: I am also of the opinion that this proposal is not mature enough. Any change that would end up in reordering etc. would not be the kind of thing we should entertain as a ballot comment.
- j. Dr. Deborah Anderson: I have a list of about 23 questions that I could not find answers on.
- k. Mr. Michel Suignard: Would it be OK with China, to have a revised document before the next meeting? At the next meeting we could progress it as an Amendment 1 to next CD.
- l. Dr. Deborah Anderson: After participating in the ad hoc, I am hesitating to put this on ballot yet. I will be much more comfortable to check for the details of changes in a revised document before we proceed to ballot.

The ad hoc report is in document [N4376](#).

m. Dr. Deborah Anderson: China is going to make some changes from this ad hoc. Will there be a joint China/Irish joint contribution?

n. Mr. Chen Zhuang: I thought there will be a joint contribution.

Mr. Michael Everson: We need to recheck everything against the source material. We can communicate before the next meeting, work together and produce a joint national body contribution for the next meeting. WG2 needs a document to take it forward.

Disposition: Invite China and Ireland to produce a revised document for next meeting.

Relevant Resolution:

M60.20 (Nüshu): WG2 invites China to produce a revised proposal, working with other interested parties, taking into consideration the recommendations in the Nüshu ad hoc report in document [N4376](#).

10.2.6 Nepaalalipi/Newar

Input documents:

- [4184](#) Proposal to Encode the Newar Script; Anshuman Pandey; 2012-01-05
- [4322](#) Proposal for Nepaalalipi script; Dev Dass Manandhar, Samir Karmacharya, Bishnu Chitrakar; 2012-02-05
- [4347](#) Proposal to Encode Nepal Himalayish Scripts; Patrick Hall; 2012-10-08
- [4372](#) Letter in support of N4184 and encoding the Newar script; Iain Sinclair; 2012-10-22

Dr. Deborah Anderson: There are two main proposals for this script - documents [N4184](#) and [N4322](#). There is a disagreement on the name of the script, and some differences in some details. Mr. Anshuman Pandey is visiting Nepal to resolve the differences. I recommended the two groups to talk to one another towards coming up with a consensus proposal. Meanwhile there is a third proposal in [N4347](#) named Himalayish script. The UTC had seen both Newar and Nepaalalipi and had provided some earlier feedback, and has requested coordinating. I would like to have WG2 feedback particularly on [N4184](#).

Discussion:

- a. Mr. Michael Everson: I have given feedback to [N4347](#) to Pat Hall that it is non-starter.
- b. Mr. Michel Suignard: There is another contribution posted to WG2 site [N4372](#) providing some feedback on [N4184](#).
- c. Mr. Michael Everson: We could go over some of the technical issues between the proposals at this meeting.

Disposition: Carry forward.

Action item: Invite national bodies to review and feedback on all proposals.

10.2.7 Hatran script

Input document:

- [4324](#) Preliminary proposal for encoding the Hatran script; SEI – Everson; 2012-09-25

Mr. Michael Everson: Hatran is the northernmost of family of Aramaic scripts that was in use approximately 100 BCE to 240CE. It is a simple script with lots of ligatures. There is no script grammar - touching horizontal to next vertical etc. Some examples are shown. Fonts may choose to ligate the glyphs. Certain letters fall together. The Resh and Daleth were pretty well indistinguishable. Original users of the script considered these to be separate, instead of Daleth-Resh being a single character. We decided to distinguish between these; glyphs are slightly distinguished by the tail of Resh being taller than for Daleth. Similar items occurred in Imperial Aramaic. There are numbers following usual pattern of Phoenician and Aramaic scripts. There is a special ligature for 500. Ligation is sometimes used; it is not obligatory.

Discussion:

- a. Dr. Deborah Anderson: A revised proposal would be beneficial. Remove 'preliminary' from title.
- b. Dr. Ken Whistler: Aramic to Aramaic. Fix typos.
- c. Mr. Peter Constable: Regarding Daleth and Resh - in two different places DA and RA consonants - you invented the glyphs for the code charts. What would be used in practice?
- d. Mr. Michael Everson: When they know the reading – for example: Figure 2 - Darel, they know when to write Da and Ra instead of Da and Da etc. Unlike other scripts the readers know how to distinguish.
- e. Mr. Peter Constable: In font implementations following what is in the chart, would the user community end up in using the same glyphs or different glyphs? Are we encoding two characters when one will do? What is the argument for two?

- f. Mr. Michael Everson: We can go back and ask the user community and ask the same question. In inscriptions the two look alike, but not in every inscription. Text in Imperial Aramaic has similar problem. The original native speakers distinguished them. Modern users in different transliterations use them distinctively. If the users say that they don't distinguish between these, we can remove Resh and rename Daleth as Daleth-Resh. They are two in the Abecedary. We could put it on a ballot and await comments.
- g. Mr. Peter Constable: If you make the glyphs contrastive in the chart, the font implementations are going to pick them up. Will that confuse the users?
- h. Mr. Michel Suignard: We could add annotations in the nameslist. People may use the charts - usually annotation may help. Every character we add should be proven.
- i. Dr. Ken Whistler: What case are you talking about when you mentioned that in some eastern Semitic language uses Daleth-Resh as a single character? Only other case of Daleth and Resh was in Syriac.
- j. Mr. Michael Everson: In Inscriptional Pahlavi there is another kind of collapse; two instances for example of wow-ayin-resh 10B65 and 10B6C. Historically they lost the distinction. Also it is possible that there was no notion of distinction. No abecedary.
- k. Dr. Deborah Anderson: Figure 5 shows an example of where they are distinguished. .first word DKYR.

Disposition:

Accept 30 characters from [N4324R](#), in a new block 108E0-108FF – Hatran; for next edition. Fonts are available.

Relevant Resolution:

M60.12 (Hatran script): WG2 accepts to create a new block named Hatran in the range 108E0 to 108FF, and populate it with 30 characters in code positions 108E0 to 108F5, and 108F8 to 108FF, with their names and glyphs as shown in document [N4324](#).

10.2.8 Mwangwego script

Input document:

[4323](#) Proposal to encode the Mwangwego script; SEI – Everson; 2012-09-25

Mr. Michael Everson: Mwangwego script is named for its creator who lives in Malawi. I have direct contact with him. It is designed for writing several languages spoken by about 15 million people. It is being taught in schools etc. Structurally it is a syllabary similar to Ethiopic - an ABUGIDA in structure. The treatment of the vowels is so regular that it did not make sense to have about 300 syllables. Attaching the vowel sign was very regular. For example, b with combining vowels gives you the syllables. Letter KA can be augmented with other spacing modifiers etc. Section 4 shows these. Multiple modifiers can be used on a consonant. They get stacked in Mwangwego. Ligation is not the right thing to do. Stacking is what is used. They are all spacing modifiers and not combining marks. There are font implementations already. There are some non-spacing modifiers as well – without stacking behaviour. Punctuations and numbers are shared with European script – not script specific.

Discussion:

- a. Mr. Michel Suignard: You have a full empty column. Can we collapse it?
- b. Mr. Michael Everson: We don't need to keep that. We can remove it.
- c. Mr. Peter Constable: Being a relatively young script, wondering in terms of stability, what would be the risk that 5 to 10 years from now changes may not happen?
- d. Dr. Ken Whistler: Such as Bamum.
- e. Mr. Michael Everson: I would not think it would be like Bamum. This is fairly sophisticated.
- f. Mr. Peter Constable: Referring to Figures 1 and 2, there is a distinction between modifiers that look like two of the apostrophes; there are also a few curved ones. In free hand writing, will they end up in asking for distinctions due to possible difficulty in writing distinctively? Are the people starting to train or have been in training for years?
- g. Mr. Michael Everson: They seem to be doing this for years by several educators. But there is no government buy-ins etc. They will have a conference on this sometime next year. It is similar to N'Ko, which took some years to get recognized by the government. This is a new thing in Malawi.
- h. Mr. Martin Hosken: One of the criteria would be - if there is a buy in? This seems to in development and not established yet.

- i. Mr. Michael Everson: This script has been around for about 33 years, not just in development.
- j. Mr. Harsha Vijayawardhana: There are about 400 users; how much text content is there?
- k. Mr. Michael Everson: Anatolian Hieroglyphs has only 6 users. I don't have an answer to your question.
- l. Dr. Deborah Anderson: Whether the government going to buy in or not, we don't know yet. Information about this script came from a book - "Survey on African writing systems" by Mr. Jason Levy et al. Personally, we could wait to see if it will take hold or not.
- m. Mr. Martin Hosken: Is this picked up by community itself, and has a life beyond one person promoting it etc.? There are other ways to establish the status. It promotes prestige, it stabilizes it, and so it cannot change. May be this may not change etc. Are these being taught in schools? Is it going to take off for higher literacy rate etc? We ask these questions to determine if this is established or not before we take it up for UCS encoding.
- n. Mr. Michel Suignard: Are we going to have a better answer 6 months from now?
- o. Dr. Ken Whistler: I would like to see this script go by UTC also for comments. As encoded it is a relatively complex script, but not very complicated. It deserves a pass by UTC.
- p. Mr. Michael Everson: WG2 has seen this for the first time. We can wait. Meanwhile we can have conversation with the creator as to the status of the script etc.
- q. Mr. Peter Constable: It would be nice to have confirmation about the status of the script etc. Also some clarification is needed - with all the consonant modifiers; what are the effects of them on collation. You don't have much information regarding collation here. There are questions regarding transliteration, collation etc. related to the modifier letters – there is a mixture of things going on here in terms of the encoding order.

Action item: Mr. Michael Everson is invited to get more information related to the status of the script, its stability, and other clarifications, based on the discussion in the meeting.

10.2.9 Tangut script

Input documents:

- [4325](#) Proposal to encode the Tangut script; Andrew West, Viacheslav Zaytsev, Michael Everson; 2012-10-02
- [4327](#) Code chart for Tangut and Tangut radicals Michael Everson, Andrew West; Andrew West, Michael Everson; 2012-10-02
- [4326](#) Proposal to encode Tangut radicals; Andrew West, Viacheslav Zaytsev, Michael Everson; 2012-10-02
- [4327](#) Code chart for Tangut and Tangut radicals Michael Everson, Andrew West; Andrew West, Michael Everson; 2012-10-02
- [4370](#) Comments on N4325, 4326 and N4327 (Tangut); China NB; 2012-10-20

Mr. Chen Zhuang: (Summarizing the feedback in document [N4370](#)) the set is not complete. Chinese experts believe there are errors. Chinese experts believe the contribution should be reviewed by experts, probably by mid next year. We hope to finish our work by May next year.

- a. Dr. Ken Whistler: Given this feedback it is premature for us take any action on these documents at this time. There are no other Tangut experts at this meeting other than the author.
- b. Mr. Michael Everson: I am unhappy with the Chinese feedback. Mr. Andrew West has provided about 680 pages with two years' worth of work. It addresses all the feedback received from WG2. The font we have does come from China.
- c. Mr. Chen Zhuang: There is a new font being developed by experts.
- d. Mr. Michael Everson: The font we have is just fine. It has been reviewed by several experts in Russia and the UK. If it is a new font it will be just another column.
- e. Mr. Peter Constable: Chinese experts do not feel that they are ready to progress it yet.
- f. Mr. Michael Everson: I will be happy with continuing the dialog; but I am not happy with the expectation that a new font is to be used, having reviewed extensively the existing font. Mr. Andrew West has not had any feedback from China for last several years.
- g. Mr. Michel Suignard: For CJK we have similar issues, and we use the fonts only as a delta to fix errors in the old, and for new characters.
- h. Mr. Martin Hosken: Will the contribution from China show the differences between current proposal and their proposal? If they do not, we will end up in further delays.
- i. Mr. Michael Everson: We would like input from China much earlier that just two weeks prior to the Lithuania meeting.
- j. Mr. Martin Hosken: I would like China to send whatever feedback they have to the authors.
- k. Mr. Michael Everson: Can we get the email addresses of the Chinese experts?
- l. Mr. Chen Zhuang: Yes.

Action item: China is invited to provide whatever feedback they have to date to the authors as early as possible, and to ensure that a comparison is made between their new font with current font.

10.2.10 Symbols for Mediæval East-Slavic Musical Notation

Input document:

[4362](#) Proposal to Encode Mediæval East-Slavic Musical Notation; Aleksandr Andreev, Yuri Shardt, Nikita Simmons; 2012-10-12

Document [N4362](#) is a revision of document [N4206](#) (which was moved out from agenda item 10.1). It asks for 7 characters in the Musical Symbols block 1D1xx.

Discussion:

- a. Dr. Ken Whistler: From the 12 previously requested characters, based on feedback it is now 11, with a changed name.
- b. Mr. Michael Everson: We have the font. These are not duplicates of any existing ones. The Sharp Sign, even though looks slightly different, is unified with existing ones. They have done due diligence on it, and I am happy with it.
- c. Dr. Deborah Anderson: Some of the feedback sent to the authors - was " .. stem down and stem up with quarter note ... be encoded separately".
- d. Mr. Michael Everson: In common notation directionality is denoted by the position.
- e. Dr. Ken Whistler: UTC had sent some feedback to the authors. We have not seen the revised document. There were a number of small points, which are part of the discussion.

Disposition: Accept 11 characters with their names, glyphs and code positions from document [N4362](#) for next edition.

Relevant Resolution:

M60.14 (East-Slavic Musical symbols): WG2 accepts to add 11 characters to the Musical Symbols block, with their names, glyphs and code points from document [N4362](#).

10.2.19 Introduction to additional scripts from Southern China

(A presentation was made by Ms. Zhang Yan, an expert from Tsing Hua University, Beijing, China. No written contribution has been submitted to WG2 document register.)

Ms. Zhang Yan: In southern china, there are many scripts of ethnic minority people, in areas bordering Tibet etc. The Tsing Hua University people have gone to these regions, are working with these endangered scripts. Since very few people exist with the corresponding knowledge, we want to preserve these. Several examples were shown. We think these can be encoded. Older people can read them and explain them; we want to record these and preserve these. Some initial work showing Glyphs, pronunciation and the Chinese name for them were shown. We would like to get some input from WG2 towards being able to encode these in the standard. We have collected the findings so far in a book that would be published soon.

Discussion:

- a. Mr. Peter Constable: Can you clarify the relationship between these various groups? Would one group's writing have been influenced by another group?
- b. Ms. Zhao Liming: There are many similarities between the various groups. Their language is part of Tibetan based languages. They do have some interaction; but we are still studying those.
- c. Mr. Peter Constable: Any interaction with the Naxi-Dongba?
- d. Ms. Zhao Liming: Yes. But we do not know the precise relationship.
- e. Mr. Peter Constable: It appears that before you proceed with any encoding proposals, you need to understand the relationship with Naxi-Dongba. Considerations similar to Naxi-Dongba would be applicable to these new scripts. You would need to sort out when characters can be identified, when they are glyph variants etc. Their writing systems are different from Dongba script.
- f. Ms. Zhao Liming: We are still doing the research. We do not know yet.
- g. Mr. Peter Constable: Once you have understood the structure of each script, some additional analysis would need to be done as to their relationship to one another etc. You may have to take a look at these as a collection of scripts.
- h. Mr. Michel Suignard: There are several examples of pictographic encoding systems. You can take a look at those for kind of information provided. Principles and procedures document can also be referenced.

10.3 Additions to Existing Scripts or Blocks

10.3.1 Additions to Sharada script

10.3.1.1 Signs for writing Kashmiri in Sharada

Input document:

[4265](#) Proposal to Encode Signs for Writing Kashmiri in Sharada; Anshuman Pandey; 2012-04-23

Dr. Deborah Anderson: One of a set of characters for Sharada that is already encoded. Proposes three combining marks postponed from earlier proposal. We have additional information in the document. These are used in Kashmiri for writing Sanskrit.

Discussion:

- a. Mr. Michel Suignard: Are these urgent? Sharada script is in Amendment 2.
- b. Dr. Ken Whistler: Let us talk about that point after all the Sharada characters are considered together. This particular proposal has already been reviewed by the UTC, and has been accepted for a future version of the Unicode standard.

Disposition: Accept the 3 characters 111CA Sharada Sign Nukta, 111CB Sharada Vowel Modifier Mark, and 111CC Sharada Extra Short Vowel Mark, with their glyphs from document N[4265](#).

(After considering the different proposals on Sharada characters under items 10.3.1, it was later decided -- under 10.1.6 - to put all the new Sharada characters in the next CD, instead of Amendment 2.)

See item a in relevant resolution M60.15 on page 38.

10.3.1.2 Headstroke character for Sharada

Input document:

[4337](#) Proposal to encode the HEADSTROKE for Sharada; SEI – Anshuman Pandey; 2012-09-29

Dr. Deborah Anderson: This is a proposal for one character. It is similar to Devanagari headstroke, but it is used in Sharada script for indicating continuation of a word in Kashmiri, unlike in Devanagari.

Discussion:

- a. Mr. Michael Everson: It looks like a Tatweel; we do not encode every possible paleographical mark.
- b. Mr. Peter Constable: There is a mark there and they want to record that.
- c. Dr. Ken Whistler: Devanagari has the same mark, but used in a different sense. Instead of some gap, it indicates a continuation or close-up mark in editing. It is not a stray mark like in Paleography.
- d. Mr. Martin Hosken: There are dozens of these in Palm Leaf manuscripts. We do not encode these.
- e. Dr. Ken Whistler: We have started down the road of encoding several of these for Devanagari; examples are Devanagari caret, head mark, extended mark etc.

Disposition: Accept 111DB SHARADA HEADSTROKE with glyph in document N[4337](#).

See item b in relevant resolution M60.15 on page 38.

10.3.1.3 Siddham sign for Sharada

Input document:

[4331](#) Proposal to Encode the Sign SIDDHAM for Sharada; SEI – Anshuman Pandey; 2012-09-27

Dr. Deborah Anderson: This is a proposal for another character SHARADA SIGN SIDDHAM.

It is a head mark used in Sharada records, representing salutary phrases such as OM, SIDDHAM, and SVASTI.

Discussion:

- a. Mr. Peter Constable: For Phags-Pa we had the same cognate symbol, and decided on encoding another one. There are head marks also in several other scripts - Phags-Pa, Tibetan etc. It begs the question similar to the Dandas question. Do we want to go the path of script-specific Head Marks?
- b. Dr. Ken Whistler: The precedence for these, if it occurs in a script, we encode it as part of that script.
- c. Mr. Tetsuji Orita: The first character in Figure 2 is different.
- d. Mr. Peter Constable: First character in Figure 1 is another shape.
- e. Dr. Ken Whistler: Section 3 explains that there are different glyphs possible and one of these chosen as the representative glyph.

Disposition: Accept 111DC SHARADA SIGN SIDDHAM with glyph from document N4331.
See item c in relevant resolution M60.15 on page 38.

10.3.1.4 Sandhi mark for Sharada

Input document:

[4330](#) Proposal to Encode Sandhi Marks for Sharada; Anshuman Pandey; 2012-09-27

Dr. Deborah Anderson: Proposes a single character SHARADA SANDHI MARK is used to indicate external Sandhi in Sanskrit.

Mr. Michael Everson: It acts a Devanagari caret mark.

Disposition: Accept 111C9 SHARADA SANDHI MARK with glyph from document N4330.

See item d in relevant resolution M60.15 on page 38.

10.3.1.5 Continuation sign for Sharada

Input document:

[4329](#) Proposal to Encode the CONTINUATION SIGN for Sharada; Anshuman Pandey; 2012-09-27

Dr. Deborah Anderson: Proposes a single character SHARADA CONTINUATION SIGN to indicate word break at the end of the line.

Discussion:

- a. Mr. Michael Everson: Why can it be not called a WORD BREAK sign? It is discontinuation!
- b. Mr. Michel Suignard: The description needs to be clarified that it is a Hyphenation sign.

Disposition: Accept 111CE SHARADA CONTINUATION SIGN with the glyph as shown in document N4329.

See item e in relevant resolution M60.15 on page 38.

10.3.1.6 Section marks for Sharada

Input document:

[4338](#) Proposal to encode section marks and gap fillers for Sharada; Anshuman Pandey; 2012-09-30

Dr. Deborah Anderson: This is a proposal two characters – section mark-1 and section mark-2. Was in the original proposal but postponed.

Dr. Ken Whistler: Since people are asking questions, it would be better to put all the above Sharada characters in CD.

Disposition: Accept 111DD SHARADA SECTION MARK-1 and 111DE SHARADA SECTION MARK-2, with glyphs in document N4338.

See item f in relevant resolution M60.15 below.

Relevant Resolution:

M60.15 (Additions to Sharada script): WG2 accepts to add the following 9 characters to the Sharada block:

- a. 3 characters for writing Kashmiri:
111CA SHARADA SIGN NUKTA,
111CB SHARADA VOWEL MODIFIER MARK, and,
111CC SHARADA EXTRA SHORT VOWEL MARK,
with their glyphs from document N4265.
- b. 111DB SHARADA HEADSTROKE, with its glyph from document N4337,
- c. 111DC SHARADA SIGN SIDDHAM, with its glyph from document N4331,
- d. 111C9 SHARADA SANDHI MARK, with its glyph from document N4330,
- e. 111CE SHARADA CONTINUATION SIGN, with its glyph from document N4329, and,
- f. 111DD SHARADA SECTION MARK-1, and,
111DE SHARADA SECTION MARK-2,
with their glyphs from document N4338.

10.3.2 Symbols of ISO/IEC 9995-7:2009 and its Amendment 1

Input document:

[4317](#) Revised proposal to incorporate the symbols of ISO/IEC 9995-7:2009 and its Amendment 1 into the UCS; SC35 Liaison – Karl Pentzlin; 2012-09-07

Mr. Alain LaBonté: This is a revised version of previous document from SC35. ISO/IEC 9995-7 has been published since then. These symbols are in ISO/IEC Symbols database. It is also in a DIN standard. There are some character name changes in the proposal. A font is free and publicly

available. There is a proposal summary form. We like these characters to be added the standard. It is not urgent.

Discussion:

- a. Mr. Michel Suignard: I need to find where the font is available from; you need to be more precise about it. There are 60 characters and 2 sequences proposed. The proposed locations have to be looked at.
- b. Dr. Ken Whistler: There is a spelling problem for 2439 - the character name. Zero Width Joiner.
- c. Mr. Peter Constable: There was a constraint about getting the standard.
- d. Mr. Alain LaBonté: The request to SC35 was to confirm whether the symbols were in a published standard. The symbols are also in the Symbols database. The perception from SC35 was that UCS will reconsider.
- e. Mr. Peter Constable: There was no assumption that once they are published in ISO/IEC 9995-7 it would be encoded in UCS. WG2 had requested for more evidence as to why they need to be encoded as characters for Plain Text. At Helsinki we did not come to any conclusion as to the rationale.
- f. Mr. Michael Everson: It is true that because that it is published they could be included in the standard. Looking at these I don't have any real objections to these being standardized. I was wondering about the design of some of these symbols.
- g. Dr. Ken Whistler: If I review these as a set of symbols being proposed as characters, I don't have any problems with most of the arrows-based ones; it will be a bunch more of the kind of arrow symbols we have added – if they cannot be unified. The names of these have to be considered. We do have double arrows, but not necessarily the things that are proposed. A review has to be done on the names of arrows. Regarding the symbols that are not based on arrows, for example 2BE1, and a set of Applicator symbols - if these are to be encoded, these are completely *de novo*. There is no prior art for these. We could annotate these as Keyboard symbols. Graphic descriptors of these symbols would be more appropriate as character names. A mathematician, for example, could grab these graphical symbols and use it for their purposes. Starting on p 3, - in the 24xx block, the set of symbols are dubious for encoding as characters. These may be OK as Keyboard symbols. Every format control characters on keyboard may not be appropriate without more rationale. The open boxes with something stuck in them are inventions are potentially not candidates as characters. We do have mechanism with Fallback Symbols in the standard. Combining open box could be entertained as part of the technical overlay symbols. If we do that, a number of the symbols would go away from the list. These changes could be palatable for review at the UTC.
- h. Mr. Michel Suignard: The Fn is enclosed in box. The solution would be to encode Fn as a combination with a combining box around it.
- i. Mr. Alain LaBonté: These do appear in fonts.
- j. Mr. Peter Constable: if we go in the direction of 'letter sequence etc' within a box, should we entertain other sequences within a box? Just because these come from an international standard they may be candidates for encoded as characters. Fonts do have several of these as well.
- k. Mr. Michel Suignard: You may want to split the proposal to those which could be amenable to accepting and others which require more rationale etc. You can work with Mr. Michael Everson and me to synchronize the names of symbols.

Disposition: The proposal needs revision. Request SC35 to provide a revised proposal based on comments received at this meeting. Also national bodies are to review and provide feedback.

10.3.3 Addition of four arrows to get a consistent mapping from ISO/IEC 9995-7 symbols

Input document:

[4318](#) Proposal to add four arrows to get a consistent mapping from ISO/IEC 9995-7 symbols to Unicode; Karl Pentzlin; 2012-09-10

Mr. Alain LaBonté: Four arrows from 9995-7 are proposed to be added - in section 2.

Discussion:

- a. Mr. Michel Suignard: I do not necessarily agree with removing the annotations as proposed in section 3. The glyphs need to be looked at.

- b. Mr. Michael Everson: The names should be also double-checked to be consistent with names for other arrows.
- c. Dr. Ken Whistler: It would also help with the allocation issues, if these proposed characters were bundled with the revision of [N4317](#) (from previous discussion - see section 10.3.2).

Disposition: Need more rationale.

Action item: Invite the authors to submit a revised proposal.

10.3.4 Addition of ten Latin characters

Input document:

[4297](#) Proposal for the addition of ten Latin characters; Michael Everson, Denis Jacquerye, Chris Lilley; 2012-07-26

Mr. Michael Everson: This document is a confluence of many contributions. In addition to Turned K and Turned T, Capital CHI and Capital Letter Small Capital I are also used in Unifon. BETAs, OMEGAs, Capital Letter Small Capital I are used in Gabonese in Africa. Small capital letter I is already encoded. Capital Letter Small Capital I is uppercase version of x026A which is contrasted with ASCII I. The Omegas and Betas are not related to Greek and cannot be unified with those. The Tau Gallicums have some glyphs with the lines going through. Examples of upper case are shown. The small ones would probably be used today for cased text. Capital letter CHI is a case pair of x026A (used in Teuthonista). Cannot be unified with Greek.

Discussion:

- a. Mr. Michel Suignard: Two of the proposed characters - Turned K and Turned T- are already in PDAM 2.2. The other 8 characters are to be discussed. There are several stroked Ds already.
- b. Dr. Ken Whistler: Capital CHI seems to be foregone conclusion now that we have the small letter Chi. Evidence in Gabonese justifies the Betas and the Omegas. Small Capital I could be dangerous! This is being invented as a character that looks like an I. You are planning to use it with Unifon based on its use in Gabonese. The UTC was not in favour of the Capital of Small Capital I. Due diligence is required on this, especially for users of Latin script with I. Messing with Latin letters such as I is very sensitive. The justification has to be more substantive than sample of use, showing impact on existing use of Latin script.
- c. Mr. Martin Hosken: How do we go forward on this?
- d. Dr. Ken Whistler: I expect people to provide more rationale especially users of Latin script in particular. Antiquarian uses of Latin like letters are problematic and there is a push back by major implementers of the Latin script.
- e. Mr. Martin Hosken: How can they express in concrete terms their concerns and if necessary how one can find alternative means? Is this coming from the UTC membership?
- f. Dr. Ken Whistler: I am trying to convey the kind of feedback from major implementers using the core Latin alphabet. Encoding another I is another troublesome one.
- g. Mr. Peter Constable: The most that can be said that UTC has reviewed these and there is no consensus for beyond the three. Similarly for the D, there is no evidence for use of lowercase Tau Gallicum.
- h. Dr. Ken Whistler: Concern is not as much about the name itself. Creating the Capital letter out of Small Capital I is an artificial one. The shape looks like very much regular uppercase I.
- i. Mr. Michael Everson: The font using Unifon have already this character.
- j. Mr. Peter Constable: Evidence in this document for Small Capital Letter I for Kulango is there. However capital form is invented.
- k. Mr. Michael Everson: I can postpone the TAU GALLICUMs pending providing more evidence. I would like us to proceed with BETAs and OMEGAs, as well as the CAPITAL LETTER SMALL CAPITAL I.

As ad hoc met and discussed the contribution.

Dr. Ken Whistler: First two are already on ballot. After consideration we agreed in the ad hoc that Beta, Omega and Upper Chi can go ahead into ballot. Tau Gallicum and Capital Letter Small Capital I should be postponed for further investigation.

Disposition: Accept with the glyphs from [N4297](#), A7B4 LATIN CAPITAL LETTER BETA, A7B5 LATIN SMALL LETTER BETA, A7B6 LATIN CAPITAL LETTER OMEGA, A7B7 LATIN SMALL LETTER OMEGA, and A7B3 LATIN CAPITAL LETTER CHI.
See relevant resolution M60.17 on page 42.

10.3.5 Request for priority allocation in Latin Extended-D and –E blocks in BMP

Input document:

[4280](#) Request for priority allocation in Latin Extended-D and -E blocks in BMP; Lorna Priest (SIL International) and Deborah Anderson (Script Encoding Initiative); 2012-06-04

Dr. Deborah Anderson: This document requests WG2 to give priority for remaining space in BMP for Latin blocks for case pairs of Latin characters. Otherwise the case pairs may be split between BMP and SMP with undesirable consequences for case conversions.

Discussion:

- a. Mr. Michel Suignard: Should we create a new SIP block for Latin extension F?
- b. Dr. Ken Whistler: The one caveat that is not really expressed here is that there are already case pairs in the UTF-8 representation, where the number of bytes is not constant even within the BMP. Potentially there could be length differences even within the BMP.
- c. Mr. Peter Constable: The bigger concern between BMP and SMP was the older implementations that are BMP only based cannot deal with UTF-16. UTF-8 based implementations would be normally able to deal with variable length code points.
- d. Mr. Michael Everson: Case pairs may or may not be accepted in the course of evaluation. There are some pairs already being proposed. Even if we go for a Latin extension F the software has to deal with case pairs being entirely in SMP. There is also a tendency to come up with uppercase versions of characters that are already in BMP. In principle it may not be possible to avoid but we can minimize such splits across planes. If we were to accept this as a practice there may be some hit on the characters under ballot currently.
- e. Dr. Umamaheswaran: Is there an indication as to how many are in the current BMP?
- f. Mr. Michael Everson: Currently there are 177 potential case pairs as candidates in the future, with 169 free spaces.
- g. Dr. Ken Whistler: We already have a problem of UTF-8 implementation. It is true that old UCS-2 implementations could be broken. They are already broken in many ways. Casing is only one of these potential problems. If we have a UTF-16 implementation, the case mapping currently may not have a problem, and you have a problem with UTF-8 implementations, and we have to deal with a localized case mapping problem etc. the casing string length differences will be encountered any ways. From that perspective the problem expressed in this contribution need not be a worry. I don't want go to the extent of specifying the case pairs. Otherwise we can continue on the current track of filling the blocks as we accept characters. We are going to hit this problem even for UTF-16 implementations sooner or later. We should continue with current approach. It is quite clear that for default case mapping string lengths do not change with UTF-16 using only BMP. If we cross plane boundaries string lengths cannot be maintained.
- h. Mr. Peter Constable: All versions of API supporting only BMP will have a hit.
- i. Dr. Umamaheswaran: If there is no strong rationale we should continue to do what we are doing now. There is no need for going to a Latin Extension F in the SMP.
- j. Mr. Michel Suignard: There is no consensus for any policy or practice; so we will not accept this proposal.
- k. Mr. Martin Hosken: Did UTC consider this contribution.
- l. Mr. Peter Constable: If UTC had agreed with a need for such a policy we would have supported it. We recognize there is a potential concern.

Disposition: Not accepted.

10.3.6 Meroitic numbers

Input document:

[4276](#) Proposal for encoding Meroitic numbers; UC Berkeley Script Encoding Initiative - Michael Everson; 2012-06-06

Mr. Michael Everson: In 2009 we had reviewed the Meroitic numbers. We postponed these just before we were going to put these in a ballot. There was some new evidence that forced the scholars to revise the understanding of the numbers. The proposal is based on Mr. Jochen Hallof's analysis. Two holes top of column at 109D0 and 109D1 that were meant for 80 and 90, which are not attested. The section numbers are cut and pasted from original.

Discussion:

- a. Dr. Deborah Anderson: The feedback from scholars I have consulted is that this proposal is solid, except for the holes at the top.
- b. Dr. Ken Whistler: We had approved the old set in the UTC. We have to revisit based on the new proposal.

Disposition: Accept. 64 characters in Meroitic Cursive block - 109BC, 109BD, 109C0..109CF, 109D2..109FF; with names and glyphs from document [N4276](#); for next CD.

Relevant Resolution:

M60.16 (Meroitic numbers): WG2 accepts to add 64 characters to the Meroitic Cursive block, at code positions 109BC, 109BD, 109C0 to 109CF, and 109D2 to 109FF, with their names and glyphs as shown in document [N4276](#).

10.3.7 “Unifon” and other characters

Input document:

[4262](#) Proposal to encode “Unifon” and other characters; UC Berkeley Script Encoding Initiative - Michael Everson; 2012-04-29

Dr. Ken Whistler: There are still some disagreements about the detail. There is some impact due to actions already taken (see discussion under section 10.3.4 on page 40. We should await a revised document based on discussion in the ad hoc at this meeting.

Action item: Authors are invited to revise the document based on ad hoc discussion at this meeting.

10.3.8 Siddham sign for Devanagari

Input document:

[4260](#) Proposal to Encode the Sign SIDDHAM for Devanagari; Anshuman Pandey; 2012-04-23

Dr. Deborah Anderson: This is a proposal for single character for Devanagari Sign Siddham. Similar to Sharada Sign Siddham. Government of India has requested the UTC to wait on this one.

Mr. Peter Constable: They can comment during ballot.

Disposition: Accept A8FC DEVANAGARI SIGN SIDDHAM with glyph from document [N4260](#).

See *relevant resolution M60.17 below*.

Relevant Resolution:

M60.17 (Miscellaneous character additions) WG2 accepts to add the following:

- A8FC DEVANAGARI SIGN SIDDHAM, to the Devanagari Extended block, with its glyph from document [N4260](#);
- 0D5F MALAYALAM LETTER ARCHAIC II, to the Malayalam block, with its glyph from document [N4312](#);
- A7B2 LATIN CAPITAL LETTER J WITH CROSSED-TAIL, to the Latin Extended-D block, with its glyph from document [N4332](#);
- The following 5 characters with their glyphs from document [N4297](#), to the Latin Extended-D block,
 - A7B4 LATIN CAPITAL LETTER BETA,
 - A7B5 LATIN SMALL LETTER BETA,
 - A7B6 LATIN CAPITAL LETTER OMEGA,
 - A7B7 LATIN SMALL LETTER OMEGA, and,
 - A7B3 LATIN CAPITAL LETTER CHI;
- A78F LATIN LETTER MIDDLE DOT, to the Latin Extended-D block (*moved out from Amendment 2* text to the next committee stage ballot)

10.3.9 Malayalam Letter Archaic II

Input document:

[4312](#) Proposal for MALAYALAM LETTER ARCHAIC II; Shriramana Sharma; 2012-05-22

Dr. Deborah Anderson: The proposal in document [N4312](#) is to add one character Malayalam Archaic III. The long l was written originally with a different form. There is attestation shown in Section 2.

Section 5 has glyph and name etc. The US national body has reviewed it and we support encoding it.

Discussion:

- a. Mr. Harsha Vijayawardhana: Is it a glyph variation or two separate characters?
- b. Dr. Ken Whistler: it is a letter with the same sound; but there is no evidence that they are glyph variants. One letter went out and another letter came in - but not a gradual transition in its glyph.
- c. Sri Lanka: It is highly unusual.
- d. Mr. Martin Hosken: One could construct it using dot character dot; but it does not make sense.
- e. Mr. Peter Constable: The UTC had considered this and we consider that this should be a separate character. I propose we accept this character.

Disposition: Accepted 0D5F MALAYALAM LETTER ARCHAIC II with a glyph based on document N4312; for the next edition of the standard. The editor has the font (based on Rachana font)
See *relevant resolution M60.17 on page 42*.

10.3.10 Latin Capital Letter J with Crossed Tail

Input document:

[4332](#) Proposal to encode LATIN CAPITAL LETTER J WITH CROSSED-TAIL in the BMP; Lorna A. Priest – SIL; 2012-09-27

It is a capital version of 029D Latin Small Letter J with Crossed Tail. Latin Extended-D block

Disposition: Accept A7B2: LATIN CAPITAL LETTER J WITH CROSSED-TAIL with its glyph as shown in document N[4332](#) page 4.

See *relevant resolution M60.17 on page 27*.

10.3.11 Section Marks in Siddham script

Input document:

[4336](#) Proposal to encode section marks for Siddham; Anshuman Pandey; 2012-09-30

[4378](#) Additional Information on Siddham Section Marks (N4336); Deborah Anderson, SEI, UC Berkeley; 2012-12-24

Dr. Deborah Anderson: This is a proposal for 14 section marks. The Shingon community is insisting that all of these are needed. They are part of established canon, and are required for complete representation. Alternatives were explained to the user community.

Discussion:

- a. Mr. Michael Everson: Would it be possible to have a little bit more meaningful names for these Section Marks rather than just -1, -2 etc.?
- b. Dr. Ken Whistler: The user community has their own philosophical meanings behind them. The answer may not be needed for encoding these.
- c. Mr. Michael Everson: I am not in favour of going ahead with encoding them at this time. I would like to get the feedback from user community regarding these.
- d. Dr. Deborah Anderson: I can try and get some answers.
- e. Mr. Michel Suignard: Is there an expectation of more characters to keep two columns empty at the end? Can we free up these two columns?

A new document N[4378](#) with additional information was created and posted.

Dr. Deborah Anderson: I will report on some more information beyond what is in the document N[4336](#). There are 14 section marks - their usage was already in the proposal. Marks 10 and 12 were missing associated information. The author went through some of his reference material, and is going to consult with other experts on their specific uses. He will be updating Japanese WG2 experts with more information. He goes into some details about the background of the script etc.

Discussion:

- a. Mr. Michael Everson: This document is good feedback. The author's main concern is that the main alphabet be processed earlier and we can await these marks. I am not satisfied that the proposal, with the names as they are, is mature to go ahead. The author agrees with that.
- b. Mr. Michel Suignard: If we do find additional info, do you have to wait for another Amendment or can it goes to the next phase? We are keeping the option to add it to the CD. It may not be that much of a delay.
- c. Mr. Michael Everson: Next available window is fine.
- d. Dr. Deborah Anderson: The author reports that the most important thing is to get the script done. There may not be new names for these marks. Having it in the CD would be OK. I want everyone to be aware some more research is being done.

Disposition: Await revised version.

Action item: Invite author to produce a revised version (working with Dr. Deborah Anderson).

10.3.12 Symbols for Sutton SignWriting

Input document:

[4342](#) Proposal for encoding Sutton SignWriting; Michael Everson, Martin Hosken, Stephen Slevinski, and Valerie Sutton; 2012-10-14

Mr. Martin Hosken: Sutton SignWriting is a system of writing sign language. Each sign stands for an action. An example is shown on page 6 in Figure 4 (in document [N4342](#)). It shows things like hands, head, how they touch, what directions they move using arrows. There is a head symbol with some bits on it. There is a symbol for hand with bits on it etc. A sign is composite of symbols. The proposal is on the symbol set that is used to write the signs. It is taken from Sign Writing program based on the invention by Ms. Valerie Sutton. It would form the basis for a future encoding of the actual signs. On page 3, there is one hand shape, shown in different positions. The positions are indicated by fills. There are sixteen rotations and 6 fills just for the hand shape. Instead of 96 positions, the proposal is to encode these as a shape, fill and rotation, as sequences. Eyes, mouth etc. were originally just glyphs; now it is towards sequences of elements as well.

Discussion:

- a. Mr. Michael Everson: This topic was presented first time in Helsinki WG2 meeting. The difference from before is -- the shapes using the face have been further broken down into combining sequences. The head character with combining eyes etc. used as overlays.
- b. Mr. Peter Constable: You have modifiers to indicate the Filler and Rotation. When you have the eyes etc. how do they interact?
- c. Mr. Martin Hosken: The head can have different filler and rotation applied to them. The modifier would apply to the combiner and not to the base .. Head + (modifiers) + Eyes + (modifiers). The fonts are really large.
- d. Mr. Michael Everson: Examples of these are in figures 5 and 6.
- e. Dr. Ken Whistler: About line breaking - the discussion may not be applicable to signs. The proposal should probably state that these things are Dingbats. The combining characters will derive their property from being combining.
- f. Mr. Michel Suignard: The request is to proceed with these in a ballot. You may want to develop a little bit on section 8. Rewording is required.
- g. Mr. Peter Constable: We did discuss some in Helsinki. We did discuss this in UTC also. At Helsinki there was consensus that the analytic model in the proposal was appropriate - the two level model of symbols and signs. It was sent for national body feedback. It is something we can progress – choices are to agree and put them in the CD or agree and put it in a bucket for next Amendment
- h. Dr. Deborah Anderson: There are 672 characters in the proposal.
- i. Dr. Ken Whistler: You have to identify that the stand of non-unification principle is being taken. Symbols being taken outside the context of software for Sign Writing can cause lot of confusables. If it is taken outside the context one can raise issues of confusability and even mischief.
- j. Mr. Michel Suignard: Symbols, in general, can cause problems. But it is not as serious as confusability between scripts. Symbols are not allowed in items such as identifiers, domain names etc. anyways.
- k. Dr. Ken Whistler: LB classes are ID (applied to playing cards, emoticons etc.) or Dingbats. Math Symbols etc. have AL class.
- l. Mr. Martin Hosken: The symbols are supposed to stick together. Higher level protocol should bunch them together.
- m. Mr. Peter Constable: AL is the default - for example, Egyptian Hieroglyphs etc.
- n. Dr. Ken Whistler: Suggest that LB class be prescribed as ID.
- o. Mr. Michael Everson: In terms of non-sign-writing software, they may appear as ordinary lines in text. I don't expect them to come with long sequences of these.
- p. Dr. Ken Whistler: That is the citation problem. In cases like long strings representing a sign, are you going to break them in a string indicating these.
- q. Mr. Martin Hosken: The maximum is typically 16; I am drifting towards LB property of being AL.

- r. Mr. Michel Suignard: In which case comparing to Egyptian Hieroglyphs would be correct.
- s. Mr. Peter Constable: You should add a paragraph about confusability also.
- t. Mr. Martin Hosken: I don't have a strong preference whether it goes into the next amendment to the next edition or into the CD.
- u. Dr. Umamaheswaran: Is there any user community requirement to do faster?
- v. Mr. Michael Everson: They are already using it - but using PUA.
- w. Mr. Michel Suignard: Is the repertoire stable? Then we can put into the CD.
- x. Mr. Martin Hosken: Yes.
- y. Mr. Peter Constable: Mr. Masahiro Sekiguchi had mentioned that in blogging some experts in Japan have indicated that this Sign Writing is not appropriate for Japanese sign language.
- z. Mr. Tetsuji Orita: Is it not true that this sign-writing language is not used for all languages in the world?
- aa. Mr. Martin Hosken: Japanese is included in the set. There is a debate within the deaf communities whether this language is to be used or not.
- bb. Mr. Peter Constable: This is a stable set of symbols for Sign Writing.

Disposition: Accept 672 characters from document N4342 in a new block Sutton SignWriting in code positions 1D800 .. 1DAAF.

Relevant Resolution:

M60.13 (Sutton SignWriting script): WG2 accepts to create a new block named Sutton SignWriting in the range 1D800 to 1DAAF, and populate it with 672 characters in code positions 1D800 to 1DA8B, 1DA9B to 1DA9F, and 1DAA1 to 1DAAF, with their names and glyphs as shown in document N4342.

10.4 Miscellaneous Proposals

10.4.1 Issues of translation 10646-2012 into Japanese

Input document:

[4365](#) Issues of translation of 10646-2012 into Japanese; Japan NB; 2012-10-17

Mr. Michel Suignard: I am glad to see that Japan took the time to review the standard in detail. It has proposed a number of changes – some are typographical errors. Others were due to items missed in the transformation between 2nd and 3rd editions in aligning with Unicode standard. Missing definition of Surrogate Pair is an example. In some cases alternative options are proposed by Japan, and we will need to select what we want to go with. There are some issues with GH source and we need to fix them. My question to Japan is what you want me to do with this. Do you want the response as a separate document or do you want the results to be reflected in the next edition?

Discussion:

Mr. Tetsuji Orita: You can incorporate the changes in the next edition. We need to get Japanese versions synchronized. Not sure if such editorial changes can be incorporated in Amendment 1.

Dr. Umamaheswaran: Perhaps we could target for Amendment 1 – earlier the better.

Mr. Michel Suignard: My preference is to prepare a response document to the Japanese contribution. We can use that document as the basis for next CD. Some normative definitions and corrections of typos etc. You can use it for your translation.

Dr. Ken Whistler: It would be better to roll all the changes into the next edition. I prefer your approach.

Action item: Mr. Michel Suignard to prepare a response document.

10.5 Proposals carried forward

The following documents were on the agenda but the meeting did not get around to discussing them, and are carried forward:

- [4256](#) Revised preliminary proposal to encode six punctuation characters introduced by Hervé Bazin; Mykyta Yevstifeyev, Karl Pentzlin; 2012-02-28
- [4257](#) Proposal to encode a symbol “Capitalized Commercial At”; Karl Pentzlin; 2012-04-17
- [4270](#) Preliminary Proposal to encode Ornamental Dingbats present on Apple devices; Karl Pentzlin; 2012-05-06
- [4281](#) Proposal for additional annotations for some modifier letters used for transliteration of Hebrew; Karl Pentzlin; 2012-02-02
- [4299](#) Preliminary Proposal to encode Bodoni Ornament symbols; Karl Pentzlin; 2012-07-25
- [4344](#) Preliminary proposal to add the Leke script; Erich Fickle, Martin Hoskin; 2012-10-05
- [4283](#) Preliminary proposal to encode the Rohingya script; SEI-Anshuman Pandey; 2012-06-20
- [4287](#) Introducing the Coorgi-Cox Alphabet; Anshuman Pandey; 2012-06-22

- [4293](#) Preliminary proposal to encode the Bagam script; UC Berkeley Script Encoding Initiative (Universal Scripts Project): Michael Everson; 2012-07-24
- [4266](#) Preliminary Proposal to Encode the Kawi Script; Anshuman Pandey; 2012-04-25
- [4261](#) Preliminary proposal for encoding the Garay script; UC Berkeley Script Encoding Initiative - Michael Everson; 2012-04-26
- [4291](#) Proposal to encode the Gondi script; Anshuman Pandey; 2012-07-23
- [4292](#) Revised proposal for encoding the Afáka script; UC Berkeley Script Encoding Initiative (Universal Scripts Project), Author: Michael Everson; 2012-07-17

11 Architecture issues

11.1 Stabilizing CJK Compatibility Ideographs through the use of Standardized Variants

Input documents:

- [4246](#) Stabilizing CJK Compatibility Ideographs through the use of Standardized Variants Ken Lunde; 2012-02-16
- [4246-A.txt](#) Data File – saved as .txt
- [4246-A.pdf](#) Data file – saved as .pdf
- [4247](#) Preserving round-trip integrity of CJK compatibility ideographs – feedback on 4246; Masahiro Sekiguchi (An expert's individual contribution); 2012-02-16
- [4275](#) Proposed Additions to ISO/IEC 10646; USNB; 2012-06-20
- [4309](#) Response to WG2 4247 (Preserving round-trip integrity of CJK compatibility ideographs); Mark Davis & Ken Lunde; 2012-08-03

Mr. Michel Suignard: We have looked at the earlier documents. Latest document is [N4309](#). It was a feedback to Japan addressing the concerns expressed in [N4247](#). Unlike compatibility ideographs, the sequences will preserve them in round tripping that would have been lost under normalization. I think it is a good idea to proceed with the sequences.

Discussion:

- a. Dr. Ken Whistler: Document [N4309](#) addresses the two alternative approaches to preserve the round tripping. Alternative 1 was to define another type of normalization. The response to defining a new normalization form was 'essentially it is a non starter'. Existing normalization forms are in wide use. If we introduce a new one, the existing implementations of standard normalizations, would be hit. It is not realistic to expect the special one to be picked up by everyone. Alternative 2 was to keep the data unnormalized; it suffers from some of the same problems. One cannot assume that - unless you are in a self-contained environment - your data will not be touched by another process which does normalization. You don't have control on it. Keeping the data in always unnormalized is also not controllable. The use of a set of variation sequences allows you to preserve the data represented using the alternative way under normalization, as proposed in document [N4246](#).
- b. Mr. Tetsuji Orita: The main concern was that Japanese customers have existing data that contains many CJK compatibility ideographs from BMP. Most of the data is in the enterprise systems - in host systems. The applications in these do not yet support normalization. The data using CJK compatibility code points will continue to be created for several years. If the sequences are used, one may end up in duplicate code points - using the code point or using the sequence. There is no solution; but we do have the concern. The proposal of sequences would be a solution.
- c. Dr. Ken Whistler: We do understand that the legacy systems may not have any normalization, and keep the data in compatibility form. Data from host systems goes out to the open world; it may come back as lost data because someone normalized it.
- d. Mr. Tetsuji Orita: We may still have issue of duplicates.
- e. Mr. Peter Constable: It is understood that when the implementations receive the data they have to recognize the sequences also. The tradeoff is that one does not have to worry about the loss in another process that may normalize.
- f. Dr. Umamaheswaran: We recognize that there is a migration issue, but in the long run we will benefit.
- g. Dr. Ken Whistler: These were approved by UTC. Most likely will be published in Unicode 6.2.1. It was held back to give a chance to WG2 to address any issue that may come up. The earliest vehicle for WG2 would be ideal.

Disposition: Accept 1002 standardized variants for CJK compatibility ideographs, from [N4246-A](#), for inclusion in Amendment 2.

Relevant Resolution:

M60.04 (Standardized variants for compatibility ideographs): WG2 accepts to add the 1002 standardized variants for compatibility ideographs, from document [4246-A](#).

12 Progression of Work Items

12.1 Amendment 1 to 10646 3rd Edition

Relevant Resolution:

M60.02 (Progression of Amendment 1): WG2 instructs its project editor to prepare and to forward the final text of Amendment 1 to the 3rd Edition, which will include the changes arising from resolution *M60.01* above, along with the final disposition of comments (document [N4346](#)) to the SC2 secretariat for processing as an FDAM ballot.

12.2 Amendment 2 to 10646 3rd Edition

Relevant Resolutions:

M60.03 (Disposition and progression of PDAM 2): WG2 notes the disposition of ballot comments on PDAM 2 ([SC2 N4228](#)) in document [N4306](#) and the subsequent text of PDAM 2.2 ([SC2 N4239](#)), that were generated between WG2 meetings 59 and 60. There were 14 character deletions, and 276 character additions, to the 900 in PDAM 2, several glyph changes, name changes and reallocation of code positions, as detailed on pages 1 to 8 in document [N4306](#), resulting in a net of **1162** characters in PDAM 2.2.

M60.06 (Progression of Amendment 2): WG2 instructs its project editor to prepare and to forward the final text of Amendment 2 to the 3rd Edition, which will include the changes arising from resolutions *M60.04* and *M60.05* above, along with the final disposition of comments (document [N4377](#)) to the SC2 secretariat for processing as a DAM ballot.

12.3 New 10646 Fourth Edition

The meeting decided to start work on the next edition, to consolidate the texts of the two current Amendments, and additional characters, scripts and textual changes accepted during this meeting, instead of starting another amendment to the current edition.

Relevant Resolutions:

M60.18 (Project subdivision): WG2 instructs its convener and project editor to create a project subdivision proposal document (will be document [N4382](#)) for creation of ISO/IEC 10646 4th edition, incorporating the texts of Amendments 1 and 2 to the 3rd edition, and further changes accepted in resolutions *M60.07* to *M60.17* above, and textual changes as noted in document [N4379](#).

WG2 notes that the subdivision proposal includes provisions for including additional characters or new scripts during the ballot resolution phase towards agile processing of the committee draft and speeding up the work of WG2 between face to face meetings.

The target starting dates are: CD 2012-12, DIS 2013-08 and FDIS 2014-03.

M60.19 (CD of 4th edition): WG2 instructs its project editor to create the text for the CD of the 4th^{edition} of ISO/IEC 10646, in accordance with the project subdivision document per resolution *M60.18* above, and send it to SC2 secretariat for a CD ballot. The consolidated charts will be in document [N4383](#).

13 Liaison reports

13.1 Unicode Consortium

Mr. Peter Constable: The Unicode consortium has published Unicode version 6.2 as well as other standards such as UCA. The only significant change was the addition of Turkish Lira sign. The consequence is that we are out of synch with amendments to 10646. This was due to the urgent requirement of this character. A minor update 6.2.1 is under consideration without any repertoire changes, but changes to bidi algorithm and some property changes. It is to synchronize with w3c work on bidi, in particular with respect to bidi isolate characters that are in Amendment 2.2. The algorithm references classes. Prior default behaviour did not consistently behave and gave sub-optimal results. Now they are being improved to work better with some higher level protocols. The next version would be version 6.3 and the intention is to synch with Amendment 1 and Amendment 2 in terms of repertoire. Updates to the relevant Technical Reports will be sent to WG2 for feedback.

Discussion:

- a. Mr. Michel Suignard: We will need to synchronize some the references in Amendment 2 to Unicode 6.3.
- b. Dr. Ken Whistler: It is too early to get the appropriate references at this point in time. UAX 15 or UAX 9 has not significantly changed. In the spirit of the agreement, the UTC should submit the updates to these to WG2.
- c. Dr. Umamaheswaran: We can consider adding these references at the FDAM 2.

- d. Mr. Tetsuji Orita: Is there an agreement that Unicode will not add characters that are not in 10646?
- e. Mr. Peter Constable: In principle yes; there will be a synch with at least major versions with some amendments. There have been exceptions in some cases like Turkish Lira sign.
- f. Dr. Ken Whistler: We have done similar to these with the Indian Rupee sign and Euro Sign in the past. These are exceptions within the principles of agreement between Unicode and SC2/WG2.
- g. Mr. Michel Suignard: The ISO process is not amenable at this point in time to react as fast as the industry may react.

13.2 SEI

Input document:

[4364](#) SEI Liaison Report; SEI Debbie Anderson; 2012-10-14

Dr. Deborah Anderson: Document N[4364](#) is for information of delegates. It lists a number of contributions made by SEI and many more to come. I have not included some projects we did assist on. We will be happy to assist in other projects.

Mr. Michel Suignard: I appreciate the valuable contributions from SEI. Many of these are already under ballot or have been accepted for the next version of the standard.

Action item: National bodies are invited to take note.

14 Other business

14.1 Future Meetings

14.1.1 Meeting 61

Input document:

[4359](#) Invitation to host meeting 61 in Vilnius, Lithuania; Lithuanian Standards Board; 2012-02-17

Mr. Michel Suignard:

At the last WG2 meeting we had:

"2nd Quarter 2013, possibly in 10-14 June 2013 - Vilnius, Lithuania, Berlin, Germany (backup)". Since then, Lithuania has responded. Invitation from Lithuania is in document N[4359](#). We also checked with Germany since we did not hear from Lithuania earlier. Germany has responded they could not hold it.

10-14 June 2013 was the date I had proposed. There was another earlier date in June – but it was too close to the IRG meeting. We could also have selected 3-7 June. Lithuania's preference was also 10-14 June.

We will confirm 10-14 June 2013 in Vilnius, Lithuania.

14.1.2 Meeting 62 - Looking for host - 4th quarter 2013

Mr. Michel Suignard:

After the Vilnius meeting, it is likely that the CD will progress to DIS. December 2013 is possibly too early. US will be the location.

Discussion:

- a. The week of 21 Jan 2014 is Chinese New Year.
- b. SC35 meets week of 17 Feb 2014.
- c. 10 --14 or 24 --28 Feb 2014 are the two options.

After more discussion, meeting 62 was tentatively set for 24 -- 28 Feb 2014; US – West Coast (dates and location to be confirmed by US national body). .. No backups.

14.1.3 Meeting 63 - Looking for host

Meeting 63 along with SC2: Tentatively set for September 2014. Potential host is Sri Lanka. Backup is China.

Relevant Resolution:

M60.22 (Future meetings): WG2 endorses the following schedule for future meetings of WG2 and of IRG:

WG2 meetings:

- Meeting 61 – 2013-06-10/14, Vilnius, Lithuania (invitation is in document [N4359](#))
- Meeting 62 – 2014-02-24/28, West Coast, USA (location to be confirmed)
- Meeting 63 – 2014-09, Sri Lanka (tentative); (with China as backup) (co-located with SC2)

IRG meetings:

- IRG Meeting 40, HKSAR, 2013-05-20/24, and,
- IRG Meeting 41, Japan, 2013-11-18/22 (tentative) (China is backup).

15 Closing

15.1 Approval of Resolutions of Meeting 60

Experts from Canada, China, Finland, Ireland, IRG, Japan, JTC1/SC35 (Liaison), SEI - UC Berkeley (Liaison), Sri Lanka, TCA (Liaison), the Unicode Consortium (Liaison), UK and USA were present when the meeting resolutions were adopted. Even though the IRG convener was not present at the start of adoption of resolutions, there were a number of other IRG member bodies present.

Discussion:

- a. Re: M60.03 resolution
Mr. Peter Constable: I would like WG2 experts to take note that due to the agile processing provision, we were able to save almost a day's work at this meeting. We were able to progress more agenda items than would have been possible otherwise. We were able to deal with some of the non-controversial scripts in PDAM 2.2.
- b. Re: M60.04 .. Japan abstained.
- c. Re: M60.05 .. Ireland and UK abstained.
- d. Re: M60.19
Ms. Toshiko Kimura: How long you want the CD ballot to be? It can be from 2 to 4 months.
Mr. Michel Suignard: I do not plan to issue another CD ballot before our next meeting. We could allow for a longer ballot period.
Dr. Ken Whistler: The CD content is going to be complicated enough that a single long ballot would be more appropriate.

The final adopted resolutions are published in document [N4354](#), along with running character counts. The various character additions and deletions in the adopted resolutions result in the following net character counts in the standard:

- (Reset) **110181** characters in 3rd edition at the start of the meeting;
 - Net addition of **1769** characters in DAM 1 to 3rd edition;
 - Net addition of **1177** characters in PDAM 2 to 3rd edition;
- Total of **113127** characters in 3rd edition at the end of the meeting.
 - Addition of **7438** new characters in CD of 4th edition;
- Total of **120565** characters in the CD of 4th edition.

Appreciation:

Relevant Resolutions:

M60.23 (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.

M60.24 (Appreciation to Host): WG2 thanks the national body of Thailand (TIS), Payap University Linguistics Institute and its staff Ms. Wipanee Chuamsakul and Ms. Phawinee Pintong, and Mr. Martin Hosken, for hosting the meeting, and providing excellent meeting facilities.

15.2 Adjournment

Meeting adjourned at 11:35h

16 Outstanding Action Items

All the action items recorded in the minutes of the previous meetings from 25 to 51, and, 53 to 56 have been either completed or dropped. Status of outstanding action items from previous meetings 52, 57 to 59, and new action items from this meeting 60 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](#)) (this document)

16.1 Outstanding action items from meeting 52, 2008-04-21/25, Redmond, WA, USA

Item	Assigned to / action (Reference resolutions in document N3454 , and unconfirmed minutes in document N3453 for meeting 52 - with any corrections noted in section 3 in the minutes of meeting 53 in document N3553)	Status
AI-52-7	Ireland (Mr. Michael Everson)	
	To take note of and act upon the following items.	
a.	<i>M52.5 (Principles for Dandas):</i> WG2 adopts the principles guiding the encoding of Dandas in Brahmic scripts from document N3457 , and instructs its ad hoc group on P&P to incorporate these into its document on Principles and Procedures (along with the additions from resolution M52.4 above). WG2 further invites the Irish national body to investigate and report on the current practice on use of currently encoded Dandas in relevant scripts towards finalizing the list of scripts and their corresponding Dandas. (Mr. Michael Everson indicated he will provide some text to include in the P&P document at meeting 58.) M53, M54 M55, M56, M57, M58, M59 and M60 – in progress.	In progress

16.2 Outstanding action items from meeting 57, Busan, Korea (Republic of), 2010-10-04/10

Item	Assigned to / action (Reference resolutions in document N3904 , and unconfirmed minutes in document N3903 for meeting 57 – with any corrections noted in section 3 in the minutes of meeting 58 in document N4103)	Status
AI-57-8	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
b.	<i>M57.27 (Khitan):</i> With reference to documents N3918 and N3925 on Khitan, WG2 endorses the ad hoc report in document N3942 , and invites China to submit a revised proposal addressing the feedback received to date. M58, M59, and M60 – in progress.	In progress.

16.3 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-58-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	

	To take note of and act upon the following items:	
b.	to address the concerns in document N4075 on potential duplication and on possible use of IVS-s as method to encode z-variants, and provide feedback to WG2. M58, M59 and M60 – in progress.	In progress.
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, M59 and M60 – in progress.	In progress.
AI-58-9	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
a.	M58.31 (<i>Chinese Chess symbols</i>): With reference to proposal from China in document N3910, WG2 invites China to submit a revised proposal taking into consideration the feedback comments received in documents N3966 and N3992. M58, M59 and M60 – in progress.	In progress.
b.	M58.30 (<i>Naxi Dongba pictographs</i>): With reference to proposal from China in document N4043, WG2 endorses the ad hoc report in document N4112, and invites China to submit a revised proposal taking into consideration the recommendations in the ad hoc report. M58, M59 and M60 – in progress.	In progress.

16.4 Outstanding action items from meeting 59, Mountain View, CA, USA, 2012-02-13/17

Item	Assigned to / action (Reference resolutions in document N4254, and unconfirmed minutes in document N4253 for meeting 59).	Status
AI-59-3	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:	
s.	With reference to document N4173 - IRG Errata Report, to check for possible Source-Mapping changes that we can request IRG to review and put a solution in place.	In progress.
AI-59-7	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
a.	M59.05 (<i>Named USIs for characters for Uyghur and Chaghatay</i>): With reference to request for NUSIs from China in document N4218 and the proposed alternative NUSIs in document N4231 from SEI, WG2 accepts the proposed 9 language-neutral NUSIs from document N4231 for inclusion in the next amendment to the standard. WG2 further invites China to work with experts from the Unicode Consortium in preparing a Unicode Technical Note to assist the Uyghur and Chaghatay users in implementation using the standard.	In progress.
AI-59-8	Unicode Liaison (Mr. Peter Constable)	
a.	M59.05 (<i>Named USIs for characters for Uyghur and Chaghatay</i>): With reference to request for NUSIs from China in document N4218 and the proposed alternative NUSIs in document N4231 from SEI, WG2 accepts the proposed 9 language-neutral NUSIs from document N4231 for inclusion in the next amendment to the standard. WG2 further invites China to work with experts from the Unicode Consortium in preparing a Unicode Technical Note to assist the Uyghur and Chaghatay users in implementation using the standard.	In progress.

16.5 New 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 59 (this document you are reading)).	Status
AI-60-1	Recording Secretary - Dr. V.S. UMAmaheswaran	
a.	To finalize the document N4354 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N4354.
b.	To finalize the document N4353 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N4353.
AI-60-2	Convener - Mr. Mike Ksar	

	To take note of and act upon the following items:	
a.	<i>M60.21 (Roadmap snapshot)</i> : WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N4320) to the WG2 web site and communicate the same to SC2 secretariat.	Completed.
b.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-60-12 - items a to d - below.)	
AI-60-3	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>M60.01 (Disposition of ballot comments of DAM1)</i> : WG2 accepts the disposition of DAM 1 ballot comments in document N4346 . The following significant changes are noted: Change in names: <ul style="list-style-type: none"> • AB53 from LATIN SMALL LETTER STRETCHED X to LATIN SMALL LETTER CHI • AB54 from LATIN SMALL LETTER STRETCHED X WITH LOW RIGHT RING to LATIN SMALL LETTER CHI WITH LOW RIGHT RING, and • AB55 from LATIN SMALL LETTER STRETCHED X WITH LOW LEFT SERIF to LATIN SMALL LETTER CHI WITH LOW LEFT SERIF Addition: <ul style="list-style-type: none"> • 20BA TURKISH LIRA SIGN with its glyph from document N4273. WG2 also accepts changing of glyphs to match the names for four characters 2BCC to 2BCF as noted in document N4363 . The final code positions, glyphs and names are in the charts in document N4381 .	
b.	<i>M60.02 (Progression of Amendment 1)</i> : WG2 instructs its project editor to prepare and to forward the final text of Amendment 1 to the 3 rd Edition, which will include the changes arising from resolution M60.01 above, along with the final disposition of comments (document N4346) to the SC2 secretariat for processing as an FDAM ballot.	Items a and b completed; see document 02n4266 .
c.	<i>M60.03 (Disposition and progression of PDAM 2)</i> : WG2 notes the disposition of ballot comments on PDAM 2 (SC2 N4228) in document N4306 and the subsequent text of PDAM 2.2 (SC2 N4239), that were generated between WG2 meetings 59 and 60. There were 14 character deletions, and 276 character additions, to the 900 in PDAM 2, several glyph changes, name changes and reallocation of code positions, as detailed on pages 1 to 8 in document N4306 , resulting in a net of 1162 characters in PDAM 2.2.	Noted.
d.	<i>M60.04 (Standardized variants for compatibility ideographs)</i> : WG2 accepts to add the 1002 standardized variants for compatibility ideographs, from document 4246-A .	
e.	<i>M60.05 (Disposition of ballot comments of PDAM 2.2)</i> : WG2 accepts the disposition of PDAM 2.2 ballot comments in document N4377 . The following significant changes are noted: <p>j. Old Hungarian block: Based on the Old Hungarian ad hoc report in document N4374,</p> <ul style="list-style-type: none"> • Replace 'Old Hungarian' in the names of the block and all the characters in the block with 'Hungarian', • Add annotations to names to address potential multiple names, and, • Shift down the 5 characters 10CF9..10CFD to 10CFA..10CFE. <p>k. Pahawh Hmong block:</p> <ul style="list-style-type: none"> • Split the Pahawh Hmong characters in the range 16B7E..16B8F, and rearrange them in the two ranges 16B7D..16B86 and 16B88..16B8F, and, • Add 16B87 PAHAWH HMONG CLAN SIGN PHAB (with its glyph from Irish ballot comment T.3). <p>l. Mende and Mende Numbers blocks: Based on the Mende Numbers ad hoc report in document N4375,</p> <ul style="list-style-type: none"> • Move the Mende digits from 1E8D1..1E8D9 in Mende Numbers block to 1E8C7..1E8CF in Mende block, • Delete the Mende Numbers block 1E8D0..1E8EF, • Extend Mende block by 1 column to end at 1E8DF, and, • Add 7 combining Mende number bases at 1E8D0..1E8D6. <p>m. Changed the character names for:</p> <ul style="list-style-type: none"> • 20BB from MARK SIGN to NORDIC MARK SIGN, 	

	<ul style="list-style-type: none"> • 1F6CD from TWO SHOPPING BAGS to SHOPPING BAGS, • 1F3CD from MOTORCYCLE to RACING MOTORCYCLE, • 1F3DE from PARK to NATIONAL PARK, • 1F6E4 from RAILWAY to RAILWAYS TRACK, and, • 1F6CC from BED to SLEEPING ACCOMMODATION. <p>n. Moved with name change:</p> <ul style="list-style-type: none"> • 1F3CF RACE CAR to 1F3CE RACING CAR. <p>o. Moved without name change:</p> <ul style="list-style-type: none"> • 1F6D0 BELLHOP BELL to 1F6CE, • 1F6EE SATELLITE to 1F6F0, • 1F6F2 ONCOMING FIRE ENGINE to 1F6F1, • 1F6F4 DIESEL LOCOMOTIVE to 1F6F2, • 1F6E7 SMALL AIRPLANE to 1F6E9, and, • 1F6E9 NORTHEAST-POINTING AIRPLANE to 1F6EA. <p>p. Added following 10 characters (see final charts for glyphs):</p> <ul style="list-style-type: none"> • 1F6E6 UP-POINTING MILITARY AIRPLANE, • 1F6E7 UP-POINTING AIRPLANE, • 1F6E8 UP-POINTING SMALL AIRPLANE, • 1F6F3 PASSENGER SHIP, • 1F3D6 BEACH WITH UMBRELLA, • 1F3D5 CAMPING, • 1F6CF BED, • 1F3D4 SNOW CAPPED MOUNTAIN, • 1F6EB AIRPLANE DEPARTING, and, • 1F6EC AIRPLANE ARRIVING. <p>q. Deleted the following 3 characters:</p> <ul style="list-style-type: none"> • A78F LATIN LETTER MIDDLE DOT in Latin Extended-D block (moved it into the text of next committee stage ballot), • 2B74 LEFT RIGHT TRIANGLE-HEADED ARROW TO BAR, and, • 2B75 UP DOWN TRIANGLE-HEADED ARROW TO BAR <p>r. Several glyphs are changed arising out of disposition of the ballot comments above. The final code positions, glyphs and names are in the charts in document N4380.</p>	
f.	<i>M60.06 (Progression of Amendment 2)</i> : WG2 instructs its project editor to prepare and to forward the final text of Amendment 2 to the 3 rd Edition, which will include the changes arising from resolutions M60.04 and M60.05 above, along with the final disposition of comments (document N4377) to the SC2 secretariat for processing as a DAM ballot.	Items d to f completed; see document 02n4267 .
g.	<i>M60.07 (CJK Unified Ideographs Extension E)</i> : WG2 accepts to create a new block named CJK Unified Ideographs Extension E in the range 2B820 to 2CEAF and populate it with 5768 characters in code positions 2B820 to 2CEA7, with their glyphs and source references as shown in the attachments to document N4358 .	
h.	<i>M60.08 (Anatolian Hieroglyphs)</i> : WG2 accepts to create a new block named Anatolian Hieroglyphs in the range 14400 to 1467F, and populate it with 583 characters in code positions 14400 to 14646, with their names and glyphs as shown in document N4282 .	
i.	<i>M60.09 (Ahom script)</i> : WG2 accepts to create a new block named Ahom in the range 11700 to 1173F, and populate it with 57 characters in code positions 11700 to 11719, 1171D to 1172B, and 11730 to 1173F, with their names and glyphs as shown in document N4321 .	
j.	<i>M60.10 (Multani script)</i> : WG2 accepts to create a new block named Multani in the range 11280 to 112AF, and populate it with 38 characters in code positions 11280 to 11286, 11288, 1128A to 1128D, 1128F to 1129D, and 1129F to 112A9, with their names and glyphs as shown in document N4159 .	
k.	<i>M60.11 (Early Dynastic Cuneiform script)</i> : WG2 accepts to create a new block named Early Dynastic Cuneiform in the range 12480 to 1254F, and populate it with 197 characters in code positions 12480 to 12544, with their names and glyphs as shown in document N4278 .	
l.	<i>M60.12 (Hatran script)</i> : WG2 accepts to create a new block named Hatran in the range 108E0 to 108FF, and populate it with 30 characters in code positions 108E0 to 108F5, and 108F8 to 108FF, with their names and glyphs as shown in document N4324 .	
m.	<i>M60.13 (Sutton SignWriting script)</i> : WG2 accepts to create a new block named Sutton	

	SignWriting in the range 1D800 to 1DAAF, and populate it with 672 characters in code positions 1D800 to 1DA8B, 1DA9B to 1DA9F, and 1DAA1 to 1DAAF, with their names and glyphs as shown in document N4342 .	
n.	<i>M60.14 (East-Slavic Musical symbols):</i> WG2 accepts to add 11 characters to the Musical Symbols block, with their names, glyphs and code points from document N4362 .	
o.	<i>M60.15 (Additions to Sharada script)</i> WG2 accepts to add the following 9 characters to the Sharada block: <ul style="list-style-type: none"> g. 3 characters for writing Kashmiri: 111CA SHARADA SIGN NUKTA, 111CB SHARADA VOWEL MODIFIER MARK, and, 111CC SHARADA EXTRA SHORT VOWEL MARK, with their glyphs from document N4265. h. 111DB SHARADA HEADSTROKE, with its glyph from document N4337, i. 111DC SHARADA SIGN SIDDHAM, with its glyph from document N4331, j. 111C9 SHARADA SANDHI MARK, with its glyph from document N4330, k. 111CE SHARADA CONTINUATION SIGN, with its glyph from document N4329, and, l. 111DD SHARADA SECTION MARK-1, and, 111DE SHARADA SECTION MARK-2, with their glyphs from document N4338. 	
p.	<i>M60.16 (Meroitic numbers):</i> WG2 accepts to add 64 characters to the Meroitic Cursive block, at code positions 109BC, 109BD, 109C0 to 109CF, and 109D2 to 109FF, with their names and glyphs as shown in document N4276 .	
q.	<i>M60.17 (Miscellaneous character additions)</i> WG2 accepts to add the following: <ul style="list-style-type: none"> • A8FC DEVANAGARI SIGN SIDDHAM, to the Devanagari Extended block, with its glyph from document N4260; • 0D5F MALAYALAM LETTER ARCHAIC II, to the Malayalam block, with its glyph from document N4312; • A7B2 LATIN CAPITAL LETTER J WITH CROSSED-TAIL, to the Latin Extended-D block, with its glyph from document N4332; • The following 5 characters with their glyphs from document N4297, to the Latin Extended-D block, <ul style="list-style-type: none"> • A7B4 LATIN CAPITAL LETTER BETA, • A7B5 LATIN SMALL LETTER BETA, • A7B6 LATIN CAPITAL LETTER OMEGA, • A7B7 LATIN SMALL LETTER OMEGA, and, • A7B3 LATIN CAPITAL LETTER CHI; • A78F LATIN LETTER MIDDLE DOT, to the Latin Extended-D block (moved out from Amendment 2 text to the next committee stage ballot) 	
r.	<i>M60.18 (Project subdivision):</i> WG2 instructs its convener and project editor to create a project subdivision proposal document (will be document N4382) for creation of ISO/IEC 10646 4 th edition, incorporating the texts of Amendments 1 and 2 to the 3 rd edition, and further changes accepted in resolutions M60.07 to M60.17 above, and textual changes as noted in document N4379 . WG2 notes that the subdivision proposal includes provisions for including additional characters or new scripts during the ballot resolution phase towards agile processing of the committee draft and speeding up the work of WG2 between face to face meetings. The target starting dates are: CD 2012-12, DIS 2013-08 and FDIS 2014-03.	Completed; see document N4382 .
s.	<i>M60.19 (CD of 4th edition):</i> WG2 instructs its project editor to create the text for the CD of the 4 th edition of ISO/IEC 10646, in accordance with the project subdivision document per resolution M60.18 above, and send it to SC2 secretariat for a CD ballot. The consolidated charts will be in document N4383 .	Items g to q and item s completed; see documents in folder 02n4268 .
t.	to correct the content in standard for source references for TCA in clause 23.1; per document N4356 from IRG.	
u.	To prepare a response to the concerns expressed by Japan in document N4365 regarding translation of 10646-2012 into Japanese.	Completed; see document N4379 .

AI-60-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
a.	To provide a list of sources used for CJK Ext-E in the same format as used in clause 23.2 of the standard to the project editor (see also resolution M60.07 under AI-60-3 item g above).	
AI-60-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps with the results from this meeting.	
AI-60-6	Ad hoc group on principles and procedures (Dr. Umamaheswaran)	
a.	To work with Dr. Lu Qin and Mr. Michel Suignard re: any needed rewording of the question on Stroke count for Ideographs in the Proposal Summary Form.	
AI-60-7	China (Mr. Chen Zhuang)	
	To take note of and act upon the following items:	
a.	<i>M60.20 (Nüshu)</i> : WG2 invites China to produce a revised proposal, working with other interested parties, taking into consideration the recommendations in the Nüshu ad hoc report in document N4376 .	
b.	To provide whatever feedback Chinese experts have on Tangut to the authors of Tangut proposals at the earliest, and to ensure that a comparison is made between their new font with the current font used in the proposal charts.	
AI-60-8	Liaison representative to JTC1/SC35 (Alain Labonté)	
a.	Is invited to communicate to the author of proposal in document N4318 for Four Arrows from 9995-7 to prepare a revised proposal, bundling it with revision of N4317 on other symbols from SC35, taking into account discussion at this meeting.	
AI-60-9	SEI - Dr. Debbie Anderson	
a.	To follow up with experts (along with Mr. Michael Everson) on combining sequences in section 4 of document N4282 on Anatolian Heiroglyphs.	
b.	Is invited to revise the proposal in document N4262 on Unifon and other characters based on ad hoc discussions at this meeting.	
c.	Is invited to work with the author to revise the proposal in document N4336 on Siddham accommodating the discussion at this meeting.	
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.	
AI-60-11	Japanese national body - Mr. Tetsuji Orita	
a.	To communicate to Japanese experts document N4369 - response to concerns expressed in document N4361 on Siddham proposal, and the discussion in the meeting.	
AI-60-12	All national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	document N4357 Old Hanzi Principles & Procedures – version 3.	
b.	documents N4184 , N4322 , N4347 and N4372 related to Nepaalalipi / Newar script.	
c.	SEI liaison report in document N4364 .	
d.	Following items are carried forward from earlier meetings: N4292 - Afáka; N4156 - Annotations for Bengali ISSHAR; N4281 - Annotations for some modifier letters used for transliteration of Hebrew; N4168 and N4163 - Azerbaijani Manat currency sign; N4293 - Bagam; N4016 - Balti 'B'; N3842 - Balti scripts; N4148 - Bengali annotations; N4121 - Bhaiksuki;; N4299 - Bodoni Ornament symbols; N4257 - Capitalized Commercial At symbol; N4212 - Combining decimal digits above; N4287 - Coorgi-Cox; N4140 - Dhimal; N3848 - Dhives Akuru; N4207 - Disunifying Emoji symbols for the Western zodiac; N4119 - Diwani Numerals Model; N4122 - Diwani Siyaq Numbers; N4079 - English Phonotypic Alphabet (EPA); N4213 - Four historic Latin letters for Sakha (Yakut); N4261 - Garay; N4291 - Gondi; N4011 - Heraldic hatching characters; N4208 - Historic currency signs of Russia; N4123 - Indic Siyaq ; N4130 - Introducing 'Khatt-i Baburi'; N4028 - Jenticha; N4266 - Kawi; N4018 - Khambu Rai; N4019 - Khema; N4037 - Kirat Rai; N3762 - Kpelle; N3768 - Landa; N4162 - Latin letters used in the Former Soviet Union; N4344 - Leke; N4210 - Linguistic Doubt Marks; N3961 - Logographic Pau Cin Hau; N4209 - Low One Dot Leader; N4036 - Magar Akkha; N4032 - Marchen; N4174 - Metrical symbols; N4118 - Model for Numerals of the Ottoman Siyaq System; N4117 - Model for Raqm Numerals; N4160 - Mongolian Square;	

	<p>N4128 - Moon; N3695 - Obsolete Simplified Chinese Characters; N3288 - Old Yi; N4270 - Ornamental Dingbats present on Apple devices;; N4124 - Ottoman Siyaq ; N4125 - Persian Siyaq; N3874 - Pyu; N4283 - Rohingya; N4256 - six punctuation characters introduced by Hervé Bazin; N4077 - Sources for the Encoding of Jurchen; N4215 - TELUGU LETTER RRRRA; N3963 - Tikamuli; N3811 - Tolong Siki; N4025 - Tulu; N4211 - Two Greek modifier letters for Critical Apparatuses.; N4146 - Woleai; N4044 - Zou.</p>	
<p>e.</p>	<p><i>M60.22 (Future meetings):</i> WG2 endorses the following schedule for future meetings of WG2 and of IRG: WG2 meetings: Meeting 61 – 2013-06-10/14, Vilnius, Lithuania (invitation is in document N4359) Meeting 62 – 2014-02-24/28, West Coast, USA (location to be confirmed) Meeting 63 – 2014-09, Sri Lanka (tentative); (with China as backup) (co-located with SC2) IRG meetings: IRG Meeting 40, HKSAR, 2013-05-20/24, and, IRG Meeting 41, Japan, 2013-11-18/22 (tentative) (China is backup).</p>	

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