



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

**DOC TYPE:** Meeting Minutes

**TITLE:** Unconfirmed minutes of WG 2 meeting 52  
Bldg. 36, Microsoft Campus, Redmond, WA, USA; 2008-04-21/25

**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 2008-03-31.

**ACTION ID:** ACT

**DUE DATE:** 2008-10-01

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

**MEDIUM:** Acrobat PDF file

**NO. OF PAGES:** 61 (including cover sheet)

Michael Y. Ksar  
Convener – ISO/IEC/JTC 1/SC 2/WG 2  
22680 Alcalde Rd  
Cupertino, CA 95014  
U.S.A.

Phone: +1 408 255-1217  
Email: [mikeksar@10646.com](mailto:mikeksar@10646.com)

**ISO**  
**International Organization for Standardization**  
**Organisation Internationale de Normalisation**

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

ISO/IEC JTC 1/SC 2/WG 2 **N3453**  
**2008-08-10**

<b>Title:</b>	Unconfirmed minutes of WG 2 meeting 52 Bldg. 36, Microsoft Campus, Redmond, WA, USA; 2008-04-21/25
<b>Source:</b>	V.S. Umamaheswaran ( <a href="mailto:umavs@ca.ibm.com">umavs@ca.ibm.com</a> ), Recording Secretary Mike Ksar ( <a href="mailto:mikeksar@10646.com">mikeksar@10646.com</a> ), Convener
<b>Action:</b>	WG 2 members and Liaison organizations
<b>Distribution:</b>	ISO/IEC JTC 1/SC 2/WG 2 members and liaison organizations

## 1 Opening

### Input document:

[3376](#) 2nd Call Meeting # 52 from 2008-04-21/24 to be hosted by the US National Body at the Microsoft campus in Redmond, Washington; Mike Ksar; 2008-04-03

Mr. Mike Ksar convened the meeting at 10:05 am, Monday, 2008-04-21. I welcome you all to this meeting. If you have contribution, give it to me. I will request our host to make copies of it. We have printed a few sets of the documents on the agenda, and these will be available later at the meeting for reference purposes. I have a DVD with all the documents on the agenda. Document N[3405](#) has the latest agenda with all the documents hyper-linked. We have a few invited experts at this meeting - they can participate in the discussion and contribute, but will not have a vote when we adopt the resolutions. There are a number of documents to cover. We will try to cover the business by Thursday before noon, and draft the resolutions on Thursday afternoon. There is a social on Thursday evening. If we need to we can meet on Friday morning to adopt the resolutions. Items that are not covered at this meeting will be taken forward to the next meeting. Amendments 5 and 6 are to be progressed at this meeting. The next edition is still being prepared and if it is not ready; we will carry it forward to the next meeting. Our host is US and Microsoft and I will let Mr. Michel Suignard address you.

Mr. Michel Suignard: I will extend a warm welcome to you all even though the weather is a little cool for this time of the year. We are in the Microsoft campus which is getting bigger every year. I hope you can find your way around. This building you are in is where the Office products are being developed. Be conscious about security -- stay around the meeting room area. Keep your badges visible when you are walking around outside the meeting room. There is a kitchenette nearby and the cafeteria is also around the corner. We have another small room available for ad hoc - Room 1015 - across the hallway. The social event will be at my house and would like to have the list of delegates who would be attending - it is partially sponsored by Unicode Consortium. The Microsoft employees attending this meeting - myself and Mr. Peter Constable - have access to the printers and we can assist you to print the documents. I have printed eight sets of the documents - one for each country. You can contact me for any questions. Once again welcome.

Mr. Peter Constable: Papers will be recycled -- leave them in a stack near the coat rack.

Mr. Mike Ksar: The hardcopies of the agenda are available for everyone. OWG-SORT group may meet during lunch breaks and if needed we can arrange extra time. SC2 plenary starts on Friday 10:30am.

Mr. Michel Suignard: (On Tuesday 9:30am) I would like to introduce Ms. Jean Sheldon, our Corporate Vice President for Office Products.

Ms. Jeanne Sheldon: Welcome all. We don't do reading and writing well if we don't do it worldwide. Our Word 97 was the first application to support ISO/IEC10646 and Unicode. We came along with other applications later ... thanks to the foresight of people such as Messrs. Michel Suignard and Asmus Freytag. We appreciate the ISO/IEC 10646 effort for worldwide coverage. It is hard to imagine doing it any other way. Our mathematics applications also use it. ISO/IEC 10646 is one of the more fundamental of the standards. Sorry we could not arrange for a better weather. Once again welcome. Have a good session.

## 1.1 Roll Call

Input document:

[3401](#) WG2 Experts List – end of meeting 50; Ksar; 2007-05-03

A document containing the names and other contact details of WG2 experts was circulated. Attendees were requested to make any corrections, mark their attendance in that document and to give their business card to the recording secretary. Invited experts were requested to identify themselves and be recognized by the convener. The following **37** attendees representing **8** national bodies, **3** liaison organizations, including **2** invited experts were present at different times during the meeting.

Name	Representing	Affiliation
Mike KSAR	.Convener, USA	Independent
Jeanne SHELDON	.Host	Microsoft Corporation
Laurentiu IANCU	.Invited Expert	Microsoft Corporation
Murray SARGENT	.Invited Expert	Microsoft Corporation
LU Qin	.IRG Rapporteur	Hong Kong Polytechnic University
Yoshiki MIKAMI	.ISO 2375 RA	Nagaoka University of Technology
Tatsuo KOBAYASHI	.SC2 Chair	Justsystems Corporation
Toshiko KIMURA	.SC2 Secretary	ITSCJ
Shih-Shyeng TSENG	.TCA - Liaison	Academia Sinica
Wei LIN-MEI	.TCA - Liaison	Chinese Foundation for Digitization Technology
Alain LABONTÉ	Canada; Editor 14651	Independent
V. S. (Uma) UMAMAHESWARAN	Canada; Recording Secretary	IBM Canada Ltd.
CHEN Zhuang	China	Chinese Electronics Standardization Institute
HUANG Weihua	China	Bijie University
SUN Bojun	China	Institute of Ethnology and Anthropology, Academy of Social Sciences
WU Xuejun	China	Bijie University
Wushour SILAMU	China	Xinjiang University
XIONG Yuyou	China	Yunnan Minority Language Committee
YAN Xiang	China	Ethnic Institute of Xishuang Banna
YU Kanglong	China	Xishuangbanna Newspaper Company
ZHAO Liming	China	Núshu Institute, Tsinghua University
Michael EVERSON	Ireland; Contributing Editor	Evertime
Kazuhito OHMAKI	Japan	National Institute of Advanced Industrial Science and Technology
Masahiro SEKIGUCHI	Japan	Fujitsu Limited
Satoshi YAMAMOTO	Japan	Hitachi Ltd.
Dae Hyuk AHN	Korea (Republic of)	Microsoft Korea
Jinseok BAE	Korea (Republic of)	Korean Agency for Technology and Standards
KIM Kyongsok	Korea (Republic of)	Pusan National University
Mi Young KANG	Korea (Republic of)	National Institute of Korean Language
Namho CHO	Korea (Republic of)	National Institute of Korean Language
Elżbieta BROMA- WRZESIEŃ	Poland	Telekomunikacja Polska S.A.
Martin HOSKEN	UK	SIL International
Richard S. COOK	USA	University of California, Berkeley
Deborah ANDERSON	USA, .SEI, UC Berkeley - Liaison	Dept. of Linguistics, UC Berkeley
Ken WHISTLER	USA, Contributing Editor	Sybase, Inc.
Michel SUIGNARD	USA; Project Editor	Microsoft Corporation
Peter CONSTABLE	USA; The Unicode Consortium - Liaison	Microsoft Corporation

*Drafting committee:* Messrs. Mike Ksar, Ken Whistler, Michel Suignard and Ms. Deborah Anderson, assisted the recording secretary Dr. Umamaheswaran in checking the draft resolutions.

## 2 Approval of the agenda

Input document:

[3405](#) Proposed Agenda Meeting 52; Ksar; 2008-04-20

Mr. Mike Ksar gave an overview of the major items on the agenda. SC2 secretary will be at the meeting later in the week. There are some SC2 documents that we have to input to SC2 secretariat. You can review the convener's report in document [N3399](#) and give me the feedback before the end of the meeting. Dr. Lu Qin, the IRG convener, will be here on Wednesday and Thursday for IRG matters. Agenda item 9 has the set of script proposals -- with some documents moved to ballot related item 10 on disposition of ballot comments. Korean standard related item is under other business.

I now open the floor for discussion and any changes or documents to be added to the agenda.

Discussion:

- a. Mr. Chen Zhuang: Regarding item 9.26 regarding Naxi Dongba Pictographs - we do not have the Chinese experts at this meeting. There is some feedback from the SEI.
- b. Mr. Mike Ksar: We can postpone this item to the next meeting.
- c. Mr. Martin Hosken: It is good to have a discussion on IVD. It is part of the ballot comments.
- d. Mr. Mike Ksar: It will be discussed along with ballot comments.

The agenda was approved with above modifications.

Additional changes made during the progress of the meeting are included in the appropriate sections in this document. Some of the agenda items have been reorganized or renumbered in these minutes. Some agenda items that were not discussed have been deleted. The following table of contents reflects where the items are discussed and recorded.

Item Number	Title	Page
1	Opening	2
1.1	Roll Call	3
2	Approval of the agenda	4
3	Approval of minutes of meeting 51	6
4	Review action items from previous meeting	6
4.1	Outstanding action items from meeting 48, 2006-04-24/27, Mountain View, CA, USA	6
4.2	Outstanding action items from meeting 50, 2007-04-23/27, Frankfurt-Am-Main, Germany	6
4.3	New action items from meeting 51, 2007-09-17/21, Hangzhou, China	6
5	JTC1 and ITTF matters	13
6	SC2 matters	13
7	WG2 matters	13
7.1	WG2 Convener's Draft Report to SC2	13
7.2	Roadmaps snapshot	13
7.3	Character count spreadsheet	14
7.4	Request to modify principles and procedures	14
7.5	CJK Multicolumn presentation	14
7.6	Subdivision of work – New edition of ISO/IEC 10646	15
7.7	Criteria for script-specific Dandas	15
8	IRG status and reports	16
8.1	Summary report and meeting 29 resolutions	16
8.2	Proposal to encode 6 additional HKSCS characters	18
9	Scripts contributions – not under ballot	19
9.1	Javanese script	19
9.2	Old Turkic/Orkhun	20
9.3	Additions for Vedic Sanskrit	20
9.4	Samaritan script	21
9.5	Alternative New Tai Lue Digit 1	21
9.6	Decimal exponent symbol	22
9.7	Livre Tournois sign	23
9.8	Proposal to encode two Kana characters	23
9.9	Kaithi Script	24
9.10	Esperanto Spesmilo sign	24
9.11	Kazakh Tenge sign	25

Item Number	Title	Page
9.12	Old South Arabian script	25
9.13	Japanese TV symbols	26
9.14	Glyph for Ogham space	28
9.15	Tamil named sequences	29
9.16	Khamti Shan characters additions to Myanmar script	29
9.17	Old Lisu script	30
9.18	Nushu script	30
9.19	Additional 39 Unified Canadian Aboriginal Syllabics	32
9.20	Two Cyrillic characters for Abkhaz	32
9.21	Rumi numerals	34
9.22	Proposal to encode Tangut	34
9.23	Two phonetic characters and two Shona characters	35
9.24	Hangul Jamos	36
9.25	Meetei Mayek	36
9.26	Contributions carried forward to next meeting	36
9.26.1	Batak script	37
9.26.2	Mandaic script	37
9.26.3	Manichaeian script	37
9.26.4	Egyptological Yod and Cyrillic breathings	37
9.26.5	Sorang Sompeng script	37
9.26.6	Varang Kshiti script	37
9.26.7	Proposal to encode Last Resort pictures in plane 14	37
9.26.8	Naxi Dongba pictograph	37
9.26.9	109 more Unified Canadian Aboriginal Syllabics	37
9.26.10	Chakma script	37
9.26.11	Addition of 22 Arabic characters	37
9.26.12	Old Yi script	38
10	Contributions on scripts and characters under ballot	38
10.1	Amendment 5	38
10.1.1	FPDAM5 ballot results	38
10.1.2	Disposition of comments	38
10.1.3.6	ARIB Ideographs	46
10.1.4	Additional comments on Avestan separation point	46
10.1.5	Korean - additional information	47
10.1.6	Two Tai Tham additions	47
10.2	Amendment 6	48
10.2.1	Subdivision of work – Amd. 6	48
10.2.2	PDAM 6 ballot results	48
10.2.3	Disposition of comments	48
11	Publication issues	50
11.1	Synchronization with Unicode	50
12	Liaison reports	50
12.1	Unicode Consortium	50
12.2	IETF	51
12.3	Script Encoding Initiative	52
12.4	JTC1/SC34	52
13	Other business	52
13.1	Presentation on KS X 1026-1: 2007	52
13.2	Web Site Review	53
13.3	Future Meetings	53
14	Closing	54
14.1	Approval of resolutions	54
14.2	Adjournment	54
15	Action items	54
15.1	Outstanding action items from meeting 48, 2006-04-24/27, Mountain View, CA, USA	55
15.2	Outstanding action items from meeting 50, 2007-04-23/27, Frankfurt-Am-Main, Germany	55
15.3	Outstanding action items from meeting 51, 2007-09-17/21, Hangzhou, China	55
15.4	New action items from meeting 52, 2008-04-21/25, Redmond, WA, USA	56

### 3 Approval of minutes of meeting 51

Input document:

[3353](#) Minutes Meeting 51, including Action Items; Uma/Ksar; 2007-10-10

Some corrections were communicated to the convener prior to the meeting. The following corrections are noted:

- Date of meeting in the title on the front cover of document [N3353](#) should be 2007-09-17/21.
- Correct 'Tai Pham' to 'Tai Tham' wherever it occurs in the minutes.
- Item 9.13, second paragraph: add (the missing) "China" to Myanmar, as a country where Old Lisu script is also used.
- Dr. Umamaheswaran also pointed out some corrections to the resolutions post-meeting M51 that were sent out as revised documents.

The minutes were approved with above modifications.

### 4 Review action items from previous meeting

Input document:

[3353](#) Section 16, Minutes Meeting 51, including Action Items; Uma/Ksar; 2007-10-xx

Dr. Umamaheswaran reviewed the action items list in document [N3353-AI](#). Of the **63** action items reviewed, **52** items have been either completed or dropped; and **11** items are carried over.

#### 4.1 Outstanding action items from meeting 48, 2006-04-24/27, Mountain View, CA, USA

Item	Assigned to / action (Reference resolutions in document <a href="#">N3104</a> , and unconfirmed minutes in document <a href="#">N3103</a> for meeting 48 - with any corrections noted in section 3 of document <a href="#">N3153</a> from meeting 49).	Status
<b>AI-48-7</b>	<b>US national body (Asmus Freytag)</b>	
	b. To prepare updated Arabic Math proposal(s) based on documents <a href="#">N3085</a> to <a href="#">N3089</a> . M48, M49, M50, M51 - in progress.	In progress.

#### 4.2 Outstanding action items from meeting 50, 2007-04-23/27, Frankfurt-Am-Main, Germany

Item	Assigned to / action (Reference resolutions in document <a href="#">N3254</a> , and unconfirmed minutes in document <a href="#">N3253</a> for meeting 50 - - with any corrections noted in section 3 in the minutes of meeting 51 in document <a href="#">N3353</a> ).	Status
<b>AI-50-5</b>	<b>Ad hoc group on principles and procedures (lead - Dr. V.S. UMAmaheswaran)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. Check and propose any updates to the P&P document arising from adopting the combined code table and enhanced names list format per document <a href="#">N3214</a> . M51 - in progress.	In progress.

#### 4.3 New action items from meeting 51, 2007-09-17/21, Hangzhou, China

Item	Assigned to / action (Reference resolutions in document <a href="#">N3354</a> , and unconfirmed minutes in document <a href="#">N3353</a> for meeting 51 - this document you are reading)	Status
<b>AI-51-1</b>	<b>Recording Secretary - Dr. V.S. UMAmaheswaran</b>	
	a. To finalize the document <a href="#">N3354</a> containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document <a href="#">N3354</a> .
	b. To finalize the document <a href="#">N3353</a> containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document <a href="#">N3353</a> .
<b>AI-51-2</b>	<b>Convener - Mr. Mike Ksar</b>	
	<i>To take note of and act upon the following items.</i>	
	a. <i>M51.40 (Roadmap snapshot):</i> WG2 instructs its convener to post the updated snapshot of the roadmaps (in document <a href="#">N3306</a> ) to the WG2 web site.	Completed.
	b. <i>M51.34 (Concern on delay in FDAM 3 progression):</i> WG2 instructs its convener to communicate to ITTF via SC2 secretariat and SC2 chair its concern on the delay by ITTF in processing FDAM3 to ISO/IEC 10646: 2003 with a request for expediting its processing.	Completed.

c.	To add the following carried forward scripts to next meeting agenda, if any updates are available: Vedic Sanskrit (N3290), Old Yi (N3288) and Batak (N3320)	Completed see document N3405.
AI-51-3	<b>Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)</b>	
	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.	<p><i>M51.1 (Myanmar changes):</i> With reference to document N3277, WG2 accepts the rearranged code chart for Myanmar block including the following changes (in the new code positions):</p> <ul style="list-style-type: none"> <li>a. Change the glyphs for 107A MYANMAR LETTER SHAN NYA</li> <li>b. Change the name for 108C to MYANMAR SIGN SHAN COUNCIL TONE-3, and adjust the base line for the glyph</li> <li>c. Add the following 17 characters: <ul style="list-style-type: none"> <li>1077 MYANMAR LETTER SHAN GA</li> <li>1079 MYANMAR LETTER SHAN ZA</li> <li>107B MYANMAR LETTER SHAN DA</li> <li>107F MYANMAR LETTER SHAN BA</li> <li>108B MYANMAR SIGN SHAN COUNCIL TONE-2</li> <li>1090 MYANMAR SHAN DIGIT ZERO</li> <li>1091 MYANMAR SHAN DIGIT ONE</li> <li>1092 MYANMAR SHAN DIGIT TWO</li> <li>1093 MYANMAR SHAN DIGIT THREE</li> <li>1094 MYANMAR SHAN DIGIT FOUR</li> <li>1095 MYANMAR SHAN DIGIT FIVE</li> <li>1096 MYANMAR SHAN DIGIT SIX</li> <li>1097 MYANMAR SHAN DIGIT SEVEN</li> <li>1098 MYANMAR SHAN DIGIT EIGHT</li> <li>1099 MYANMAR SHAN DIGIT NINE</li> <li>109E MYANMAR SYMBOL SHAN ONE</li> <li>109F MYANMAR SYMBOL SHAN EXCLAMATION</li> </ul> </li> <li>d. Remove the tiny dot in the glyph for 1040 MYANMAR DIGIT ZERO</li> </ul> <p>The rearranged code chart and names list are shown on page 7 of document N3277 as updated in this meeting.</p>	Completed; in FDAM4.
b.	<p><i>M51.2 (Lanna script):</i> With reference to the ad hoc report on Lanna script in document N3346, and based on disposition of ballot comments on FPDAM4 at the meeting, WG2 resolves to move all the changes introduced for Lanna script (block 1A20--1AAF) from Amendment 4 to Amendment 5, incorporating the following changes:</p> <ul style="list-style-type: none"> <li>a. Ensure the correct glyphs and associated names are used to produce the charts correcting the previous production error</li> <li>b. Replace LANNA with TAI THAM in the script name, the block name and all the character names</li> <li>c. Add an annotation that the script is also known as LANNA (similar to TAI LUE)</li> <li>d. Insert a new character 1A5A TAI THAM SIGN LOLA HOY KONGNOT</li> <li>e. Move the characters in 1A5A to 1A5E down one position</li> <li>f. Move the character in 1A5F to 1A7E.</li> </ul> <p>Further the Chinese national body and other experts are invited to discuss and resolve all outstanding concerns from document N3346 for consideration at the next WG2 meeting.</p>	Completed in FPDAM5.
c.	<p><i>M51.3 (Disposition of FPDAM4 ballot comments):</i> WG2 accepts the disposition of ballot comments on FPDAM4 in document N3344 and instructs its editor to prepare the final text of Amendment 4 incorporating the dispositions. The following changes are noted in particular:</p> <ul style="list-style-type: none"> <li>a. Lanna script is moved out to Amendment 5 per resolution M51.2 above</li> <li>b. Improvement of the glyph for 1E9E</li> <li>c. Correction to the glyphs for 0333 and 0347</li> <li>d. Addition of annotations to MALAYALAM LETTER CHILLU RR and CHILLU L</li> <li>e. Changes in Myanmar Shan entries per resolution M51.1 above</li> <li>f. Rearrangement of characters in columns 2E2, 2E3 and 2E4 in the Supplemental Punctuation block per Irish ballot comment T.4 and accompanying modified chart on page 5 in document N3330</li> <li>g. Replacement of 'SWUNG DASH' with 'TILDE' in the names for 2E1B, 2E1E and 2E1F</li> <li>h. Corrections to several source reference errors for CJK</li> <li>i. Corrections to collection number allocations</li> <li>j. Removal of 2018--201F, 301D-301F from the BiDi mirrored list</li> </ul>	Completed; see document N3381.

d.	<i>M51.4 (Progression of Amendment 4):</i> WG2 resolves to include all the items accepted for inclusion in the standard noted in resolutions M51.1 and M51.2 into Amendment 4. WG2 instructs its project editor to forward the final text of Amendment 4 along with the disposition of comments document N3344 to the SC2 secretariat for an FDAM ballot. The final set of charts and names lists are in document N3348. The unchanged target starting date for FDAM4 is 2007-12.	Completed; see document SC2/N3998.
e.	<i>M51.5 (Removal of Bamum script from Amd. 5):</i> With reference to document N3298, and supportive technical comments in PDAM5 ballot response document N3331, WG2 resolves to remove all changes introduced for Bamum script (block 1C80--1CCF) from Amendment 5, awaiting further input from the Bamum user community before further processing.	Completed; removed from Amd. 5.
f.	<i>M51.6 (Removal of Meitei Mayek script from Amd. 5):</i> With reference to document N3327, and based on discussion of PDAM 5 ballot comments on Meitei Dandas at the meeting, WG2 resolves to remove all changes introduced for Meitei Mayek script (block A6A0--A6FF) from Amendment 5, until the question about script-specific Dandas is resolved (see resolution M51.7 below).	Completed removed from Amd. 5.
g.	<i>M51.8 (Word Separator Middle Dot):</i> With reference to documents N3347 and Irish ballot comment T.3 on PDAM 5 in document N3331, WG2 accepts to encode 2E31 WORD SEPARATOR MIDDLE DOT with its glyph as shown in document N3349.	Completed; in Amd. 5.
h.	<i>M51.9 (Update to 11 KP source references):</i> WG2 accepts to update the KP1 source reference mapping for 11 code points per document N3285.	Completed; in FPDAM5.
i.	<i>M51.10 (Japanese ARIB ideographs):</i> With reference to document N3318, WG2 accepts to encode the following: 2 CJK unified ideograph characters: 9FC4 (ARIB ID 47), 9FC5 (ARIB ID 95), and 4 CJK Compatibility ideograph characters: FA6B (ARIB ID 39), FA6C (ARIB ID 67), FA6D (ARIB ID 93), and FA6E (ARIB ID 105) with their glyphs and compatibility mappings as shown in Table 7-11 in document N3318. Further, WG2 requests IRG to review and provide feedback on the above at its November 2007 meeting.	Completed; in Amd. 5.
j.	<i>M51.11 (Disposition of PDAM5 ballot comments):</i> WG2 accepts the disposition of ballot comments on PDAM5 in document N3345 and instructs its editor to prepare the final text of Amendment 5 incorporating the dispositions. The following changes are noted in particular: a. Addition of Tai Tham script (also known as Lanna) per resolution M51.2 above b. Removal of Bamum script per resolution M51.5 above c. Removal of Meitei Mayek script per resolution M51.6 above d. Addition of 2E31 per resolution M51.8 above e. Updates to KP source reference per resolution M51.9 above f. Addition of 6 ideographs per resolution M51.10 above g. Removal of 67 CJK Ext. C unified ideographs (see also document N3280 from IRG) h. Corrections to 26 CJK Ext. C ideographs per ballot comments from Japan i. Corrections to glyphs for 14 CJK Ext. C unified ideographs (see also documents N3279 and N3281) j. Corrections to source references for several CJK Ext. C unified ideographs k. Deletion of 1 Egyptian hieroglyph at 130FB l. Addition of 9 Egyptian hieroglyphs m. Rearrangement of code chart for Egyptian hieroglyphs reflecting the above changes and removing any empty code positions n. Addition of missing annotations for Korean Hangul additions o. Cleanup of the source references along with IRG-provided G_KX data and hex notation in RoK source references. p. Updates to the names list for Hangul Jamos to avoid confusion q. Corrections to collection number errors <i>Correction:</i> Item g above should read: Removal of 63 CJK Ext. C unified ideographs and removal of T-source for 4 CJK Ex. C unified ideographs (per charts in document N3278 attachment A). Disposition of comments N3345 should also reflect this correction.	Completed; in Amd. 5.

k.	<i>M51.12 (Progression of Amendment 5)</i> : WG2 instructs its project editor to forward the final text of Amendment 5 along with the disposition of comments document <a href="#">N3345</a> to the SC2 secretariat for an FPDAM ballot. The final set of charts and names lists are in document <a href="#">N3349</a> . The unchanged starting dates for this work item are: FPDAM 2007-10-31, and FDAM 2008-07.	Completed; see document <a href="#">N3982</a> .
l.	<i>M51.13 (Imperial Aramaic script)</i> : WG2 accepts to encode in the standard 31 characters in code positions 10840 to 10855 and 10857 to 1085F, in a new block 10840 to 1085F named Imperial Aramaic, with their names and glyphs as shown in document <a href="#">N3339</a> .	Completed; in PDAM6.
m.	<i>M51.14 (Phoenician numbers)</i> : With reference to document <a href="#">N3284</a> , WG2 accepts to encode the following 2 characters: 1091A PHOENICIAN NUMBER TWO 1091B PHOENICIAN NUMBER THREE with their glyphs as shown on page 5 in document <a href="#">N3284</a> .	Completed; in PDAM6.
n.	<i>M51.15 (Inscriptional Parthian)</i> : WG2 accepts to encode in the standard 30 characters in code positions 10B40 to 10B55 and 10B58 to 10B5F, in a new block 10B40 to 10B5F named Inscriptional Parthian, with their names and glyphs as shown on page 18 in document <a href="#">N3286</a> .	Completed; in PDAM6.
o.	<i>M51.16 (Inscriptional Pahlavi)</i> : WG2 accepts to encode in the standard 27 characters in code positions 10B60 to 10B72 and 10B78 to 10B7F, in a new block 10B60 to 10B7F named Inscriptional Pahlavi, with their names and glyphs as shown on page 19 in document <a href="#">N3286</a> .	Completed; in PDAM6.
p.	<i>M51.17 (Common Indic Number Forms)</i> : With reference to documents <a href="#">N3312</a> , <a href="#">N3334</a> and <a href="#">N3316</a> , WG2 accepts to encode 10 characters in code positions A830 to A839 in a new block A830 to A83F called Common Indic Number Forms with glyphs as shown on page 14 of document <a href="#">N3316</a> .	Completed; in PDAM6.
q.	<i>M51.18 (Bengali Ganda Currency mark)</i> : With reference to document <a href="#">N3311</a> , WG2 accepts to encode: 09FB BENGALI GANDA MARK with its glyph as shown in document <a href="#">N3311</a> .	Completed; in PDAM6.
r.	<i>M51.19 (Tibetan Religious symbols)</i> : With reference to document <a href="#">N3268</a> , WG2 accepts to encode the following 4 characters: 0FD5 TIBETAN SYMBOL GYUNG DRUNG NANG -KHOR 0FD6 TIBETAN SYMBOL GYUNG DRUNG PHYI -KHOR 0FD7 TIBETAN SYMBOL GYUNG DRUNG NANG -KHOR BZHI MIG CAN 0FD8 TIBETAN SYMBOL GYUNG DRUNG PHYI -KHOR BZHI MIG CAN with their glyphs as shown on page 1 in document <a href="#">N3268</a> .	Completed; in PDAM6.
s.	<i>M51.20 (Amendment 6 – subdivision and PDAM text)</i> : WG2 instructs its editor / convener to prepare a project sub division proposal (see document <a href="#">N3358</a> ) and PDAM text based on resolutions M51.13 to M51.19 above, and forward them to the SC2 secretariat for ballot. The proposed start dates for the progression of this work item are: PDAM 2007-11, FPDAM 2008-06, and FDAM 2008-11.	Completed; see document <a href="#">N3989</a> .
t.	<i>M51.21 (FCD of next edition)</i> : With reference to documents <a href="#">N3274</a> , <a href="#">N3275</a> and <a href="#">N3276</a> , WG2 instructs its editor / convener to prepare: a. a subdivision proposal for the next edition of the standard (see document <a href="#">N3360</a> ) b. text for the next edition of the standard incorporating the texts of Amendments 1 through Amendment 5 and submit the above along with the updated rationale document <a href="#">N3362</a> to SC2 for registration and balloting, with the following schedule: FCD: 2008-03 and FDIS: 2008-11.	In progress.
<b>AI-51-4</b>	<b>IRG Convener and IRG Editor (Dr. Lu Qin)</b>	
	To act on the resolution below.	
a.	<i>M51.35 (IRG Principles and Procedures)</i> : With reference to item 3 in document <a href="#">N3283</a> , WG2 invites IRG to develop a set of principles and procedures to guide their work, with due considerations for the current WG2 Principles and Procedures.	In progress.
b.	<i>M51.36 (IRG Annex S Review)</i> : WG2 endorses the IRG activity to review and feedback on Annex S of ISO/IEC 10646: 2003, without impacting already unified ideographs in the standard, taking into consideration the FCD ballot progression which starts in 2008-03.	In progress; start of FCD is delayed.

c.	<i>M51.38 (IRG ideographs for Names):</i> With reference to item 8 in document <a href="#">N3283</a> , WG2 endorses the IRG activity to investigate and report back to WG2 on the issues and recommendations on ideographs for names of persons, places and the like.	In progress.
d.	<i>M51.39 (IRG Urgent-Need ideographs):</i> With reference to item 10 in document <a href="#">N3283</a> , WG2 requests the IRG to report back to WG2 with a more complete plan related to the identified 12000 'urgent need' ideographs, along with a prioritization of this work with respect to other existing IRG work items.	In progress.
e.	<i>M51.10 (Japanese ARIB ideographs):</i> With reference to document <a href="#">N3318</a> , WG2 accepts to encode the following: 2 CJK unified ideograph characters: 9FC4 (ARIB ID 47), 9FC5 (ARIB ID 95), and 4 CJK Compatibility ideograph characters: FA6B (ARIB ID 39), FA6C (ARIB ID 67), FA6D (ARIB ID 93), and FA6E (ARIB ID 105) with their glyphs and compatibility mappings as shown in Table 7-11 in document <a href="#">N3318</a> . Further, WG2 requests IRG to review and provide feedback on the above at its November 2007 meeting.	Completed; see revised document <a href="#">N3318</a> .
f.	With reference to disposition of comment JP-1 from Japan on PDAM 5 ballot, IRG is requested to replace all the G_KX source information without the decimal values with the new format G_KXdddddd. IRG is to assist the project editor in preparing the updated data file for Amd. 5 by 2007-10-15. IRG to also investigate and make recommendations on individual number of digits for other dictionary sources.	Completed; in Amd. 5.
g.	With reference to disposition of comment T.2 from Republic of Korea on PDAM 5 ballot the IRG is to work with the project editor in producing the updated charts for the K5 sources with hexadecimal notation.	Completed; in Amd. 5.
h.	IRG is to verify whether ideographs 2AEEF and 24814 can be unified or not, to address the UK ballot comment T.1b on PDAM 5.	Completed; in Amd. 5.
i.	IRG convener and IRG editor to assist the project editor in preparing the relevant source-reference data for Amd. 4, Amd. 5 and Amd. 6, the Ext. C charts for Amd. 5, and the multi-column unified CJK charts for the text of the second edition, respecting the schedules adopted in the relevant resolutions at this meeting.	In progress.
<b>AI-51-5</b>	<b>National bodies of Germany, India, Ireland, UK and USA (Mr. Michael Everson, Ms. Deborah Anderson)</b>	
	To act on the resolution below.	
a.	<i>M51.7 (Criteria for script-specific Dandas):</i> WG2 invites the German, Indian, Irish, UK and US national bodies in consultation with other experts, to formulate 'definitive criteria for script-specific Dandas' for consideration at the next WG2 meeting for inclusion in the WG2 Principles and Procedures.	Completed; see document <a href="#">N3457</a> .
<b>AI-51-6</b>	<b>China (Mr. Chen Zhuang)</b>	
	To take note of and act upon the following items.	
a.	<i>M51.22 (Nüshu script):</i> With reference to documents <a href="#">N3287</a> , <a href="#">N3322</a> , <a href="#">N3337</a> and <a href="#">N3340</a> on Nüshu script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see documents <a href="#">N3426</a> , <a href="#">N3433</a> and <a href="#">N3449</a>
b.	<i>M51.30 (Old Lisu script):</i> With reference to documents <a href="#">N3317</a> , <a href="#">N3323</a> and <a href="#">N3326</a> on Old Lisu script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see <a href="#">N3424</a> .
c.	<i>M51.31 (Simple Miao script):</i> With reference to document <a href="#">N3335</a> on Simple Miao script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	In progress.

	<p><b>d.</b> <i>M51.2 (Lanna script):</i> With reference to the ad hoc report on Lanna script in document <a href="#">N3346</a>, and based on disposition of ballot comments on FPDAM4 at the meeting, WG2 resolves to move all the changes introduced for Lanna script (block 1A20--1AAF) from Amendment 4 to Amendment 5, incorporating the following changes:</p> <ul style="list-style-type: none"> <li>a. Ensure the correct glyphs and associated names are used to produce the charts correcting the previous production error</li> <li>b. Replace LANNA with TAI THAM in the script name, the block name and all the character names</li> <li>c. Add an annotation that the script is also known as LANNA (similar to TAI LUE)</li> <li>d. Insert a new character 1A5A TAI THAM SIGN LOLA HOY KONGNOT</li> <li>e. Move the characters in 1A5A to 1A5E down one position</li> <li>f. Move the character in 1A5F to 1A7E.</li> </ul> <p>Further the Chinese national body and other experts are invited to discuss and resolve all outstanding concerns from document <a href="#">N3346</a> for consideration at the next WG2 meeting.</p>	Completed; in Amd. 5.
<b>AI-51-7</b>	<b>Ireland (Mr. Michael Everson)</b>	
	To take note of and act upon the following items.	
	<p><b>a.</b> <i>M51.23 (Samaritan alphabet):</i> With reference to document <a href="#">N3291</a> on Samaritan alphabet, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	Completed; see document <a href="#">N3377</a> .
	<p><b>b.</b> <i>M51.24 (Javanese script):</i> With reference to documents <a href="#">N3292</a>, <a href="#">N3319</a> and <a href="#">N3329</a> on Javanese script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	Completed; see revised <a href="#">N3329</a> .
	<p><b>c.</b> <i>M51.25 (Psalter Pahlavi script):</i> With reference to document <a href="#">N3286</a> containing a proposal on Psalter Pahlavi script, WG2 invites national bodies and liaison organizations to review and provide feedback on Psalter Pahlavi script to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	In progress.
	<p><b>d.</b> <i>M51.26 (Book Pahlavi script):</i> With reference to document <a href="#">N3294</a> on Book Pahlavi script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	In progress.
	<p><b>e.</b> <i>M51.32 (3 Malayalam characters):</i> With reference to document <a href="#">N3295</a> on 3 Malayalam archaic characters, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	Dropped; no feedback.
<b>AI-51-8</b>	<b>USA (Mr. Michel Suignard)</b>	
	To take note of and act upon the following items.	
	<p><b>a.</b> <i>M51.27 (Old South Arabian script):</i> With reference to documents <a href="#">N3296</a> and <a href="#">N3309</a> on Old South Arabian script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to work with the US national body and submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	Completed; see document <a href="#">N3395</a> .
	<p><b>b.</b> <i>M51.28 (Tangut script):</i> With reference to documents <a href="#">N3297</a>, <a href="#">N3307</a>, <a href="#">N3333</a> and <a href="#">N3343</a> on Tangut script (also known as Xi Xia script), WG2 invites national bodies and liaison organizations to review and provide feedback to the US national body and invites the US national body to work with Chinese, Irish and UK national bodies and invited experts and submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	Completed; see document <a href="#">N3448</a> .
	<p><b>c.</b> <i>M51.33 (Japanese TV Symbols):</i> With reference to document <a href="#">N3341</a> on Japanese TV symbols, WG2 invites national bodies and liaison organizations to review and provide feedback to US national body and invites the US national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.</p>	Completed; see document <a href="#">N3397</a> .
<b>AI-51-9</b>	<b>SEI - UC Berkeley (Ms. Deborah Anderson)</b>	
	To take note of and act upon the following items.	

a.	<i>M51.29 (Old Turkic script)</i> : With reference to documents <a href="#">N3299</a> and <a href="#">N3357</a> on Old Turkic script (also known as Orkhun script), WG2 invites national bodies and liaison organizations to review and provide feedback to SEI and invites SEI to work with the Chinese national body and submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see document <a href="#">N3357</a> revised.
<b>AI-51-10</b>	<b>All national bodies and liaison organizations</b>	
	To take note of and act upon the following items.	
a.	<i>M51.22 (Nüshu script)</i> : With reference to documents <a href="#">N3287</a> , <a href="#">N3322</a> , <a href="#">N3337</a> and <a href="#">N3340</a> on Nüshu script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see documents <a href="#">N3426</a> , <a href="#">N3433</a> and <a href="#">N3449</a>
b.	<i>M51.23 (Samaritan alphabet)</i> : With reference to document <a href="#">N3291</a> on Samaritan alphabet, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see document <a href="#">N3377</a> .
c.	<i>M51.24 (Javanese script)</i> : With reference to documents <a href="#">N3292</a> , <a href="#">N3319</a> and <a href="#">N3329</a> on Javanese script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see revised <a href="#">N3329</a> .
d.	<i>M51.25 (Psalter Pahlavi script)</i> : With reference to document <a href="#">N3286</a> containing a proposal on Psalter Pahlavi script, WG2 invites national bodies and liaison organizations to review and provide feedback on Psalter Pahlavi script to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	No feedback.
e.	<i>M51.26 (Book Pahlavi script)</i> : With reference to document <a href="#">N3294</a> on Book Pahlavi script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	No feedback.
f.	<i>M51.27 (Old South Arabian script)</i> : With reference to documents <a href="#">N3296</a> and <a href="#">N3309</a> on Old South Arabian script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to work with the US national body and submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see document <a href="#">N3395</a> .
g.	<i>M51.28 (Tangut script)</i> : With reference to documents <a href="#">N3297</a> , <a href="#">N3307</a> , <a href="#">N3333</a> and <a href="#">N3343</a> on Tangut script (also known as Xi Xia script), WG2 invites national bodies and liaison organizations to review and provide feedback to the US national body and invites the US national body to work with Chinese, Irish and UK national bodies and invited experts and submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see document <a href="#">N3448</a> .
h.	<i>M51.29 (Old Turkic script)</i> : With reference to documents <a href="#">N3299</a> and <a href="#">N3357</a> on Old Turkic script (also known as Orkhun script), WG2 invites national bodies and liaison organizations to review and provide feedback to SEI and invites SEI to work with the Chinese national body and submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see document <a href="#">N3357</a> revised.
i.	<i>M51.30 (Old Lisu script)</i> : With reference to documents <a href="#">N3317</a> , <a href="#">N3323</a> and <a href="#">N3326</a> on Old Lisu script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see <a href="#">N3424</a> .
j.	<i>M51.31 (Simple Miao script)</i> : With reference to document <a href="#">N3335</a> on Simple Miao script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	No feedback.
k.	<i>M51.32 (3 Malayalam characters)</i> : With reference to document <a href="#">N3295</a> on 3 Malayalam archaic characters, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	No feedback.

I.	<i>M51.33 (Japanese TV Symbols)</i> : With reference to document N3341 on Japanese TV symbols, WG2 invites national bodies and liaison organizations to review and provide feedback to US national body and invites the US national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	Completed; see document N3397.
m.	<i>M51.41 (Future meetings)</i> : WG 2 meetings: Meeting 52 - 2008-04-21/25, Redmond, WA, USA; SC2 plenary is planned for the 25th of April Meeting 53 - Fall 2008, seeking host; backup USA Meeting 54 - Spring 2008, Republic of Korea (pending confirmation); backup USA Meeting 55 - Fall 2009 (along with SC2 plenary); Tokushima, Japan (pending confirmation); backup USA	Noted.

## 5 JTC1 and ITTF matters

### Input documents:

- [3375](#) Amendment 3 JTC1 Approval; ITTF; SC2 02n3991; 2007-12-27  
[3391](#) Notice of Publication: ISO/IEC 10646: 2003/Amd.3; SC2 Secretariat; 2008-02-20

Above documents are for information of delegates. Amendment 3 text is available from ITTF web site: <http://standards.iso.org/ittf/PubliclyAvailableStandards/index.html>.

## 6 SC2 matters

### Input documents:

- [JTC1/SC2 Program of Work](#) - <http://www.dkuug.dk/JTC1/SC2/open/pow.htm>  
[3381](#) FDAM4 text to SC2; Am4names.txt; CJKC\_SR.txt; CJKU\_SR.txt; Michel Suignard; 2008-01-25  
[3406](#) PDAM6 Ballot Results; SC2 Secretariat; 2008-03-19  
[3409](#) AMD5 ballot results; SC2 Secretariat 02n4004; 2008-03-25  
[3415](#) SC2 Secretariat Report – plenary 15 – Redmond; SC2 Secretariat; 2008-04-02  
[3416](#) Request for Periodic Review; ITTF; 2008-04-02  
[3417](#) Meeting Recommendations from the 11-14 March 2008 SWG-Directives Meeting in London, United Kingdom [JTC 1 N 8987]; ITTF; 2008-04-02  
[3439](#) SC2 plenary meeting 15 draft agenda; SC2 Secretariat; 2008-04-12  
[3440](#) Draft: SC 2 Proposal for stabilised standards; SC2 Secretariat; 2008-04-12

The above document were all for information of delegates. There was no discussion.

Documents containing the SC2 program of work, the SC2 secretariat report, agenda for SC2 15th plenary, request for periodic review of a list of SC2 maintained standards, recommendations for stabilizing some standards, and recommendations from SWG directives meeting are all related to the SC2 plenary on 2008-04-25. FDAM4 text has been submitted to ITTF and is under ballot in JTC1. FPDAM5 and PDAM6 ballot results and accompanying ballot comments are on the agenda for disposition of comments at this meeting - see item 10.1 on page 38 for FPDAM5, and item 10.2 on page 48 for PDAM6.

## 7 WG2 matters

### 7.1 WG2 Convener's Draft Report to SC2

#### Input document:

- [3399](#) WG2 Convener Report to SC2; Ksar; 2008-04-24

WG2 experts are requested to review and provide feedback to the convener before end of the meeting. The document will be updated to include the results from this meeting before presenting to SC2 plenary.

### 7.2 Roadmaps snapshot

#### Input document:

- [3398](#) Snapshot of Pictorial view of Roadmaps to BMP, SMP, SIP and SSP; Uma; 2008-04-05

Dr. Umamaheswaran: Document N3398 is the latest snapshot of the roadmaps from the Unicode web site. If anyone has feedback on the document please give them to me before end of the meeting. Otherwise WG2 can take a resolution to post this to the WG2 site and send to SC2 for information to national bodies.

**Relevant resolution:**

**M52.28 (Roadmap snapshot):**

**Unanimous**

WG2 instructs its convener to post the updated snapshot of the roadmaps (in document [N3398](#)) to the WG2 web site.

**7.3 Character count spreadsheet**

**Input document:**

[3368](#) Character count spreadsheet; Ken Whistler; 2007-11-03

Mr. Mike Ksar: Document [N3368](#) contains a spreadsheet containing the character counts related to Unicode 5.1. It is for information to the delegates.

**7.4 Request to modify principles and procedures**

**Input document:**

[3441](#) Proposed changes to Principles & Procedures document N3102; US national body; 2008-04-14

Ms. Deborah Anderson: This is proposed wording to include in P&P document requesting proposal submitters to identify the list of experts who may be contacted from different countries.

**Discussion:**

- a. Mr. Martin Hosken: Is the WG2 or UTC considered a stake holder?
- b. Dr. Ken Whistler: A stake holder is anyone who claims a stake in the proposal process. If someone comes to the table the person becomes a stake holder. For example, we get something like Mandaic. All national bodies (stakeholders of ISO) are notified by document distribution seeking their feedback. The national bodies can interact with the authors identified in the document.
- c. Mr. Peter Constable: Any national body can ask a specific input from the author or ask for an ad hoc meeting.
- d. Mr. Martin Hosken: The process seems to be OK for WG2 P&P.

Disposition: Accept the proposal to add paragraphs from [N3441](#) into the P&P document.

Action item: Dr. Umamaheswaran is to update the P&P document.

**Relevant resolution:**

**M52.4 (Additions to P&P):**

**Unanimous**

WG2 accepts the request to include the list of experts contacted in proposals to WG2, to the Principles and Procedures document proposed in document [N3441](#).

**7.5 CJK Multicolumn presentation**

**Input document:**

[3408](#) CJK multicolumn presentation; Michel Suignard; 2008-03-21

Mr. Michel Suignard: There are nine columns for CJK Sources – these are described the document [N3408](#). The document shows some of the possible formats and ways to deal with sparse entries for sources. Several options are shown in order not to waste the space. It is a trade-off between positional alignment (all J-sources for example in the same column) and taking advantage of sparsity. There is a possibility of also showing a radical and stroke count in the cells.

**Discussion:**

- a. Dr. Ken Whistler: Including the radical number interferes with the code point referencing. You can keep the stroke count, but move the radical number to the top of the block or something of that nature.
- b. Mr. Michel Suignard: Some of the source names are too long also. Both the source and radical / stroke count information is very useful information to have for each. As we go to Ext. B and C the maximum number of sources drops off sharply to 2 and sometimes 3 etc. There can be more packed into a visual page on the screen. Even if we don't print these out, we need some efficiency in showing the page. There are ways to generate PDFs on the fly using PDF generating tools. Getting the fonts is the challenge -- especially for the North Korean glyphs. For the source information, we could use abbreviations when they become too long.
- c. Mr. Mike Ksar: My preference is what I see. Six columns for main block, four for Ext. A, two for B and two for C. There are some variants in the main block - multiple lines vs positional misalignment.

Disposition:

WG2 accepts the dense formats for multiple columns for CJK. See relevant resolution below.

Action item: Requests IRG to use these formats in preparing the multiple column formats in cooperation with the project editor.

**Relevant resolution:**

**M52.26 (Multiple column format for Ideograph charts):** **Unanimous**

WG2 accepts the dense formats for multiple columns as described in document [N3448](#) as follows:

- Format from page 5 for the main CJK Unified Ideographs block
- From page 6 for CJK Extension A block
- From page 7 for CJK Extension B and Extension C block.

WG2 further requests IRG to use these formats in preparing the multiple column formats in cooperation with the project editor with possible updates if necessary.

## 7.6 Subdivision of work – New edition of ISO/IEC 10646

Input document:

[3360](#) Subdivision of work - FCD; Ksar; 2007-09-20

[3362](#) FCD Rationale – updated N3274; Michel Suignard; Project Editor; 2007-09-20

[3364](#) FCD Subdivision of Work ballot; SC2 Secretariat, 023974; 2007-09-27

Mr. Michel Suignard: The text for the next edition is all set to go. The charts are not ready yet. In Amd. 5 we have Ext. C and we are going to multiple column format. The non CJK part can be produced relatively easily. Ext. B and Ext. C are being negotiated with the IRG. There are also fonts- related issues to be negotiated with the font providers. These have to be produced both for Unicode and for ISO/IEC 10646.

Discussion:

- a. Mr. Alain LaBonté: There are also issue about the fonts and charts for the French version. if we can produce the charts for Fr version at the same time as the En version it would be better.
- b. Dr. Ken Whistler: We could scale back the scope of the work if we decide to include only up to Amd. 4 and move Amd. 5 to a future addition. This may permit moving forward much easier. We have at least the fonts for Ext. B even though not for Ext. C. Amd. 5 has its own production issues.
- c. Mr. Michel Suignard: The text is not just including Amd. 1 to 4 etc. Amd. 5 and Amd. 6 may be made applicable to the older edition. Another possibility would be to delay the next edition till we finish Amd. 6 -- it makes synchronization issues easier as well – and gives us more time to produce the charts.
- d. Mr. Mike Ksar That would be my preferred solution; delay the next edition till Amd. 6.
- e. Dr. Umamaheswaran: I was going to propose the same.

Disposition: Amend scope to include Amd. 6 in the next edition, and revise the dates for NP.

**Relevant resolution:**

**M52.24 (FCD of next edition):** **Unanimous**

WG2 instructs its project editor to prepare a working draft of the text for the next edition of the standard updated to include the text of Amendment 6 for review at WG2 meeting M53.

The new schedule is WD 2008-09, FCD: 2008-11 and FDIS: 2009-06.

## 7.7 Criteria for script-specific Dandas

Input document:

[3457](#) Criteria for the encoding of script-specific dandas; Unicode and US national body; 2008-02-08

Ms. Deborah Anderson introduced the document – a brief background and the recommendations are in document [N3457](#).

Dr. Ken Whistler: There are some South Asian scripts in Oceania etc. also using Dandas. Our recommendations are based on currently encoded scripts versus new ones. Cases 1 and 2 are straight forward. Case 3 is more complicated -- currently encoded scripts that need them but don't have their own Dandas -- like for scripts from India. The Devanagari dandas are used for example for several North Indian scripts. The other option is to encode new Dandas. In either case we stick with whatever decision we make. In known additional cases like in Bengali where it is reported that they use regular sets as well as another set.

Section B deals with new scripts. It has a set of principles that are related to the currently encoded ones. Once a determination is made the recommendation is to stick with it -- either we encode script-specific Dandas or unify with another one. If the proposers of a script bring a position that they can use existing Dandas then that determination can be made. If we accept these we should include these in the P&P document and we should refer to these. Some editing may be needed.

Discussion:

- a. Mr. Peter Constable: Item a) has a list of scripts using common Dandas. Example 1735 and 1736 are for Tagalog, Buhid, Tagbanwa and Hanunoo. Similarly the 0964 and 0965 from Devanagari block. These are to be declared explicitly after making a determination.
- b. Mr. Martin Hosken: Item c of B -- needs some rewording.
- c. Dr. Ken Whistler: If we do adopt these -- we need to make a determination and confirm the assumption stated such as for 964 / 965.
- d. Mr. Michael Everson: I will take this action item.
- e. Mr. Mike Ksar: Can we encode new Dandas for new scripts? Yes.

Disposition: Accept the principles for P&P.

Action item: Dr. Umamaheswaran to incorporate into P&P document. Mr. Michael Everson to investigate and report on current practice on use of currently encoded Dandas.

**Relevant resolution:**

<b>M52.5 (Principles for Dandas):</b>	<b>Unanimous</b>
WG2 adopts the principles guiding the encoding of Dandas in Brahmic scripts from document <a href="#">N3457</a> , 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.	

Dr. Ken Whistler: I would like to now request the Meetei Mayek script be brought out of its abeyance. I would like us to adopt that script for Amd. 6, including its own specific Dandas. There is additional feedback from Governments of India and Manipur. (See item 9.25 on page 36 for discussion on updated proposal on Meetei Mayek.)

## 8 IRG status and reports

### 8.1 Summary report and meeting 29 resolutions

Input documents:

- [3371](#) IRG Meeting# 29 Resolutions; IRG Rapporteur; Doc IRG N1377; 2008-04-01
- [3372](#) IRG Meeting 29 Summary; IRG Rapporteur; 2008-01-01

Dr. Lu Qin: I will present the summary document. The resolutions are referenced from within the summary report.

- *Item 1 - Future meetings*

Dr. Lu Qin: Meetings 30 and 31 have been approved. HKSAR is lined up for meeting 32 pending confirmation. HKSAR and China may switch the location for Meetings 31 and 32. China had no objections to the switch. Hosting of WG2 meeting is a separate subject. It will not be hosted by HKSAR - but by Hong Kong Polytechnic.

Discussion:

- a. Mr. Mike Ksar: HKSAR is a non-voting member of ISO. Currently HKITF is the liaison organization. If HKSAR can be a member of ISO, they can host the WG2 meeting. Please get in touch with Ms. Toshiko Kimura.

1. *Item 2 – Multiple column code charts for CJK*

Dr. Lu Qin: This item is still in progress. I understand there were some comments from an earlier discussion at the meeting. The quality of the charts will be reviewed.

(See item 7.5 on page 14 for discussion on CJK multiple column presentation).

## 2. *Item 3 - CJK Ext. C*

Dr. Lu Qin: CJK Ext. C has already been submitted and was under ballot. There is a revision that we had identified.

## 3. *Item 4 Ext. D work*

Dr. Lu Qin: This work is in Version 3 and will be reviewed in IRG meeting 30.

Discussion:

- a. Mr. Michel Suignard: One of the suggestions for Ext. B multi-column is to make the charts denser. WG2 will be requesting IRG to make the charts denser -- the content will not change just the format.
- b. Dr. Lu Qin: We are not generating the next version as yet. If I can get a document with all the suggested changes I can pass it on to the technical editors. The new format can be reviewed at IRG meeting 30.
- c. Mr. Michel Suignard: Also for Ext. C and beyond, we will need the fonts in outline format.
- d. Dr. Lu Qin: Please mark this as an action item so I can follow up.

Action item: Dr. Lu Qin to investigate and report on the availability of outline fonts for producing the CJK multiple column charts – including CJK Ext. C.

## 4. *Item 5 - Urgently needed characters*

Dr. Lu Qin: IRG meeting 30 will review these. A number of possibilities are being explored – either as a separate submission or as Ext. D postponing current Ext. D to Ext. E.

Discussion:

- a. Mr. Michel Suignard: I also note that there are 6 HKSCS characters -- possibly these are needed more urgently.
- b. Dr. Lu Qin: Some of those are already in future extensions. I will come to those.

## 5. *Item 6 - Annex S elaboration*

Dr. Lu Qin: This item is in progress -- being reviewed by IRG members.

Discussion:

- a. Mr. Michel Suignard: I would like to be in the loop for this review. I would also request a plan be submitted towards possible inclusion in Amd. 6.
- b. Mr. Richard Cook: The work of Annex S is still in very early stage. It may not be ready for Amd. 6.
- c. Mr. Michel Suignard: Annex S is pretty old -- we can stage the updates. For example lighter issues could be included in Amd. 6 and deeper issues that need more time can be done later. I would like IRG to take a look Annex S staging / planning. We also have dependency in Unicode standard which has borrowed quite a bit from Annex S.

Action item: IRG is to prepare and report on a work plan for Annex S revision.

## 6. *Item 7 - IRG Principles and Procedures*

Dr. Lu Qin: The work on a principles and procedures document for IRG has started and making slow progress. Mr. John Jenkins is leading the work. This is a new work effort unlike work on Annex S.

Discussion:

- a. Mr. Mike Ksar: I would like to see some progress on this item. We talked about this at the last WG2 meeting, but nothing has happened. We would like to get a schedule for this work. One of the items talked about was to use the WG2 P&P as a base document.

Action item: Need a work plan from IRG.

## 7. *Item 8 - Old Hanzi work*

Dr. Lu Qin: A consolidated list of Complete Oracle Bone inscriptions would be available by end of April. TCA is in charge of the work.

Discussion:

- Mr. Michael Everson: How many Oracle Bone characters would be there in the consolidated set?
- Dr. Lu Qin: I do not know – TCA representative is not present now -- they are doing the work.
- Mr. Masahiro Sekiguchi: In my understanding it is tens of thousands. There are about 100 radicals needed.

Ms. Wei Lin-Mei: There are about 6000+ Oracle Bone characters.

- *Item 9 - Review of 6 Japanese ARIB characters*

Dr. Lu Qin: WG2 had requested IRG to review 6 ARIB characters. IRG reviewed these and have submitted our feedback to WG2.

- 8. *Item 7 – RoK's request for urgently needed characters*

Dr. Lu Qin: Korea (RoK) had about 10000 characters for processing urgently. It is live work -- but due to the size we could not entertain it at the last IRG meeting.

The above items are all related to IRG resolutions.

Discussion:

- a. Mr. Peter Constable: I had input to WG2 from UTC, and would be of interest to IRG. This is regarding the IDS-s.
- b. Mr. Mike Ksar: We can forward the Unicode Liaison report to IRG to take a note.

Action item: IRG to review and feedback on IDS item in Unicode liaison report in document [N3459](#).

## **8.2 Proposal to encode 6 additional HKSCS characters**

Input document:

[3445](#) Six characters to be submitted for inclusion in the BMP; Hong Kong Special Administrative Region (HKSAR); 2008-04-15

Dr. Lu Qin: Document [N3445](#) is submitted from HKSAR. The intention is to inform WG2 that HKSCS had an extension, supposed to be the last one of HKSCS. HKSAR has decided that there will be no more extension from March / April 2008 time frame. Some characters that were in the earlier extension are proposed here. Six of these characters are not in ISO/IEC 10646. I suggested to HKSAR that WG2 can be informed and IRG can take these into account also.

Discussion:

- a. Mr. Michel Suignard: We have taken input of this nature into WG2 -- for example ARIB characters. We may decide to get IRG to take a look at it, or we can also take action in WG2. We should have some input on these from the national bodies who are also IRG members. From implementation point of view if there is some urgency we could entertain these in WG2.
- b. Mr. Mike Ksar: As I look at these -- four of these are in Ext. C or D. Two are not in any collections.
- c. Dr. Lu Qin: The first one is in Ext. D and has been reviewed for unification etc. The second one is for Cantonese opera tones. The third one is also a Tone. Fourth one is a person's name and is in ext. D collection and has gone through unification review. The fifth one is already in Ext. C. The sixth one is in Ext. D -- a personal name. Annex 2 shows the first character. Annex 3 shows the two Cantonese tones. Others are all personal names.
- d. Mr. Michel Suignard: There are two that are not in any of the extensions. Is Ext. D time frame soon enough for HKSAR? I would like the remaining five to be treated urgently but would like to get the opinion of other members.
- e. Dr. Lu Qin: There is no hurry -- Ext. D time frame may be adequate.
- f. Mr. Richard Cook: Is there a reason for putting them in BMP?
- g. Mr. Michel Suignard: We are just filling the holes in the BMP -- it is a convenience thing.
- h. Dr. Ken Whistler: The safest compromise would be to move the five that are not in Ext. C into the urgently needed set -- pulling them out of Ext. D. That will give IRG the review time. IRG has still the same amount of work to do. IRG can add these five to the collection of 238 urgently needed set.
- i. Mr. Mike Ksar: Do the Korean 10000 characters go into Ext. D. They are urgently needed?
- j. Dr. Lu Qin: There are characters that are considered to be a 'closed stable set' and are considered urgently needed. The Korean set called 'urgently needed' is another set. IRG will give those another label.
- k. Mr. Masahiro Sekiguchi: I would like these six characters to be separately discussed beyond the 238. I understand the urgency from implementation point of view.
- l. Dr. Lu Qin: HKSAR has listed the six since Ext. C has not completed the balloting process. One of the six is in Ext. C under ballot. The other five have not gone through the unification process.

- m. Mr. Masahiro Sekiguchi: We don't want to add more candidates to the 'urgently needed' or Ext. D sets. Our preference is to process these five separately. Our concern is that adding these to the other sets, would possibly delay the work on Ext. D or UNC.
- n. Mr. Michel Suignard: The proposal was to put these in the UNC. Is Japan suggesting considering these separately from UNC which is expected to come from IRG soon. IRG can review these five also along with the UNC.
- o. Mr. Masahiro Sekiguchi: We don't have any objection from timing point of view -- they could be handled in the same time frame. We want to close the UNC candidates. IRG can discuss these five as equivalent timing. The UNC is still under discussion and being finalized.
- p. Mr. Michel Suignard: WG2 can encode these in a merged way if we so choose. IRG has to approve the sets. It looks like the UNC is not as stable as I thought. I can now understand Japan's concern that these be reviewed separately.
- q. Dr. Lu Qin: It looks like I got the number of unified UNCs wrong.

Action item: IRG to review and recommend on the five additional HKSCS extension characters from document [N3445](#).

Mr. Mike Ksar: Thank you Dr. Lu Qin and please thank the IRG for all the hard work.

**Relevant resolution:**

<b>M52.27 (IRG matters)</b>	<b>Unanimous</b>
WG2 requests IRG	
<ul style="list-style-type: none"> <li>a. to prepare and present plans for their work on 'Annex S revision' and 'IRG Principles and Procedures'</li> <li>b. to study and report on the request regarding Ideographic Description Sequences (IDS) from document <a href="#">N3459</a> (Unicode Liaison Report) towards inclusion in the standard</li> <li>c. to review and report on request for HKSCS extensions in document <a href="#">N3445</a></li> </ul>	
for consideration at WG2 meeting 53.	

## 9 Scripts contributions – not under ballot

### 9.1 Javanese script

**Input documents:**

- [3292](#) Preliminary proposal for encoding the Javanese script in the UCS; Everson; 2007-07-31
- [3319](#) Proposal for encoding the Javanese script in the UCS; SEI - Everson; 2008-03-06
- [3329](#) Javanese government support for encoding the Javanese script; Michael Everson; 2007-09-13

Mr. Michael Everson: The work to do Javanese happened before Hangzhou meeting. There were a number of questions for clarification. These have been addressed in this revised document [N3319](#) which replaces [N3292](#). For example Note 2 on page 3 explains the difference between Javanese and Balinese scripts encoding model. Balinese is very much Indic model. The Javanese is more analytic. The Javanese experts preferred this model. Under line breaking more specifics about syllable model were requested. The proposal has been around for review for sometime. It is proposed to progress it to ballot. Discussion:

- a. Mr. Peter Constable: This document was reviewed by experts in Unicode consortium and found it to be mature and ready to proceed.
- b. Dr. Ken Whistler: Document [N3329](#) a recommendation from the Government of Indonesia supporting this encoding proposal -- support in local community as well as ministerial level support.
- c. Mr. Mike Ksar: If we accept this script for Amd. 6, we have to re-ballot PDAM6. Otherwise this will be Amd. 7.
- d. Dr. Ken Whistler: The US national body is definitely in favour of adding Javanese to Amd. 6 and re-balloting PDAM6. From the agenda it is clear there will be other entries for Amd. 6 and it would be simpler to carry forward only a single Amd.
- e. Mr. Michel Suignard: We will have to call this PDAM6.2 and it is easier to process a single Amd. than multiple.
- f. Mr. Mike Ksar: we will need revised dates from the project editor for the resolution.

Disposition: Accept for encoding in Amd. 6. Needed font is with the editor.

**Relevant resolution:**

<b>M52.7 (Javanese script):</b> WG2 accepts to encode in the standard 91 characters in code positions A980 to A9CD, A9CF, A9D0 to A9D9, A9DE and A9DF in a new block A980-A9DF named Javanese, with their names and glyphs as shown in document <a href="#">N3319</a> .	<b>Unanimous</b>
--	------------------

## 9.2 Old Turkic/Orkhun

Input documents:

- [3258](#) Orkhon; Silamu; 2007-04-23
- [3299](#) Orkhun – Updated; China – Wushour; 2007-07-15
- [3357](#) Feedback on Orkhun N3299; Everson; 2008-01-25

Prof. Wushour Silamu: This proposal has been used two times earlier. Document [N3357R2](#) dated 2008-01-25 is the latest update. We have not heard any feedback to modify the proposal. There are no changes.

Discussion:

- a. Mr. Michael Everson: There was a request on revisiting the ordering. The script is used in China and Europe as well. Professor Marcel Erdal had reviewed this earlier and had no problem. In my opinion the script is ready to go forward. A discussion of using already encoded punctuation characters is also included in this update.
- b. Dr. Ken Whistler: The order is definitely much better.

Disposition: Accept for Amd. 6; it is a Right to Left script. Ensure using R2 version.

**Relevant resolution:**

<b>M52.9 (Old Turkic script):</b> WG2 accepts to encode in the standard 71 characters in code positions 10C00 to 10C46 in a new block 10C00-10C4F named Old Turkic, with their names and glyphs as shown in document <a href="#">N3357</a> . This is a Right to Left script.	<b>Unanimous</b>
---	------------------

## 9.3 Additions for Vedic Sanskrit

Input documents:

- [3290](#) Revised proposal to encode characters for Vedic Sanskrit in the BMP of the UCS; Michael Everson and Peter Scharf (editors), Michel Angot, R. Chandrashekar, Malcolm Hyman, Susan Rosenfield, B. V. Venkatakrisna Sastry, Michael Witzel; 2007-07-26
- [3366](#) Proposal to encode 55 characters for Vedic Sanskrit in the BMP of the UCS; Michael Everson and Peter Scharf (editors), Michel Angot, R. Chandrashekar, Malcolm Hyman, Susan Rosenfield, B. V. Venkatakrisna Sastry, Michael Witzel; 2007-10-18
- [3383](#) Summary proposal to encode characters for Vedic in the BMP of the UCS; Ireland and UC Berkeley SEI; Michael Everson & Peter Scharf; 2008-03-06
- [3385](#) Comparison between two Vedic proposals of January 2008; Everson & Scharf; 2008-01-31
- [3456](#) Summary of Vedic Characters based on 3385, 3383R, and the Unicode Pipeline; Debbie Anderson; 2008-04-19

Ms. Deborah Anderson: Document [N3456R](#) represents the work I did by comparing [N3383](#) with other documents -- from the Government of India and from Mr. Michael Everson in [N3385](#). There are 9 proposed name corrections.

Discussion:

- a. Mr. Michael Everson: The whole process of getting Vedic has involved a lot of work -- complementary as well as conflicting. Ms. Deborah Anderson's document contains a common set of agreed to characters. There are some 'not agreed to' characters still under discussion. We should go ahead with the agreed-upon set of characters.
- b. Dr. Ken Whistler: [N3366](#) has all the background information, the reasons for encoding these, and has exhibits for everything that has been proposed. [N3383R](#) is the latest summary in the form of code chart and names list. That would be very close to the document that would be taken up for amendment. Document [N3456R](#) Ms. Deborah Anderson introduced represents the consensus between Government of India (and a large number of experts in India), the authors of [N3383R](#) and reviews in the UTC. We should put all the characters from [N3456R](#) with their glyphs from [N3366](#) into the next amendment. The remaining characters may come up later after further discussion with experts in India.
- c. Mr. Peter Constable: The UTC has discussed these proposals and has reviewed with the authors; the proposed repertoire is acceptable for encoding.

Disposition: Accept the proposal for Amd. 6 – document N3456R dated April 18 2008 contains the set of characters (including eight proposed name changes), with their glyphs from document N3383R. Two new blocks and some additions to existing Devanagari block. Some are combining characters.

**Relevant resolution:**

<b>M52.18 (Vedic additions):</b> WG2 accepts to encode in the standard 59 characters in code positions 1CD0 to 1CD3, 1CD5 to 1CE8, and 1CED to 1CF1 in a new block 1CD0-1CFF named Vedic Extensions, A8E0 to A8F7 in a new block A8E0-A8FF named Devanagari Extended, and 0900, 0955, 0973, 0974, 0979, and 097A in the current Devanagari block, with their glyphs as shown in document N3383 and their names from document N3456.	<b>Unanimous</b>
--	------------------

## 9.4 Samaritan script

**Input documents:**

[3291](#) Preliminary proposal to add the Samaritan alphabet to the BMP of the UCS; Michael Everson and Mark Shoulson; 2007-07-27

[3377](#) Proposal to add the Samaritan alphabet to the BMP of the UCS; UC Berkeley Script Encoding Initiative; Michael Everson & Mark Shoulson; 2008-01-25

Mr. Michael Everson: The previous version was document N3291. It presented the same material with some outstanding questions on behaviour of some characters such as the short I in initial position. These have been addressed and resolved with a variety of experts in document N3377. The proposal summary form has the names of the experts who were consulted. 61 characters are proposed. A middle dot separator was removed - deciding to use the generic one that is in Amd. 5. The proposal is to add this script to Amd. 6.

**Discussion:**

- a. Mr. Peter Constable: This is another script proposal the UTC has reviewed and feel is ready for encoding.

Disposition: Accept for Amd. 6; a Right-to-Left script.

**Relevant resolution:**

<b>M52.8 (Samaritan script):</b> WG2 accepts to encode in the standard 61 characters in code positions 0800 to 082D and 0830 to 083E, in a new block 0800-083F named Samaritan, with their names and glyphs as shown in document N3377. This is a Right to Left script.	<b>Unanimous</b>
--	------------------

## 9.5 Alternative New Tai Lue Digit 1

**Input document"**

[3380](#) A proposal to Encode Alternative New Tai Lue Digit 1; Martin Hosken; 2008-01-23

Mr. Martin Hosken: This proposal is to fix a minor problem in New Tai Lue. It introduces a new digit one - replacing the old one. There are two sets -- a digit one from another set was picked. There are implementations pending this proposal progressing. The proposal is to include this in Amd. 5. Proposal is to change the glyph of existing digit one and add a new one. Character at 19D1 that is already encoded has the glyph shown for the new proposed character at 19DA in Example 1 in the document.

**Discussion:**

- a. Mr. Michael Everson: This cannot be for Amd. 5. It is essentially changing the code position for an existing character.
- b. Mr. Peter Constable: The existing character is put in a code position to put it in a systematic set but has the wrong shape. For implementation to implement with that shape it will be a bug. That is why the Mr. Martin Hosken's proposal the way it is.
- c. Mr. Michel Suignard: If you want this in Amd. 5 we will have a problem. It could be accepted for Amd. 6.
- d. Dr. Ken Whistler: It is not clear to me whether we are talking about an alternative glyph or there is a contrastive use of two characters. I can understand there are two digit sets historically.
- e. Mr. Martin Hosken: There is evidence that the two digits are used in the same font in the same text in a contrastive manner. They are not simply glyph variants.
- f. Mr. Peter Constable: The new digit being proposed can only be used in isolation. It cannot be used with the set of digits in the code. A multi digit number for ex: 2011 using the currently encoded glyph would be wrong.

- g. Mr. Michael Everson: The currently encoded one is Hora set. New digit Tham one is being proposed. The shape of Hora set has to be fixed. I withdraw my earlier objection.
- h. Mr. Masahiro Sekiguchi: I have a question -- the problem is also in currently encoded ideographs. Why can't we follow the same practice as for ideograph?
- i. Mr. Peter Constable: As a vendor implementing this script we cannot correctly implement the currently standardised glyph and the numeric property will be wrong for the current glyph. As it stands today the relationship is tied to other digits. It is part of a systematic set of digits. If there were no two digits in the script, we would have simply fixed the glyph of current encoded 19D1. It is different from ideographs -- no source separation issue, no issue about glyph variation or unification etc. If we encoded a new character leaving the current glyph with current encoding implementers have to ignore it.
- j. Mr. Michael Everson: In Old Tai Lue we have Hora digit one and Tham Digit one. New Tai Lue uses all the Hora digits and should have the appropriate shape. The Digit that is not used in numbers the Tham digit one is used in New Tai Lue.
- k. Mr. Masahiro Sekiguchi: An example case that I mentioned -- yesterday we discussed the Korean proposal about changing compatibility ideograph mapping. For me their proposal sounded reasonable because the mapping was pointing to an existing character that was wrong. The problem here seems to be similar. I don't understand why this problem is different.
- l. Dr. Ken Whistler: The case we talked yesterday involved a mapping and had impact on normalization stability. This case does not have such a problem. It is clear to me that there is a glyph error in the current encoding. We fix glyphs all the time. The problem arises because we are encoding another character which has the glyph currently encoded. This is similar to the accounting digits for Japanese. Disambiguation is needed. These are very different from the issue from yesterday; there is no normalization issue at all.
- m. Mr. Michel Suignard: Yesterday what I said was the fix for the Korean error is to add a new character with a new map, and not to change the current mapping. Obviously we are adding this to Amd. 6 and gives us more time to review and get consensus.
- n. Mr. Mike Ksar: I think I do understand the principle you have explained. We have been following it in WG2. I don't want to set a precedent here. If there are no implementations today it would be an easier pill to swallow. What I am confused about -- this was an error of omission rather than changing for change sake. It would be an exception to principles and procedures that we are following. It would improve the implementations for the users. In principle we can fix the glyph and cannot move a character.
- o. Dr. Umamaheswaran: There are two specific items -- one is to fix the glyph for an existing character at 19D1. The character name and code position have not changed. We are not moving this character. A new character is proposed for 19DA with (unfortunately) having the same glyph as the old one.
- p. Mr. Michel Suignard: we can fix the glyph in Amd. 5 and add new character to Amd. 6.
- q. Dr. Ken Whistler: I can support that.
- r. Mr. Martin Hosken: If we fix the glyph it would make the early implementations correct.

Disposition:

Fix the glyph in Amd. 5 for 19D1 to what is shown in top line of example 1 in document [N3380](#).  
 Add in Amd. 6, 19DA NEW TAI LUE THAM DIGIT ONE with the glyph shown in last line of example 1 in document [N3380](#).

See relevant resolutions M52.1 on page 47 and M52.20 (item a) on page 35.

## 9.6 *Decimal exponent symbol*

Input document:

[3386](#) Revised proposal to encode the decimal exponent symbol; Leonid Broukhis; 2008-01-22

Dr. Ken Whistler: This is a request for a single character which has the shape of a 10 set down on the base line. It is requested as a symbol to complete the set of symbols for an old Russian GOST standard and is also used in ALGOL 60 variation used in Russia. It is required in current emulations to show existing data. Examples are given in document [N3386](#). The UTC examined and explored other alternatives to represent this. The consensus was the simplest way forward to simply encode this as a symbol and add to the technical symbol set - at 23E8.

Discussion:

- a. Mr. Masahiro Sekiguchi: Who will be happy with this proposal? Do we need this now to support an old Russian standard? You mentioned that it is needed for an emulator -- how does the current emulation handle this?
- b. Dr. Ken Whistler: In principle one could convert this to some other notation, to be able encode old data sets. There were many Russian computers that were manufactured using this character set. We normally deal with mapping to UCS by adding the missing character if there is none. All the other characters in the set shown on page 2 of the document are in the standard. The document explains the difficulty of using subscript notation etc.
- c. Mr. Masahiro Sekiguchi: Someone in Russia will be using it? Yes.
- d. Mr. Mike Ksar: Are there other symbols that this proposal may open the flood gates for? For example to show base of 16 etc.
- e. Dr. Ken Whistler: No -- this is one symbol that exists in Algol 60 and is unrelated to the base designation symbols.
- f. Mr. Mike Ksar: If the author can contact the GOST standards people and indicate that we are adding this character in support of a Russian standard. This may trigger the GOST organization to start participating in our activities.
- g. Dr. Ken Whistler: There was no previous serious attempt to map these to UCS.

Disposition: Accept for Amd. 6, along with the user note 'Algol-60 token .. ', from GOST 10859-64. See relevant resolution M52.20 (item b) on page 35.

### **9.7 Livre Tournois sign**

Input document:

[3387](#) Proposal to encode the Livre Tournois sign in the UCS; David R. Sewell, University of Virginia Press - via UTC; 2008-02-13

Dr. Ken Whistler: Document N[3387](#) is the request for an old French currency sign that was in widespread use in France in 18th century. Used in both manuscripts and in print. It is widely attested. The US national body is satisfied with its usage and the evidence and we would request to encode this along with the other currency signs.

Discussion:

- a. Mr. Peter Constable: UTC has reviewed this and we consider this as appropriate for encoding.

Disposition: Accept for Amd. 6, 20B6 LIVRE TOURNOIS SIGN, with its glyph - L and T with Stroke across in figure 1 in document N[3387](#).

See relevant resolution M52.20 (item c) on page 35.

### **9.8 Proposal to encode two Kana characters**

Input documents:

[3388](#) Proposal to encode two Kana characters concerning YE; Nozomu Katō – via UTC; 2008-02-13

[3394](#) UTC/L2 request to review proposal for encoding 2 kana characters; US INCITS/L2 and Unicode Technical Committee (UTC); 2008-02-28

Dr. Ken Whistler: Document N[3394](#) is a contribution from the US jointly with UTC. It is our feedback on the proposal in document N[3388](#) - which was sent to the UTC. We reviewed the document and is a particularly difficult question concerning Kana. It seemed reasonable, but we need feedback from the Japanese national body. The second question is to whether these two should be encoded early for the users or should we wait for any comprehensive collection of obsolete Kana characters that may be coming forth.

Discussion:

- a. Mr. Mike Ksar: Does Japan want to take it back to the national body?
- b. Mr. Masahiro Sekiguchi: We did look at this document and had a short discussion on it. We need more time to do the needed research. The Hiragana proposal seems to be part of the Hentaigana proposal. We have not seen use of these. If the authors still believe that there is some use for both these characters we need to understand that. We have not seen these in usage.
- c. Mr. Mike Ksar: Can we move this to next meeting -- pending feedback from Japanese national body?

- d. Dr. Ken Whistler: That is exactly what US national body is looking for --- we need the expert input from Japanese national body.

Action item: Japanese national body to provide feedback regarding documents [N3388](#) and [N3394](#), for next meeting.

## 9.9 Kaithi Script

Input document:

- [3389](#) Proposal to Encode the Kaithi Script in ISO/IEC10646; Anshuman Pandey – via UTC; 2008-02-13  
[3438](#) Request for removal of digits from Kaithi proposal; Anshuman Pandey – via UTC; 2008-04-11

Ms. Deborah Anderson: Document [N3389](#) has the details of the proposal. Kaithi script is Brahmi based. It is related to Devanagari, Gujarati and other major north Indian scripts. The original script was generated by the British Government in Bihar. It was used for administrative and religious manuscripts. Document [N3438](#) has the rationale for requesting removal of 10 digits from [N3389](#).

Discussion:

- a. Mr. Martin Hosken: Different solutions are given for the same problem. The Swash Marks -- four alternatives are shown. Which one is proposed?
- b. Dr. Ken Whistler: There are additional issues in the script -- which is not addressed by the proposed repertoire. Answer to the question raised is needed for future.
- c. Mr. Martin Hosken: Examples of Enumeration sign on page 34 .. how do you contrast A vs B,C and D in the encoding?
- d. Dr. Ken Whistler: A is written above the digit. E is written in line.
- e. Mr. Mike Ksar: Do we want to wait for another round of review before going ahead?
- f. Mr. Michael Everson: We can go ahead and put the script in the ballot now, and get all the comments resolved.
- g. Dr. Ken Whistler: The enumeration sign is an implementation issue. It may result in adding another enumeration sign if need be. At least one instance of standalone use of the sign is there - example E. It may turn out that we may need rendering rules like for Arabic Date symbols. I believe the repertoire itself is the necessary set for the Script. We can pursue other questions later.
- h. Mr. Martin Hosken: I don't see a need for removing any characters from this set. I can accept going forward.
- i. Mr. Peter Constable: The character property for this particular symbol has not been resolved.
- j. Dr. Ken Whistler: The US national body position is that we should go ahead. This proposal has far more information and is mature compared to other scripts of India. There are some issues that are related to number signs etc. similar to the symbols in Tamil or Telugu etc.
- k. Mr. Martin Hosken: I do have a number of questions on this script. This is the first time I am seeing this.
- l. Mr. Mike Ksar: If this goes to ballot how would you pursue that your questions are answered?
- m. Mr. Peter Constable: This proposal was reviewed by UTC and we are prepared to go ahead with this proposal. There is a question about character properties with respect to one character. We will get that resolved.
- n. Mr. Martin Hosken: As an expert, not on behalf of UK, I am happy to pursue my questions with other experts.
- o. Mr. Mike Ksar: We will have two ballots with Amd. 6.2.
- p. Ms. Deborah Anderson: The fonts will be sent to the editor from the author.
- q. Mr. Michael Everson: I do have a font.

Disposition: Accept for Amd. 6.

**Relevant resolution:**

<b>M52.15 (Kaithi script):</b> WG2 accepts to encode in the standard 61 characters in code positions 11080 to 110BC, in a new block 11080-110CF named Kaithi, with their names and glyphs as shown in document <a href="#">N3389</a> .	<b>Unanimous</b>
---	------------------

## 9.10 Esperanto Spesmilo sign

Input document:

- [3390](#) Proposal to encode the Esperanto spesmilo sign in the UCS; Everson; 2008-03-06

Mr. Michael Everson: As many of you may know, the Esperantists were always interested in UCS. In 1907 they had a bank of their own in 320 cities in 43 countries. They had their own currency as well. A decimal currency the SPESMILO was in use. There is a revival of interest recently on the sign for this currency.

Discussion:

- a. Dr. Ken Whistler: The US national body has not reviewed this. Personally I would not have any objection - looks straight forward for going ahead with the encoding.
- b. Mr. Mike Ksar: Who will be using this?
- c. Mr. Michael Everson: The Esperantists are using the currency and this sign.

Disposition: Accept for Amd. 6.

See relevant resolution M52.20 (item d) on page 35.

### **9.11 Kazakh Tenge sign**

Input document:

[3392](#) Proposal to encode the Kazakh tenge sign in the UCS; Everson; 2008-03-06

Mr. Michael Everson: This is another example of symbol for currency. In October 2006, the national bank of Kazakhstan had a contest for a currency sign. Page 2 of document [N3392](#) shows the design dimensions etc.

Discussion:

Dr. Ken Whistler: The US national body has not reviewed this. Personally I have reviewed it and have no objection going forward; it is attested in the document.

- a. Mr. Peter Constable: As to the time table, we will be looking at its inclusion in Amd. 6,
- b. Dr. Umamaheswaran: Amd. 6 should be finalized by November 2008 plus 6 months.

Disposition: Accept for Amd. 6.

See relevant resolution M52.20 (item e) on page 35.

### **9.12 Old South Arabian script**

Input documents:

[3296](#) Proposal to encode the Old South Arabian script in the SMP of the UCS; Everson & Yacob; 2007-08-29

[3309](#) Proposal to encode South Arabian Script - comments on N3296; Sultan Maktari, Kamal Mansour; 2007-07-30

[3395](#) Proposal to encode Old South Arabian Script; University of California, Berkeley Script Encoding Initiative Sultan Maktari & Kamal Mansour; 2008-02-29

Ms. Deborah Anderson: The proposal in document [N3395](#) builds on an earlier document [N3309](#). The first proposal was in 1998. See document for details, issues and how they have been addressed. The script was used in 8th century in the Arabian Peninsula. Two styles have been discovered. The proposal is based on the Monumental script. No agreement on the name among the scholars. 6 numeral figures are included.

Discussion:

- a. Mr. Peter Constable: The UTC has considered these and we would like to proceed with this script.
- b. Mr. Michael Everson: The Irish national body is not very happy with the names; we prefer either the Semitic or Arabic names. Even if transliteration is used there is more than one way of naming these. This proposal needs more review / agreement on the names from the user communities. Aleph and Ain are there because we have no choice. There are other symbols for number separators etc. It would be nice to know how many were there. There is scope for following up on the missing ones before we progress this script. In terms of the repertoire and their glyphs I have no problem.
- c. Dr. Ken Whistler: The US national body has expressed its preference with proceeding with the proposed names -- we can annotate with as many other names as needed for cross referencing. The main issue is -- which names to use?
- d. Mr. Michael Everson: One would find H, H1, H2 etc. H1, H2, H3 etc. is not normal transliteration conventions we normally use.
- e. Mr. Peter Constable: The transliteration schemes are usually based on usual pronunciation for these characters. There is no agreement on how the characters are to be pronounced -- so it is not clear to me how the normal conventions can be applied.

- f. Dr. Ken Whistler: Word separator and digit one use the same grapheme. For archaic writing systems like this, distinction based on the properties was not considered important to disunify these. The word separator as distinct from digit one would be if you have systematic rules for layout etc. that could warrant the distinction. The scripts would be facsimile descriptions of old manuscripts etc. The context will determine the use as a number versus word separator. As to the future expansion space, I do not see a strong argument to set aside an extra column.
- g. Ms. Deborah Anderson: We were not able to find evidence of additional characters. There may be a few.
- h. Mr. Michael Everson: I wanted the expansion space to be addressed.
- i. Mr. Peter Constable: If we know with high confidence that there may be additional symbols then it may be worth providing an extra column. We don't have the confidence at this time.
- j. Mr. Michael Everson: We can move it to 10A60 and better use of the space.
- k. Mr. Mike Ksar: Roadmap would be updated accordingly.

Disposition: Accept for Amd. 6; it is a Right to Left script.

**Relevant resolution:**

<b>M52.16 (Old South Arabian script):</b>	<b>Unanimous</b>
WG2 accepts to encode in the standard 32 characters in code positions 10A60 to 10A7F, in a new block 10A60-10A7F named Old South Arabian, with their names and glyphs as shown on page 10 of document <a href="#">N3395</a> . This is a Right to Left script.	

### 9.13 Japanese TV symbols

**Input documents:**

- [3397](#) Japanese TV Symbols; Michel Suignard; 2008-03-20
- [3461](#) Comments on 3397 – Japanese TV symbols; Laurentiu Iancu; 2008-04-21
- [3468](#) Feedback on TV Symbols; Masahiro Sekiguchi (An expert contribution); 2008-04-23
- [3469](#) Japanese TV Symbols update; Michel Suignard; 2008-04-24

Mr. Michel Suignard: Document [N3397](#) is a replacement of document [N3341](#) that was discussed in Hangzhou meeting. The US national body had an action item to take the feedback into account. Updates to mapping to existing characters have been made. A few are disunified. Some ARIB characters are excluded. Status section describes the criteria. Three types - Regular new symbols, enclosed alphanumerics and enclosed ideographs. Code point assignments are proposed. Fill existing BMP blocks first but do not add new blocks to BMP. Overflow goes to SMP. The names describe the glyphs rather than usage. Source separation rule used is described. The ARIB set is a subset of a larger set - for example the Geographical Survey Institute of Japan's map symbols. Other symbols could be added in the future. Some geometric shapes have been unified. Feedback received is included for consideration by WG2. The moving of characters proposed in the feedback is not included in the proposed charts. If WG2 experts have any opinions on these we could have an ad hoc and sort them out rather than taking up the meeting time. Decompositions are also identified where applicable. The proposal summary form is attached. A section lists the symbols that are in ARIB set but are not included in this proposal -- they may already have been encoded.

The most recent feedback we have received is in document [N3461](#). 26D7 – the proposal is to add vertical dashed line. I suggest this could be entertained during ballot. There is some feedback on names -- we could accept these. There is also suggestion to move some of the characters to a different location; we can entertain that without having to create a new block. Some inconsistency in unification/disunification is identified. Sometimes the unification decision is affected by the size of the glyphs, the symbols sizes etc.

**Discussion:**

- a. Dr. Umamaheswaran: You should look at the character property also in the unification exercise.
- b. Mr. Michel Suignard: That is good input.
- c. Mr. Michael Everson: Are you expecting one more round of discussion?
- d. Mr. Michel Suignard: I would like to get these into Amd. 6 if we can. If we need to we can have an ad hoc. In my opinion it is mature enough to proceed.
- e. Mr. Peter Constable: This document has not been discussed at the UTC. A number of UTC experts had discussed and feedback was given to the author. Since these are reflected in the new proposal they felt that it is ok to proceed.
- f. Mr. Michel Suignard: I would like to do one iteration at this meeting based on an ad hoc.

Document [N3468](#) is the Japanese expert feedback.

Mr. Michel Suignard: The first point is that there are two characters that look identical. We don't encode symbols which look identical twice. 2nd point is about a typo; this will be fixed. Point 3 is related to the naming issue.

Discussion:

- a. Mr. Masahiro Sekiguchi: I have a feeling that we need to contact the ARIB committee -- they should know about the purpose of using these symbols.
- b. Mr. Michel Suignard: I had contacts through my company to ARIB contact. Some of these symbols, the people don't know the use because of legacy. I prefer not to recode the same symbol multiple times depending on the usage -- some of these may need to be done. It must have at least one meaning. For some of them there is no idea as to what its usage may be.
- c. Mr. Masahiro Sekiguchi: Some of these may be trivial for JP users. Others I don't know.
- d. Mr. Michel Suignard: There are only about 10 of these. We could spend some time on these.

Mr. Michel Suignard: Point 4 - contact list. Should the Japanese national body be included?

- a. Mr. Masahiro Sekiguchi: The Japanese committee feeling is that we should get contacts in ARIB group.
- b. Mr. Michel Suignard: I don't have contacts with the ARIB standard writers. I do have contacts with the implementers of ARIB in multimedia applications. I could take suggestions from you as to what is appropriate for section 2 in the proposal. This proposal originated from the need from implementers to have ARIB symbols in computers. It was done using PUAs so far. It poses a problem since PUA is used very much in the Far East including in Japan by different vendors. The motivation was to get these out of the PUA to avoid clashes of PUA usage.
- c. Mr. Michael Everson: Two way traffic -- point in the wrong direction in some countries.
- d. Mr. Michel Suignard: We may have to annotate some of these. - having a unique left to right bias. They could be duplicated in the other direction.

Mr. Michel Suignard: Point 5 -- agreed. It was missed. We follow the current practice for other symbols. Closed captions have splits -- need two parts sometimes. Page 7 - the tortoise brackets were unified in the fonts that I had access to. If these should not be then we can split these.

- a. Dr. Ken Whistler: Not only these are close enough the distinction between the shapes may not be adequate. Having sometimes tortoise shell versus parentheses makes it more reasonable to unify these.
- b. Mr. Michel Suignard: Annotations can be used.

Mr. Michel Suignard: Item 7 - typo; will be fixed.

There are some unresolved issues -- but I don't feel any of these are critical. It could be possibly all done in an ad hoc. I can prepare a revised document, and we can look at it. My request is to progress it into Amd. 6.

Discussion:

- a. Dr. Ken Whistler: The US national body would be in favour as Mr. Michel Suignard has suggested. It strikes to me that it is far enough along and with the updates it would be ready to go ahead.
- b. Mr. Masahiro Sekiguchi: We agree.
- c. Mr. Laurentiu Iancu: The first time this document is a WG2 doc. There is a feedback posted to L2 site posted by Mr. Rick McGowan. There seems to be a name clash - from miscellaneous technical symbols.

Document [N3469](#)

Mr. Michel Suignard: An ad hoc group - Messrs. Michel Suignard, Ken Whistler, Masahiro Sekiguchi and Laurentiu Iancu - considered the various documents. Document [N3469](#) contains the revised proposal. A paragraph on character sequence is added addressing comment from Japan. Names for the symbols for viewing baseball were changed. The net result is addition of two characters from the earlier draft due to disunification and making the set consistent. Some names were changed in the ad hoc group. Some characters from SMP were moved into empty positions in BMP along with associated name changes to

be consistent with having common meanings versus intended use. These can be refined based on ballot comments. There is room left for one character in the Korean column. Changed the names of the letter sequences -- other examples are Latin Capital Letter DZ, others use Letters a b in the CJK area. Either one or the other has to be selected. The circulated document [N3469](#) will be revised fixing some of the errors.

Discussion:

- a. Dr. Ken Whistler: Having been involved in the ad hoc yesterday and the changes that we have found now it is in good shape to go forward in the next amendment.

Disposition: Accept for Amd. 6; no new blocks in BMP; two new blocks in SMP.

**Relevant resolution:**

<b>M52.14 (Japanese TV Symbols):</b>	<b>Unanimous</b>
WG2 accepts to encode in the standard 186 characters in code positions	
<ul style="list-style-type: none"><li>• 2150 to 2152 and 2189 in the Number Forms block,</li><li>• 269E, 269F, 26BD, 26BE, and 26C4 to 26FF in the Miscellaneous Symbols block,</li><li>• 3244 to 324F, and 32FF in the Enclosed CJK Letters and Months block</li><li>• 1F100 to 1F10A, 1F110 to 1F11F, 1F120 to 1F12D, 1F131, 1F13D, 1F13F, 1F142, 1F146, 1F14A to 1F14F, 1F157, 1F15F, 1F179, 1F17B, 1F17C, 1F17F, and 1F18A to 1F18D in a new block 1F100-1F1FF named Enclosed Alphanumeric Supplement, and,</li><li>• 1F200, 1F210 to 1F230, and 1F240 to 1F248 in a new block 1F200-1F2FF named the Enclosed Ideographic Supplement,</li></ul>	
with their names and glyphs as shown in document <a href="#">N3469</a> .	

### 9.14 Glyph for Ogham space

Input document:

[3407](#) UTC/US decisions concerning Ogham space and Tamil named sequences; Michel Suignard; 2008-03-21

Dr. Ken Whistler: The glyph used for Ogham space is a horizontal line in the standard now -- typical way of presenting in Ogham. When this issue was reviewed by the UTC, this character has the property of Space. All others spaces are printed invisibly but shown in the standard with a dotted rectangle around the abbreviation like SP. For consistency reasons it would be better to show the special status for this OGHAM space also like other spaces. The least disruptive would be simply put a dashed box around the character -- like the first one on page 2 in document [N3407](#).

Discussion:

- a. Mr. Michael Everson: Irish national body does not like this at all. If it is not broken do not fix it. There is a statement in the standard about blank versus use of a dash depending on the font. We do not favour any glyph changes for this character.
- b. Mr. Peter Constable: It is noted in the document that ISO/IEC 10646 has many spaces in the standard and there are multiple ways of conveying the special nature for all the spaces except for this one. If an implementer has cued himself/herself to seeing a dashed box around the spaces it would be better to be consistent in the standard.
- c. Mr. Michel Suignard: Except for the last one without the bar in the box, all others are not disruptive. The minimum disruptive would be the first one.
- d. Mr. Michael Everson: You also could be not disruptive at all. There is no problem here.
- e. Mr. Mike Ksar: Does the character have a box around it now? No.
- f. Dr. Ken Whistler: The problem has nothing to do with the claim that the Ogham font vendors do the right thing now. It is with the other users of the standard who are misled that this character is not a space character. The proposal is to correct the problem of such misinterpretation.
- g. Dr. Umamaheswaran: The consistency issue has to be addressed -- my preference is to have a dashed rectangle around the dash.
- h. Mr. Mike Ksar: We should include this in Amd. 5.

Disposition: Add the dashed box around the Ogham space glyph at U+1680 and include in Amd. 5. See relevant resolution M52.1 on page 47.

## 9.15 Tamil named sequences

Input document:

[3407](#) UTC/US decisions concerning Ogham space and Tamil named sequences; Michel Suignard; 2008-03-21

Dr. Ken Whistler: In long discussions with the Government of India and Tamil Nadu Government representatives, a need to identify all the syllables of Tamil was brought up. The Tamil Nadu representatives wanted a documentation of these named sequences. In Unicode we go through a two stage process -- provisional and final. Before they become approved / final, they have to be also in ISO/IEC 10646 in the interest of synchronization. The US national body is requesting these be added to ISO/IEC 10646 before they can be made final in Unicode. They are currently provisional in Unicode.

Discussion:

- a. Mr. Peter Constable: It is informative in Unicode 5.1 but would be final after ISO/IEC10646 includes it.
- b. Dr. Umamaheswaran: It is high time we did this -- it is similar to what we did for Lithuanian sequences. It will also prevent others who do not know from proposing additional encodings for such combined sequences as single code positions etc.

Disposition: Accept for Amd. 6 the 269 Tamil Named sequences from pages 2 and 3; the list is also available as Unicode 5.1 data files.

**Relevant resolution:**

<b>M52.21 (Tamil named sequences):</b>	<b>Unanimous</b>
WG2 accepts to include in the standard the 289 Tamil named sequences proposed in document <a href="#">N3407</a> .	

## 9.16 Khamti Shan characters additions to Myanmar script

Input documents:

[3423](#) Proposal to add Khamti Shan Characters to the Myanmar Blocks; Martin Hosken; 2008-04-04

[3436](#) Ordering and character properties for Myanmar Khamti Shan characters; Everson; 2008-04-09

Mr. Martin Hosken: Khamti Shan is used in Myanmar and in India. These are extensions to Myanmar script to support the Khamti Shan writing systems. There are stylistic variations from Myanmar. All three orthographies are listed here - Khamti Shan, Aiton and Phake. These are unified with Myanmar in most cases. Document [N3436](#) has some comments and properties for these. The ordering can be commented on during the ballot.

Discussion:

- a. Dr. Ken Whistler: The names should be modified by document [N3436](#); for example AA69. Regarding AA6B, 6C and 6D -- it is not clear as to what these interesting ligature symbols are for. Why are they given property Punctuation? If these are for punctuation we need more information.
- b. Mr. Martin Hosken: These symbols are similar to 109E Shan 1 and 109F Shan Exclamation.
- c. Dr. Ken Whistler: Need this explanation be added to the documentation. Contrastive use of 109A with respect to the circled tone we already have. An explanation and cross reference for these should be included in an updated document.
- d. Mr. Michael Everson: With these updates would we be able to go ahead with these for Amd. 6?
- e. Mr. Peter Constable: Are there any conjoining behaviours associated with the proposed additions? These should be documented. How do the proposed characters interact with the current encoding model?
- f. Mr. Martin Hosken: I will provide answers to the questions raised here. Yes some of these characters have conjoining / sub joining behaviour.

Disposition: Accept for Amd. 6; reference the revised document [N3423R](#) (that will be posted to WG2 site).

**Relevant resolution:**

<b>M52.13 (Myanmar additions for Khamti Shan):</b>	<b>Unanimous</b>
WG2 accepts to encode in the standard 18 characters in code positions	
<ul style="list-style-type: none"><li>• 109A to 109D (combining marks) in the Myanmar block,</li><li>• AA60 to AA6D in a new block AA60-AA7F named Myanmar Extended-A,</li></ul> with their names from document <a href="#">N3436</a> and glyphs as shown in document <a href="#">N3423</a> .	

## 9.17 Old Lisu script

Input documents:

- [3317](#) Proposal for Encoding the Old Lisu Script in the BMP of the UCS; China national body; 2007-08-29
- [3323](#) Tables and Names – Fraser contribution N3317; Everson; 2007-09-11
- [3326](#) Fraser's Lisu orthography: Research notes toward a Unicode encoding; Richard Cook; 2007-09-02
- [3424](#) Proposal for encoding the Old Lisu script in the BMP of the UCS; China; 2008-01-28

Mr. Chen Zhuang: I would like to invite Mr. Martin Hosken to present the document.

Mr. Martin Hosken: This document [N3424](#) was reviewed by UTC and was revised based on their feedback. Two characters were added and two were removed. Issue of unification with Latin was addressed and was to keep it as a separate block. China wanted to call it Old Lisu. UK wants it Lisu and not Old Lisu etc.

Discussion:

- a. Mr. Peter Constable: The UTC has reviewed this and concluded that the repertoire shown in this document was appropriate. As to the name - Chinese may not have the ability to distinguish between the orthographies old and new. But in English we have the ability to distinguish as Latin and Lisu. In the Tai Tham ad hoc meeting, we had the opportunity to meet language experts of the Lisu community from Thailand and Myanmar. They were of the opinion that Lisu is more appropriate.
- b. Mr. Michael Everson: Ireland has looked at these, and is happy with the repertoire. As to the name - our preference would have been to use Fraser. An annotation to recognize that the script has other names also should be adequate.
- c. Mr. Richard Cook: My personal opinion is that disunification from Latin is really bad idea. Lisu does not need its own block and I am completely opposed to it.
- d. Mr. Mike Ksar: I hear what you say. Other experts seem to have different opinion and would like to keep the characters in their own block.
- e. Mr. Richard Cook: The main case for this in a separate block was because of case folding issue in the IDN. A separate block is a solution to the problem.
- f. Dr. Ken Whistler: There is acknowledged differences of opinion on this issue of disunification -- but the consensus was to go forward as a separate block.
- g. Mr. Chen Zhuang: I confirmed with the experts from Yunnan where most of the Lisu people live in China. We can live with name LISU instead of OLD LISU.
- h. Mr. Mike Ksar: Will it be difficult to add the annotation, like Fraser?
- i. Dr. Ken Whistler: It is easy to do.
- j. Mr. Chen Zhuang: We have no objection to the annotations.

Disposition: Accept for Amd. 6; with the word OLD removed from the character names and in the block name. Revised document will reflect the final names, code positions and glyphs.

Action item: China is to provide a revised document reflecting the discussion above.

### Relevant resolution:

<b>M52.10 (Lisu script):</b> WG2 accepts to encode in the standard 48 characters in code positions A4D0 to A4FF in a new block A4D0-A4FF named Lisu, with their names (removing the word 'OLD' in them) and glyphs as shown in document <a href="#">N3424</a> .	<b>Unanimous</b>
--	------------------

## 9.18 Nushu script

Input documents:

- [3287](#) Proposal for encoding Nūshu in the SMP of UCS; China national body; 2007-08-13
- [3322](#) Comments on Nūshu Proposal by the Chinese national body N3287; Debbie Anderson; 2007-09-08
- [3337](#) Reply to N3322 on Nūshu Proposal; China national body; 2007-09-16
- [3340](#) Presentation deck on Nushu; China; 2007-09-17
- [3426](#) Revised Proposal for encoding Nushu in the SMP of the UCS; China; 2008-03-02
- [3433](#) Comments on N3426: Revised Proposal for encoding Nushu in the SMP of the UCS; USnational body; 2008-04-09
- [3449](#) Feedback on Nushu; UK - Andrew West; Pending
- [3462](#) Feedback on Nushu 3433; China national body; 2008-04-22
- [3463](#) Proposal for encoding Nushu in the SMP of the UCS; China; 2008-06-06.

Mr. Chen Zhuang: Documents [N3426](#) and [N3462](#) are the two documents to consider. The latter one is a supplement to [N3426](#). Document [N3426](#) addresses the comments from Hangzhou meeting. We

renamed characters following the Chenguan pronunciation. Also showed is a mapping between these and Chinese. There are some characters from Nushu Chinese dictionary that are not included in this proposal. Document [N3462](#) supplement was in response to comments from the US national body. We modified two glyphs and added 7 characters. We added mapping to Chinese dictionary for use by experts.

Discussion:

- a. Mr. Martin Hosken: What interests UK the most is the unification principle used in deciding which were unified and which were not. We would like to see the documentation on these so that we don't have to revisit the question in the future.
- b. Mr. Mike Ksar: How do you decide to use the selected glyph versus another one?
- c. Mr. Chen Zhuang: We had four rules for selecting which one.
- d. Mr. Richard Cook: Professor Zhao Liming's – 'A comparative study of Nushu' answers almost all the questions UK had raised. Parts of the proposal are taken from the book. The book has multi column information. Of course, the proposed UCS code points do not appear in the book !! The points raised by UK are valid for this script as well as for Han characters as well. I have suggested to Professor Zhao to include the UCS code positions in the book and it will help proof read the proposal against the dictionary.
- e. Ms. Deborah Anderson: As a member of the US national body I would like to thank Prof Zhao Liming. Our interaction has been very effective and quick.
- f. Mr. Chen Zhuang: This proposal is for encoding the basic characters needed for the society. The proposal does not include all the characters from the book and the others are not needed at this time.
- g. Mr. Mike Ksar: Are you planning to add more characters to the proposal? Do you want to go ahead with the proposal for Amd. 6?
- h. Ms. Wei Lin-Mei: China may spend more than 20 years or so to continue with the discussion on additional characters. At this time they want the proposed set. WG2's door is always open for future additions ... right? Yes.
- i. Mr. Michael Everson: Ireland did not have opportunity to review the proposal at all. Are the mappings provided in the proposal? There is a book by Mr. William Chiang referenced in document [N3426](#).
- j. Mr. Richard Cook: Document [N3462](#) contains all the mappings to various sources.
- k. Mr. Mike Ksar: Is there a mapping provided to the book Mr. Michael Everson is referring to?
- l. Dr. Qin Lu: China has not done that. But it can be done.
- m. Mr. Michael Everson: If you could provide a mapping to that book it will help us review and proof read the other mappings proposed.
- n. Dr. Umamaheswaran: We could go ahead with the proposal in Amd. 6. The ballot comments can be done during the ballot period. China can be requested to provide the requested mapping during the time to assist national bodies in their evaluation.
- o. Mr. Peter Constable: What was the ordering principle used and were the additions of seven more following the ordering principles?
- p. Mr. Chen Zhuang: The additions were not following the ordering principles.
- q. Dr. Ken Whistler: Under those conditions I would prefer to see the reordered version before we accept going ahead.
- r. Mr. Mike Ksar: Can China prepare an updated document with revised order by Thursday morning. Document [N3463](#) would be the new document we can base a resolution on.
- s. Mr. Chen Zhuang: We can do that in six weeks period.

Disposition: Accept for Amd. 6; new block named Nushu from 1B000 to 1B18F; 1B000 to 1B17D in [N3426](#) with glyph changes for three characters x098, x125 and x155; and 1B17E to 1B184 from document [N3462](#). New document [N3463](#) will have a consolidated table.

Action item: China is to prepare the new document with the consolidated table in six weeks' time after this meeting.

**Relevant resolution:**

**M52.11 (Nushu script):**

**Unanimous**

WG2 accepts to encode in the standard 389 characters in code positions 1B000 to 1B184 in a new block 1B000-1B18F named Nushu, with their names and glyphs as shown in document [N3462](#). (*should have been N3463*)

## 9.19 Additional 39 Unified Canadian Aboriginal Syllabics

Input document:

[3427](#) Proposal to encode 39 Unified Canadian Aboriginal Syllabics in the UCS; Michael Everson and Chris Harvey; 2008-04-08

Ms. Deborah Anderson: Mr. Chris Harvey has been collecting the material for a long time. This set has well researched material. The first one is the syllabics hyphen. There are seven characters with dots next to them. One additional final is proposed for Wood Cree. These fill up the existing CASEC block. Additional N series with W-, additional R series with W-, and additional consonants are proposed. Additions for Blackfoot - ring and dot finals,

Discussion:

- a. Dr. Umamaheswaran: I do not know if Mr. Chris Harvey had a chance to contact the previous CASEC work group experts or not. I would like them to review and at least be comfortable with these.
- b. Dr. Ken Whistler: The US national body has not reviewed these. I have no objection to progressing these to Amd. 6.
- c. Ms. Deborah Anderson: The source for this document should include the SEI.

Disposition: Accept for Amd.6; fill existing UCAS block and add a new block UCAS Extended.

**Relevant resolution:**

**M52.19 (UCAS additions):** Unanimous  
WG2 accepts to encode in the standard 39 characters in code positions 1400, 1677 to 167F in the existing UCAS block, and A9E0 to A9FC in a new block A9E0-A9FF named Unified Canadian Aboriginal Syllabics Extended-A, with their glyphs, and names from document [N3427](#).

## 9.20 Two Cyrillic characters for Abkhaz

Input documents:

[3429](#) Glyph changes for Abkhaz; Sasha Ankwab; 2008-04-14

[3435](#) Proposal to encode two Cyrillic characters for Abkhaz; Everson; 2008-04-11

Ms. Deborah Anderson: Document [N3429](#) is a request for glyph change from Mr. Alexander Ankwab et al. Originally they were seeking a separate character. I corresponded with them on glyph change versus new character. This contribution is the resultant document with a request to glyph change. The middle hooks were replaced by descenders.

Discussion:

- a. Dr. Ken Whistler: The immediate change would request a number of changes -- items 4 and 5. The problem is with the glyph change request for number 1. There is another contribution asking for two characters for addressing these. Items 2 and 3 are annotations that depend on what we decide on item 1. We can progress items 4 and 5 as glyph changes for Amd. 5. For item 1, either we do what is suggested in this document -- which is supported by the US national body, or something else. Document [N3435](#) is proposing a separate code point.
- b. Mr. Michael Everson: First part of document [N3435](#) requests for the same glyph changes as in document [N3429](#). For 04A7, 04A8, 04BE and 04BF. The second part addresses the question of PE with descender vs PE with Middle hook. The principal reason for withdrawing the request by the author of the previous document was for the implementation time for the new character. The problem is Abkhaz had gone through a number of orthographic reforms. In the earlier versions they were using a Slavonic font. The characters from 1912 are encoded separately and are in the standard. The characters with middle hook or hook have changed over time to descenders. The 2002 orthography only the PE with the descender versus PE with middle hook is the only one that cannot be represented. Abkhaz want to replace the glyph for PE with middle hook with glyph with descender. There are two options -- one is to change the glyph which will prevent us from showing the older orthography. The other option is to encode a new one. Document [N3429](#) has the glyph option. We have all the other characters with hook and descender characters.
- c. Ms. Deborah Anderson: In the best of all worlds we are really talking about five distinct characters -- having gone through different orthographies.
- d. Mr. Michael Everson: They represent the same sound - but different characters.
- e. Dr. Ken Whistler: What we have is five sets of characters which have gone through orthographic reforms. We have over time encoded the two forms for all except the PE. But doing so is the wrong thing to do for Abkhaz -- we will be doing a disservice to Abkhaz. The two forms being

encoded introduce a spelling change problem. As we go between old and new orthographies, we have to change the code positions -- it introduces a change in the spelling. We do have other instances of shape changes etc. for several other characters - T with Caron, L with Caron etc. for Czech. Preferred form is to have a comma to the right. The glyph differs from the descriptive name of the character reflecting the practice for Czech. The case we have for Abkhaz is a parallel to it. The right thing to do is to follow the request from Mr. Sasha Ankwab -- and if one wants the old form use the appropriate font.

- f. Mr. Michael Everson: We already have all the older orthography characters in the standard supporting showing older and newer orthographies, excepting this one. The alternative is there to change the glyph with some annotation to indicate the usage for older orthography with a hook.
- g. Mr. Masahiro Sekiguchi: Is Abkhaz the only instance where the Cyrillic with middle hook and Cyrillic with descenders used interchangeably?
- h. Mr. Michael Everson: There are languages which use letters with hooks. Abkhaz is the only one that has changed the hook to descender. As far as I know Abkhaz uses the PE with hook. An ISO transliteration standard distinguishes between PE with a hook and PE with a descender.
- i. Dr. Ken Whistler: Ghe with descender that was added separate from Ghe with the hook (used in Yakut) sometime ago. The rationale was that Ghe with descender is used in Yupic, a Siberian language -- unrelated to Abkhaz. It was not a glyph alternate in that language. But for Abkhaz it causes a spelling problem.
- j. Dr. Umamaheswaran: Can you clarify the ISO -9 use of the two characters?
- k. Dr. Ken Whistler: ISO 9 is a transliteration standard - shows how to transliterate the PE with hook and PE with descender for Abkhaz language -- it gives different transliterations for these.
- l. Mr. Martin Hosken: If it is a glyph change I would see continuity. If it is a government dictated item, it could be a spelling reform. To me it looks a spelling reform.
- m. Ms. Deborah Anderson: I want to reiterate that I worked a lot in really laying out the various options with the user communities. That should be given serious consideration.
- n. Mr. Michael Everson: I have also talked to the author. The reason he withdrew his original proposal was the implementation time delay consideration. Other alternatives would be to change the glyph for this and add another character with the hook on it.
- o. Mr. Peter Constable: I dislike the option of glyph change to an existing character. There is a character that is currently encoded with the glyph on the left. It creates an inconsistency in the naming convention and the glyphs in the standard. Most of the characters with names with 'middle hook' have middle hooks. Adding a second character also does not solve the problem.
- p. Dr. Umamaheswaran: Why don't we simply add an annotation without changing the current glyph or name that the shape to be used for modern Abkhaz is to use the one with the descender character.
- q. Mr. Mike Ksar: I would like to hear opinions on this alternative.
- r. Mr. Martin Hosken: Effect of adding an annotation would be that if in the future the one with the hook comes up as a distinct character then the implementations following the annotation would have to change.
- s. Dr. Ken Whistler: Dr. Umamaheswaran's suggestion as an alternative is to indicate that the Descender Glyph is preferred as an annotation. It does not go as far as request from Abkhaz experts. The fourth alternative of changing the glyph as well as add a new character is the worst one.
- t. Mr. Peter Constable: If these are glyph variants we can acknowledge that.
- u. Mr. Mike Ksar: The most common ground seems to be adding an annotation as Dr. Umamaheswaran suggested. If we do not get agreement one way or the other we have to delay this to another meeting.
- v. Mr. Martin Hosken: if we do not solve the problem what would Abkhaz do?
- w. Mr. Michael Everson: They may come back with a request for yet another character.
- x. Mr. Masahiro Sekiguchi: I want to hear from the Abkhaz expert as to what they would think of Dr. Umamaheswaran's suggestion. Also can we delay the solution to the next meeting -- can the users live with it?
- y. Mr. Peter Constable: I think the users are looking for earliest possible implementation for the new orthography. They could live whatever we decide as long as it is decided sooner than later.

- z. Dr. Ken Whistler: If we decide not to change here, they will continue to insist that their PE is written with the one with the descender and will ask the font vendors for the correct shape they want. They are looking for ways to get the standard as well as the vendors for the fonts to do what they want.
- aa. Mr. Peter Constable: It occurs to me the crux of the issue is -- are these two separate characters or glyph variants of the same character. One point of view is that these should be disunified. Ideally we should come to a position that we either will unify or disunify consistently.
- bb. Mr. Martin Hosken: As soon as you need a character to be used in more than one orthography they should be disunified.
- cc. Mr. Peter Constable: That is not obvious in all cases.

Disposition: Change the glyphs for 04A7, 04A8, 04BE and 04BF from document N3435. Accept for Amd. 5. See relevant resolution M52.1 (third bullet) on page 38. Discussion on 'PE with Descender' is postponed to the next meeting.

Action Item: Mr. Michael Everson and Ms. Deborah Anderson, to contact the Abkhaz community on the alternatives for PE with descender discussed at the meeting.

### 9.21 Rumi numerals

Input documents:

- [3087](#) Rumi Numeral System Symbols; .doc: Summary Proposal Form; Supporting material; Azzeddine LAZREK; 2006-03-30
- [3089](#) A complete Rumi bibliography; Azzeddine LAZREK; 2006-03-31
- [3430](#) Rumi revised proposal; Azzeddine Lazrek; 2008-04-08

Ms. Deborah Anderson: Referring to document N3430, Rumi is a numeral system - derived from Graeco-Coptic. These are different from Indic and Arabic digits. It has been reviewed by many specialists in Rumi. The first contribution was as early as document N1958. We have glyph agreement from the experts - document N3430 is a cleaned up version of the glyphs, names lists and properties. Background information is in earlier documentation.

Discussion:

- a. Mr. Martin Hosken: What is the difference between DIGIT and NUMBER in the names?
- b. Dr. Ken Whistler: NUMBERS are greater than 9. Digits are 0 to 9. Properties of NUMBERS are also not decimal -- number other.
- c. Mr. Peter Constable: Headings aside, the UTC has reviewed this contribution and is OK with the repertoire.
- d. Mr. Mike Ksar: Are there four fractions being proposed for potential future use.
- e. Mr. Peter Constable: These four fractions do have separate letter forms. These are in historic use. There are conventions for writing fractions ... except that these four do have letter forms.

Disposition: Accept for Amd. 6 in new block named RUMI SYMBOLS. It is a Right to Left set.

**Relevant resolution:**

<b>M52.12 (Rumi Numeral symbols):</b>	<b>Unanimous</b>
WG2 accepts to encode in the standard 31 characters in code positions 10E60 to 10E7E, in a new block 10E60-10E7F named Rumi Numeral Symbols, with their names and glyphs as shown in document <a href="#">N3430</a> . <b>(Missing: It is a Right to Left set)</b>	

### 9.22 Proposal to encode Tangut

Input documents:

- [3297](#), [3287A](#) and [3297B](#) Proposal to encode Tangut characters in UCS Plane 1 and Charts; Unicode – Richard Cook; 2007-08-12
- [3307](#) Tangut – Informational Background; Richard Cook; 2007-09-01
- [3338](#) Response to UC Berkeley's proposals on Tangut; China national body; 2007-09-16
- [3343](#) More on Tangut; Richard Cook; 2007-09-17

Ms. Deborah Anderson: The first Tangut proposal in 2007 came from SEI. We saw it in Hangzhou meeting, and has had extensive review. At this meeting we have talked with Chinese experts. The UK comments have been accommodated. China will provide mapping data and fonts. We will provide a G column. Recommendation on Radicals is postponed. No additional CJK strokes are needed. The US and China feel that the proposal is mature and is ready to go to ballot.

Discussion:

- a. Mr. Martin Hosken: The UK welcomes this proposal on Tangut. However, we would request not to include it in the ballot at this time.
- b. Mr. Michael Everson: I would like to see the document with the new G column before the 6000+ characters should go to ballot. We also believe that the radicals should also be included. With an extra meeting time we should be able to include these. There is a valid use requirement – Mr. Andrew West has been waiting for the radicals. We can be more confident with one more meeting time.
- c. Dr. Ken Whistler: The US national body is not in favour of delaying the repertoire of Tangut be tied in anyway with the radicals issue which is much more complicated. The basic repertoire has been on the table for several meetings. The radicals issue needs to be solved but it has no relation with the currently mature basic repertoire. I would like to understand is whether the UK would have problem in including it at the next meeting for Amd. 6, or would the radicals be insisted upon?
- d. Mr. Martin Hosken: There is too much to check for these 6000+ characters. They need about a year to test these 6000+ characters.
- e. Mr. Mike Ksar: There are two ballots available.
- f. Dr. Ken Whistler: If it requires a new ballot for Tangut at the next meeting then we may have problem. If you need a year to check it, then including it at this meeting will give you that timeframe. If you need a 1 year from the next meeting then it may not go into the next version of Unicode.
- g. Mr. Peter Constable: This set has been reviewed in UTC. They took a decision to accept for Unicode once it goes into ISO/IEC10646. By delaying this it may affect the synchronization.
- h. Mr. Martin Hosken: I would like to ask China how they are testing these. We did find some errors in checking these and pointed out these to Mr. Richard Cook. We can produce a mature proposal for ballot. I also would not tie the radicals with the ballot at this time.
- i. Mr. Michael Everson: We don't have a mature proposal now. Have we checked the mappings?
- j. Mr. Richard Cook: The corrections he speaks of are in the additional Column with same code points in a font.
- k. Dr. Umamaheswaran: Which is the final document to base the resolution? Document [N3297B](#) is to be referenced.

Disposition: Accept for Amd. 6 in new block named TANGUT.

**Relevant resolution:**

<b>M52.17 (Tangut script):</b> WG2 accepts to encode in the standard 5910 characters in code positions 17000 to 18715, in a new block 17000-1871F named Tangut, with their names and glyphs as shown in document <a href="#">N3297</a> .	<b>Unanimous</b>
---	------------------

### 9.23 Two phonetic characters and two Shona characters

**Input document:**

[3447](#) Proposal to encode two phonetic charcters and two Shona characters; Lorna Priest; 2007-10-22

Mr. Peter Constable: The contribution proposes four characters - one combining mark and three phonetic characters. The combining mark is used in Khoisian languages used in South Africa. Turned Alpha is for Americanist tradition for voiceless quality. The other two are for Shona. We have encoded the lower case forms of these; now there are attested versions of upper case forms. These have been reviewed by the UTC and we have no objection.

Disposition: Accept four characters for Amd. 6. See item f in resolution M52.20 below.

**Relevant resolution:**

<b>M52.20 (Character additions):</b> WG2 accepts to encode the following in the standard: <ol style="list-style-type: none"><li>a) 19DA NEW TAI LUE THAM DIGIT ONE with its glyph shown in the last line of Example 1 in document <a href="#">N3380</a>;</li><li>b) 23E8 DECIMAL EXPONENT SYMBOL with its glyph shown in document <a href="#">N3386</a>, along with the user note 'Algol-60 token', based on the Russian standard GOST 10859-64;</li><li>c) 20B6 LIVRE TOURNOIS SIGN with its glyph (L and T with a stroke across) in Figure 1 in document <a href="#">N3387</a>;</li></ol>	<b>Unanimous</b>
--	------------------

- d) 20B7 SPESMILO SIGN with its glyph (straight version on page 1) from page 1 of document [N3390](#);
- e) 20B8 TENGE SIGN with its glyph as from page 1 of document [N3392](#), and,
- f) The four characters:
  - i. 1DFD COMBINING ALMOST EQUAL TO BELOW,
  - ii. 2C70 LATIN CAPITAL LETTER TURNED ALPHA,
  - iii. 2C7E LATIN CAPITAL LETTER S WITH SWASH TAIL, and
  - iv. 2C7F LATIN CAPITAL LETTER Z WITH SWASH TAIL
 with their glyphs from document [N3447](#).

**9.24 Hangul Jamos**

**Input documents:**  
[3458](#) Proposal to add nine multi-letter Jamo characters; Kent Karlsson; 2008-04-21  
[3464](#) Response to 3459 – More Jamos; Korea national body; 2008-04-23

Dr. Ken Whistler: Document [N3458](#) from Mr. Kent Karlsson was reviewed by UTC. The consensus was that the encoding of this set is not required nor it is advisable. The UTC recommendation was not to accept these. The US national body agrees with this position.

- Discussion:
- a. Prof. Kyongsok Kim: We analysed document [N3458](#) from Mr. Kent Karlsson. Document [N3464](#) contains our review comment. Hangul Jamos can be used in different ways. The 9 characters proposed by Mr. Kent Karlsson can be used in one of the three ways. It looks like his proposal seem to belong to type B. These are already included in the Syllable Final letters. He is proposing them as Syllable Initial - where these characters are not used. It seems that his assumption is wrong and hence we feel they are not needed.
  - b. Dr. Dae Hyuk Ahn: Compatibility characters came from the Korean standard. Adding to compatibility Jamo should not be entertained.

Disposition: WG2 does not accept the proposal.

**Relevant resolution:**

<b>M52.25 (Multi-Letter Jamo characters):</b>	<b>Unanimous</b>
WG2 rejects the proposal in document <a href="#">N3458</a> to add 9 multi-letter Jamo characters based on the feedback in document <a href="#">N3464</a> and discussion at this meeting.	

**9.25 Meetei Mayek**

**Input document:**  
[3470](#) Updated proposal for Meitei Mayek (using source from N3270 pDAMD5) Everson 2008-04-24

Mr. Peter Constable: The most recent accepted version was in document [N3270](#) (PDAM5) from which the Meitei-Mayek script was removed.

Mr. Michael Everson: Document [N3470](#) is the revised document and has a summary of changes. The script was taken off from Amd. 5 and now that we have addressed the Danda unification issue we are bringing it back. It has the same repertoire as before, including the Dandas. Script name is now MEETEI MAYEK. Has a new code table - different from previous document. Characters have been renamed to reflect new script name, and are reordered from earlier. It also addresses some feedback received from Government of India and Manipur state. The glyphs will be corrected by Mr. Michael Everson.

Disposition: Accept updated Meetei-Mayek script for inclusion in Amd. 6 in new block named MEETEI MAYEK

**Relevant resolution:**

<b>M52.6 (Meetei Mayek script):</b>	<b>Unanimous</b>
Having resolved the question related to Dandas per resolution M52.5 above, WG2 accepts to encode in the standard 78 characters in code positions 1C80 to 1CAE and 1CB0 to 1CCE, in a new block 1C80-1CCF named Meetei Mayek, with their names and glyphs as shown in document <a href="#">N3470</a> .	

**9.26 Contributions carried forward to next meeting**

All contributions which were on the agenda but not discussed and need further national body feedback are placed under this section. These are to be carried forward to the next meeting.

### 9.26.1 Batak script

Input document:

- [3293](#) Preliminary proposal for encoding the Batak script in the UCS; Everson; 2007-07-26
- [3320](#) Proposal for encoding the Batak script in the UCS; SEI - Everson; 2008-01-25
- [3445](#) Discussion of Batak Vowel Ordering; Rick McGowan & Ken Whistler; 2008-04-14

### 9.26.2 Mandaic script

Input document:

- [3373](#) Preliminary proposal to encode the Mandaic script; Everson; 2008-01-01

Mr. Michael Everson: Good progress has been made with user community. Updated document will be presented at next meeting. Script is not too complicated.

### 9.26.3 Manichaean script

Input documents:

- [2544](#) Revised proposal to encode the Manichaean script in the UCS; Everson; 2002-12-03
- [3378](#) Revised proposal to encode the Manichaean script in the UCS; Michael Everson and Desmond Durkin-Meisterernst; 2008-01-28

Mr. Michael Everson: Good progress has been made with user community. Updated document will be presented at next meeting. Script is not too complicated.

### 9.26.4 Egyptological Yod and Cyrillic breathings

Input documents:

- [3382](#) Egyptological YOD and Cyrillic breathings; Michael Everson & Bob Richmond; 2008-01-28
- [3393](#) Response to N3382 on Cyrillic; Evangelos Melagrakis; 2008-02-26
- [3431](#) Comments on N3382: Egyptological Yod and Cyrillic Breathings; Deborah Anderson Donald Mastronarde; 2008-01-28
- [3432](#) Position paper on Egyptological Yod and Cyrillic Breathings; USnational body; 2008-04-08

### 9.26.5 Sorang Sompeng script

Input documents:

- [1957](#) Proposal to encode the Sorang Sompeng script in the BMP; Everson; 1999-01-29
- [3410](#) Preliminary proposal for encoding the Sorang Sompeng script in the UCS; Everson; 2008-04-08

Mr. Michael Everson: Preliminary proposal for a small script. The new document is under review.

### 9.26.6 Varang Kshiti script

Input documents:

- [1958](#) Proposal to encode the Varang Kshiti script in the BMP; Everson; 1999-01-29
- [3411](#) Preliminary proposal for encoding the Varang Kshiti script in the UCS; Everson; 2008-04-08

Mr. Michael Everson: This may take longer time -- script reform is being done. It may contain cased versions.

### 9.26.7 Proposal to encode Last Resort pictures in plane 14

Input document:

- [3412](#) Proposal for encoding Last Resort Pictures in Plane 14 of the UCS; Everson; 2008-04-01

### 9.26.8 Naxi Dongba pictograph

Input documents:

- [3425](#) Proposal for Encoding Naxi Dongba Pictograph in the SMP of the UCS; China; 2008-03-25
- [3442](#) Comments on N3425 Proposal for Encoding Naxi Dongba Pictograph in the SMP of UCS; Richard Cook and Deborah Anderson, SEI, UC Berkeley; 2008-04-14

### 9.26.9 109 more Unified Canadian Aboriginal Syllabics

Input document:

- [3437](#) Preliminary proposal for additional Canadian Syllabics characters; Everson; 2008-04-12

Mr. Michael Everson: This document contains a second set of UCAS; shows whole lot of more characters coming.

### 9.26.10 Chakma script

Input document:

- [3428](#) Preliminary proposal for encoding the Chakma script in the UCS; Everson; 2008-04-08

Mr. Michael Everson: The proposal is preliminary and needs more work.

### 9.26.11 Addition of 22 Arabic characters

Input document:

- [3460](#) Proposal to Encode 22 Characters for Arabic Pedagogical Use; Attash Durrani (Pakistan NLA), Kamal Mansour, Rick McGowan; 2008-04-21

Dr. Ken Whistler: Document N[3460](#) is based on input from Pakistan standards body to Unicode consortium for 22 pedagogical characters. They could be applied to all Arabic script users. This

document has not been reviewed by UTC yet. We solicit feedback from all national bodies for consideration at the next meeting.

### 9.26.12 Old Yi script

An updated proposal on Old Yi (document [N3288](#)) was not yet available from Chinese national body for discussion at the meeting.

## 10 Contributions on scripts and characters under ballot

### 10.1 Amendment 5

#### 10.1.1 FPDAM5 ballot results

Input documents:

[3409](#) AMD5 ballot results; SC2 Secretariat 02n4004; 2008-03-25

Document [N3409](#) contains the results and responses on PDAM5 text in document [SC2 N3982](#). Of the 29 P-members, 10 had approved (China had comments), 5 had disapproved (Ireland, Japan, Korea (Republic of), UK and USA, with accompanying comments), 2 had abstained and 12 had not responded. Sri Lanka, an O-member, had responded with comments.

#### 10.1.2 Disposition of comments

Input documents:

[3409](#) AMD5 ballot results; SC2 Secretariat 02n4004; 2008-03-25

[3413](#) Proposed disposition of comments – AMD. 5; Michel Suignard; 2008-03-28

Input documents related to ballot responses:

[3359](#) Changing K5 source reference format to Hex; national body Korea; Kim, Kyongsok, Dae Hyuk Ahn; 2007-09-20

[3365](#) Confirmation of seven glyphs in CJK UNIFIED IDEOGRAPHS EXTENSION C; Japan national body; 2007-10-15

[3370](#) Ext. C minor revision – reordering of 14 characters and two characters with additional source reference

information; IRG Rapporteur; Doc IRG N1392R; 2007-11-28

[3374](#) Tai Tham ad-hoc meeting 21-22 Jan 2008, Payap University, ChiangMai, Thailand Mike Ksar; 2007-12-20

[3379](#) Tai Tham Ad-hoc Meeting Report; Tai Tham Ad-hoc; 2008-01-22

[3384](#) Tai Tham Subjoined Variants; Martin Hosken; 2008-01-29

Output document:

[3475](#) Disposition of Comments AMD 5; Michel Suignard; 2008-04-24

Document [N3413](#) contains the national body comments along with proposed disposition of comments from the project editor. The national body comments are in document [N3409](#).

- **China - approval with comments**

Mr. Michel Suignard: There were 5 technical comments from China, T.1 to T.5, all reflecting the results from the ad hoc meeting on Tai Tham early this year. The referenced document in the Chinese comment should have been [N3379](#) (instead of [N3389](#) which is on Kaithi script). China did some work in extracting from that report. Characters have been moved, renamed and shuffled etc. I took the comments from China as the summary of the changes requested. There is also a separate request for two additional characters (see discussion under item 10.1.6 on page 47 – these are not part of the ballot). Irish comment T.3, UK comment T.2, and USA comment T.8a, also along the same lines. With my interpretations (given in the proposed disposition of comments) I propose we accept Chinese comments.  
Discussion:

- Mr. Peter Constable: Was the placement of one of the headings in the names list discussed or not in the ad hoc? The previously independent vowels 1A4B and 1A4C are at an odd location - but these are among the consonants. Also will we have a final set of charts before end of the meeting?
- Mr. Michael Everson: The intent is to keep these with the consonants block.
- Mr. Mike Ksar: We can expect the charts for Amd. 5 by end of the week.

Disposition: Accept all the changes proposed in document [N3413](#), endorsing the meeting report in document [N3379](#).

Mr. Mike Ksar: We really appreciate the work of organizing and hosting the ad hoc. We did send a letter of appreciation with the help of Messrs. Martin Hosken and Peter Constable to the host in Chiang Mai.

- **Ireland - disapproval with technical and editorial comments**

*T.1 - Removal of Sinhala numbers in columns 0D8E and 0D8F.*

Mr. Michel Suignard: There was an input from Sri Lankan Standards Institution requesting removal of these for further study. These should have been stated as columns 0DEx and 0DFx. Comment T.7 from USA and this Irish comment are in support of the Sri Lankan request.

Disposition: Accepted removal of Archaic Sinhala numbers in columns 0DEx and 0DFx for further study.

*T.2 and T.5 - Correct the name for 11FD, A96E, A973*

Mr. Michel Suignard: The US comment T.5 includes these as well.

Disposition: Accepted to add final H in KHIEUK to make it KHIEUKH.

*T.3 - Replace Tai Tham with ad hoc meeting results.*

Disposition: Accepted (see discussion under Chinese comments T.1 to T.5 on page 38 above).

*T.4 - Two additional Tai Tham subjoined variants*

Disposition: Accepted - see discussion under item 10.1.6 on page 47.

*T.6 Page 40, Row 10B0: Avestan.*

Mr. Michel Suignard: Ireland reiterates its support for the retention of U+10B38 AVESTAN SEPARATION POINT.... We would not agree to remove this character from FPDAM 5. The US comment T.6 has the opposite view.

Disposition: Ireland after further discussion in ad hoc withdrew its comment T.6. See discussion and disposition under item 10.1.4 on page 46.

*E1, E2 and E3*

(Also Korea (RoK) comment T.2)

Disposition: Accepted in principle: These comments are related to the glyph discrepancies caused by use of different fonts for Hangeul Jamo between ISO/IEC 10646:2003 and Amd. 5 charts. The inconsistency has to be resolved by project editor, contributing editor and Korea (RoK) working together to arrive at suitable glyphs / fonts.

*E4 accepted.*

Mr. Michael Everson: Ireland changes its position to approval.

- **Japan – disapproval with comments**

*JPT1 – ARIB CJK Ideographs*

Request changes per consensus from IRG #29. Move J\_ARIB-757D from FA6D to unified CJK block. Follow IRG recommendations for the remaining 5.

See discussion and disposition for these under UK technical comment *T.1*, on page 42.

Disposition: Accepted.

*JPT2 – References to Unicode 5.2 including collection 309*

Mr. Michel Suignard: I understand Japan's concern. It is a synchronization issue.

- Mr. Masahiro Sekiguchi: Can we get a commitment from Unicode for synchronizing with Unicode 5.2 with Amd. 5.
- Dr. Ken Whistler: It is rather unlikely to have a synchronized Unicode 5.2 with Amd. 5. It is too soon after Unicode 5.1. There will be a Unicode 5.2. The most likely scenario would be it would be synchronized with Amd.5 and Amd. 6, sometime in 2009. We don't have a formal agreement in the UTC on this subject. This is the best assessment as things stand.
- Mr. Michel Suignard: We do have a normative referencing issue -- since new characters have gone in and algorithms such as BiDi refer to these.
- Dr. Ken Whistler: We were in a similar situation with Amd. 3 earlier. We should not automatically assume that there will be a corresponding Unicode version for each Amd.

- e. Mr. Masahiro Sekiguchi: Our concern is about the content and not the timing issue. In Amd. 5 there is a collection named Unicode 5.2. It does not include any Amd. 6 items. If Unicode 5.2 would contain Amd. 6 then we have to avoid the situation.
- f. Dr. Umamaheswaran: I propose to move the collection for Unicode 5.2 from Amd. 5 to Amd. 6, and include the additions from Amd. 6 in that collection.

Disposition: Accepted in principle. Remove the new text referring to Unicode 5.2 in Amd. 5. Move collection for Unicode 5.2 to Amd. 6.

*JPT3 - Regarding use of 'Normative character alias' in new text for 34.2*

Disposition: Accepted in principle. Changed bullet point to read 'Character alias ...'.

*JPE1 and JPE2 – accepted.*

*JPO1 – requests clarification of Editor's note on the right column of page 2.*

Mr. Michel Suignard: These notes are related to CJK source references. We entered Kx for Ext. A, B, C etc. We started noticing some discrepancies for Ext. C. Based on discussion between IRG convener and UTC there are some problems for KangXi referencing. The Unihan database entries look to be correct. The IRG input seems to be incorrect. I have issues with Kx sources for Ext. C. This impacts the identity of the characters themselves. If these are not resolved for the 10 or 15 of these we cannot proceed with Amd. 5. If these can be fixed this week we may be able to move forward. I realize that the context for the editor's note was missing. I encourage an ad hoc and give me some recommendations.

(An ad hoc of experts from Japan, the project editor and IRG convener is to discuss and recommend.)

Discussion:

- a. Mr. Masahiro Sekiguchi: We should let IRG discuss the issue. The next IRG is in June 2008. Is it possible to wait for next IRG to finalize these Kx source references?
- b. Mr. Michel Suignard: These are not characters added in Amd. 5. All these are from Ext. B. They look like typos from IRG but cannot be processed as editorial. An erratum has to be processed to deal with these.
- c. Mr. Masahiro Sekiguchi: If we can all agree to a common solution we can move forward. Even if we can get a consensus within a small group at this meeting I will have concerns about other IRG members.
- d. Mr. Michel Suignard: The Kx source from IRG does not agree with the super CJKI database. It looks like a typo when the information was supplied to the editor. If we can resolve it at this meeting we can move ahead.

Disposition: An erratum will be prepared and included in Amd. 5 on fixing Kx source reference errors for about 15 ideographs. (Refer to the final disposition of comments document N3475 page 6 for details.)

Mr. Masahiro Sekiguchi: Japan's position changes to approval.

- ***Korea (ROK) – disapproval with comments***

*T1. page 1, right column - Proposes changes to use 'character' in annotations*

Mr. Michel Suignard: If we accept the Korean proposal it would undo Amd. 3 changes. An alternative is to re-introduce plural to characters so these annotations would read:

- syllable-initial characters or initial consonants
- syllable-peak characters or medial vowels
- syllable-final characters or final consonants

Disposition: Accepted in principle; use revised wording for annotations.

*T2. p. 12 – Glyph discrepancies - same as Irish comments E.1 to E.3*

Disposition: Accepted in principle: These comments are related to the glyph discrepancies caused by use of different fonts for Hangul Jamos between ISO/IEC 10646:2003 and Amd. 5 charts. The inconsistency has to be resolved by project editor, contributing editor and Korea working together to arrive at suitable glyphs / fonts.

*T.3 names list – section with Hangul vowels and consonants - proposes to change wordings of six phrases in the headings in nameslist*

Mr. Michel Suignard: The issue is with nameslist used in common with Unicode. I would like to get an opinion from Unicode liaison.

Discussion:

- a. Dr. Ken Whistler: This issue has not come up in the US committee. As the editor has suggested the terminology can be explained in one place in the standard. Editorially the change in headers is not desirable. Multiple ways in the headers in nameslist should not be entertained. I agree with the editor.
- b. Mr. Mike Ksar: We discussed this in one of the earlier meetings. Why are we bringing it back to the WG2 again? It is not a must to have. It looks like it is your preference.
- c. Prof. Kyongsok Kim: We wanted to have further discussion.
- d. Mr. Michel Suignard: We will not accept the changes to headers in nameslists. These are explained in one place in the standard.

Disposition: Not accepted.

*T.4 – add missing annotation (ssangyesieung) for U+3180 (per document N3172)*

Mr. Michel Suignard: Annotations were added but did not appear in the Amd. 5 text. However the text adding these annotations does not reflect the new chart format, so they will be amended using the new format.

Disposition: Accept in principle. All the annotations will be included in the new format.

*T.5 – mapping of F9B8 to 96B8, 96B7 should be only to 96B7*

Mr. Michel Suignard: The issue is a compatibility ideograph mapping error. We cannot fix this without backward compatibility being broken. The same discussion is going to come up on other Korean contributions.

Discussion:

- a. Prof. Kyongsok Kim: You are saying that mapping is incorrect, but we cannot change the mapping.
- b. Mr. Michel Suignard: It is like having the wrong name and we cannot fix it due to stability policies. We can add a note to indicate this mapping is wrong. The solution is to add a new character with the correct mapping. It would break existing implementation etc.
- c. Mr. Peter Constable: Are you saying that note can be added?
- d. Mr. Michel Suignard: This one already has a note. Korean users do have all the characters they need. On the mapping issue the standard has an incorrect mapping and will remain so forever -- the identity of the CJK character would be changed otherwise.
- e. Mr. Masahiro Sekiguchi: What Mr. Michel Suignard said is correct for CJK unified ideographs. But these are for compatibility ideographs. WG2 has not discussed the issue of errors in mapping of compatibility ideographs.
- f. Mr. Peter Constable: From the Unicode Consortium point of view even changing the map for CJK compatibility ideographs would affect the principle of stability in normalization / maps etc. Adding a new character may be entertained but it will not solve the problem.
- g. Mr. Mike Ksar: Do you think this topic needs further discussion? At this point in disposition of comments, the editor is proposing not to accept the Korean proposal. The topic of errata with compatibility ideographs can be brought up again.
- h. Mr. Michel Suignard: This item is not part of Amd. 5 text either. It is really errata item that is brought in as Amd. 5 comments. The note was added and it triggered finding other errors. From strictly Amd. 5 point of view this should not be accepted. We can always discuss the errata and add to Amd. 5 or 6 as a separate item.
- i. Mr. Mike Ksar: My suggestion is not to accept this comment as part of the disposition of comments for Amd. 5. We can always entertain the errata based on contributions from national bodies. The same issue is also in another agenda item (see item 10.1.5 on page 47)

Disposition: Comment is not accepted.

*T6. Change K5 entries in CJKU\_SR.txt file – hex format is in Amd. 5 text but not in the .txt file (see document N3359).*

Mr. Michel Suignard: The latest version is corrected and circulated as additional information on ballot to the national bodies. Due to a production error the wrong .txt file was sent initially. The final one is correct.

Disposition: Accepted in principle. It is already fixed.

*T7. Delete one line from CJKU\_SR.txt file – reference K5H00029*

Mr. Michel Suignard: The latest version of .txt file is corrected and was circulated as additional info on ballot to the national bodies.

Disposition: Accepted in principle. It is already fixed.

Prof. Kyongsok Kim: Korea's positions changes to approval.

• **UK – disapproval with comments**

*T.1 Concerns over 2 ARIB Unified 9FC4, 9FC5 and 4 Compatibility Ideographs FA6b – FA6E, and a request that these be removed from Amd. 5.*

*T1.a) U+9FC4 (ARIB#47) is unifiable variant of U+6881; it was U+2ACAD in PDAM5 – was removed and added back to Amd.5 (see Resolutions M51.10-11).*

Mr. Michel Suignard: Revised document N3318R has justification for U+6881. If we accept it in Amd. 5, it should be removed from Ext. D. It should also get the T source reference it had in Ext. C to TC-4A76.

*T1.b) U+FA6D (ARIB#93) should be a unified ideograph. Also Japan comment T1.*

Disposition: Accept.

*T1.c) Concerns on whether IVS should be used for the compatibility ideographs or not, with a reference to ARIB entries in Adobe-Japan1 IVS collection <http://www.unicode.org/ivd/data/2007-12-14/>. Also a request that the issue of quality control of IVD and its relation with ISO/IEC 10646 be discussed at WG2 meeting 52. See also the US comment T.2.*

Mr. Michel Suignard: These six ARIB ideographs were quasi-unanimously accepted at meeting 51, including UK, with only China abstaining. IRG 29 also had a quasi-unanimous decision regarding accepting these six. One issue is what to do with compatibility characters.

Discussion:

- a. Mr. Martin Hosken: The IVD discussion is also important. The IVS mechanism is the simple way to deal with variants and is at the same time a way to add new characters. We have to watch that the quality of encoding does not go down. Currently if someone were to come with a collection to the UTC, and the UTC said that we don't want the character, the organization can still go ahead and encoded it via IVD even if that is wrong. How do we deal with this?
- b. Mr. Michel Suignard: The US has a similar position on how do we deal with compatibility characters. The US position was to use the variation sequences for such compatibility characters, because the canonical decomposition of compatibility characters with the Unified CJK essentially makes them lost during normalization. Up to Amd. 5 we don't have any entries in IVD. If we do go the IVD way, we need to point to the IVD database and some content in it. The current Adobe-Japan1 collection in IVD corresponding to Unicode 5.1 does have these characters and we could use these. The IVD collection is currently much larger.
- c. Mr. Martin Hosken: How does one add to that IVD?
- d. Mr. Michel Suignard: The plan at the beginning was to point from the standard to the IVD. WG2 can decide if we support the IVS for the ARIB characters; we have to do something in Amd. 5.
- e. Mr. Martin Hosken: What happens to the Adobe-Japan1?
- f. Mr. Michel Suignard: It was agreed to have a pointer and since it was pointing to an empty set we removed the pointer.
- g. Mr. Martin Hosken: Who decides what goes into IVD?
- h. Mr. Mike Ksar: There are several normative references to material that is maintained by UTC. IVD is another one of these. ISO/IEC 10646 is not just about encoding -- by reference we have the algorithms etc. that we need from Unicode as well. Once the Unicode brings the IVD forward to WG2 we can reinstate the reference in ISO/IEC 10646.
- i. Mr. Martin Hosken: So the Unicode has to bring the item forward.
- j. Mr. Masahiro Sekiguchi: Anybody can submit entries for IVD to Unicode consortium ... and after a discussion following a defined procedure they can get into the IVD.

- k. Mr. Peter Constable: The UTC is not vetting every sequence that goes into the IVD -- it is a registry of what any specific vendor has done.
- l. Mr. Michel Suignard: I encourage you to read Amd. 3. At that time the decision was to remove the pointer because the IVD registered sequences were not there at that time. I agree that the content of IVD is to be vetted in order to make it of some quality. IVD is meant to be a registry.
- m. Mr. Mike Ksar: ISO 2375 is also another registry; IVD is similar to that. Whatever people want to register can go in there.
- n. Mr. Martin Hosken: If we are going to say that you can add things to IVD, we are telling that the character is not going to be encoded. When we encode something from the IVD later into the standard the registered entity becomes redundant.
- o. Dr. Ken Whistler: All the items being discussed are quoted in US comments in document [N3413](#).
- p. Mr. Masahiro Sekiguchi: Because of various reasons, Japan wants these characters as Compatibility Characters and not just in IVD. Document [N3318](#) simply proposes 3 unified and 3 compatibility ideographs. There was no suggestion for IVD. Even IRG in its discussion did not look at the IVD. IVD is just a registry and anyone can register glyphs for these three compatibility ideographs also; but it does not satisfy the Japan's stated requirement. Ballot comment T.3 from US, there is some discussion about using IVD.
- q. Mr. Michel Suignard: Japan wants these. The US and UK don't want it.
- r. Mr. Peter Constable: In Amd. 3 there is a description about variation sequences. The wordings could be made clearer to indicate that what is in IVD is still part of the standard by reference. While the use of sequences is recognized, but it does not say that because it is in IVD it could satisfy a requirement if it is brought forward.
- s. Mr. Masahiro Sekiguchi: While we recognize that what is in IVD could be used to satisfy some requirement, it does not satisfy the stated requirement. The existing ARIB standard-based implementations are based on current ISO/IEC 10646. We could establish some policy that IVD could be used for maintaining round trip compatibility etc. but I don't want to affect the current ARIB implementations and hence we prefer to encode these as compatibility ideographs.
- t. Dr. Ken Whistler: My reading of Amd. 5 says two unified and four compatibility ideographs. The original JP request was to move one of the compatibility ideographs and encode it as a unified ideograph. The net result would be to have 3 unified and 3 compatibility ideographs. The UK request is to map five of these into Variation Sequences which are already part of Adobe Japan 1. I don't understand what the sixth one is?
- u. Mr. Martin Hosken: I am happy to progress 9FC5.
- v. Dr. Ken Whistler: The US comment says that the one instance is mappable. The other four match the UK request. It would mean that we would be OK with 9FC5 to progress as a unified ideograph. If UK agrees to it, we can move it forward. The problem would then be left for 5 remaining characters.
- w. Mr. Masahiro Sekiguchi: Japan wants FA6D ARIB-93 as a unified ideograph. Document [N3318](#) is Japan's position. IRG discussed the original document [N3318](#) and decided that five out of six were correct. But the ARIB 757D was incorrect and the consensus in IRG was that it is not a compatibility ideograph; it should be an independent unified one. That is why Japan revised the document [N3318](#).
- x. Mr. Michel Suignard: UK was also part of the IRG and they did have a consensus in IRG.
- y. Mr. Martin Hosken: The UK supports ARIB 93 as going ahead as a unified ideograph .. U+FA6D. The UK is OK with ARIB 95 as well. The UK comment T1a says why Arib 47 U+9FC4 should not be unified.
- z. Mr. Masahiro Sekiguchi: We have addressed this in document [N3318](#). IRG had a long discussion -- if it is in the standard it should be as a unified ideograph.
- aa. Mr. Mike Ksar: If we go ahead with accepting the IRG recommendation of 3 unified and 3 compatibility ideographs what would be the UK position -- will the negative ballot stay?
- bb. Mr. Martin Hosken: What would be the US position?
- cc. Dr. Ken Whistler: The US does not go and verify whether the unification can be done or not. We go by IRG recommendation. We would have 3 unified and 3 compatibility ideographs. But we want the 3 compatibility ideographs encoded as IVSs. (After discussing with the members of the US delegation) the Japan proposal of 3 and 3 would be acceptable compromise for Amd. 5.

- dd. Mr. Peter Constable: The Unicode consortium believes that continued use of compatibility ideographs should be discouraged and the use of IVS-s should be the preferred way of going forward instead of more compatibility characters.
- ee. Dr. Umamaheswaran: I would welcome a proposal to have a collection similar to the Named Sequences list if we want to move forward.
- ff. Mr. Masahiro Sekiguchi: The purposes of IVD, IVS, and compatibility characters are slightly different. Not all aspects of compatibility ideographs can be replaced by IVD and IVS. The IVD is maintained by the registry and UTR 37 allows explicitly multiple registrations etc. I agree we need to evaluate the approach of IVSs in the future.
- gg. Mr. Martin Hosken: The UK agrees to going forward with the IRG recommendation.
- hh. Mr. Mike Ksar: I would like to invite Unicode consortium to prepare a discussion document for consideration by WG2 at a future meeting.
- ii. Action item: UTC is invited to prepare a discussion document for using IVSs and IVD instead of coding more compatibility ideographs, for a future WG2 meeting.

Disposition: Accept the IRG recommendation of 3 unified and 3 compatibility characters for the ARIB characters.

#### *T.2 Tai Tham*

*T.2.a)* Support for Tai Tham Ad-hoc Meeting Report (N3379). Also Ireland comment T.3 and US comment T.8a.

Disposition: Accept.

*T.2.b)* request for two additional subjoined characters proposed in document N3384.

See also comment T.4 from Ireland and T.8b from USA. See discussion under item 10.1.6 on page 47.

Discussion: Accepted.

Mr. Martin Hosken: The UK ballot changes to approval.

- **USA – Disapproval with comments.**

*T.1 U Source reference* should be to UTR 45 instead of Unicode 5.1.

Discussion:

- a. Mr. Masahiro Sekiguchi: Is TR45 is part of Unicode 5.1 standard?
- b. Dr. Ken Whistler: It is not at present. It will stay as a TR.
- c. Mr. Peter Constable: There are a number of types of documents. Unicode Technical Specification (UTS) - like UCA; there are Annexes (UAX-s) that are parts of the standard. Technical reports (UTR-s) about implementation issues. A UTR may or may not become an annex of the standard in the future.
- d. Mr. Michel Suignard: The referenced document will not change. The definition of the U-source is now in one place. Pointing to this UTR it allows me to have a single point of reference. Similar to the Kx reference the normative part is only the value used in the standard and not the source reference. It is not yet on the web site and I will make sure before we finalize the reference.

*T.2 Clause 20.5 and Note 2 – proposes new reference to UTS 37 and IVD URL*  
<http://www.unicode.org/ivd/data/2007-12-14>.

Disposition: Accepted. See also discussion under UK *T.1* on page 42.

*T.3 ARIB CJK compatibility ideographs – proposes to use IVS-s instead of encoding separately.*

If normalization is used for the canonically equivalent compatibility ideograph and its counterpart unified CJK ideograph, the compatibility ideograph is lost. This prevents normalization from being used if compatibility ideographs are not to be lost. Proposes not to encode the ARIB ideographs that are proposed to be compatibility characters in Amd. 5. Similar to UK comment T.1c.

Disposition: Not accepted. US agreed to encode these per IRG recommendation as the compromise solution. See discussion under UK *T.1* on page 42.

*T.4. Editor's note on conflicting KangXi source references should be resolved before progressing the Amd.*  
 See discussion under Japan comment *JPO1* on page 40.

Disposition: An erratum will be prepared and included in Amd. 5 on fixing the Kx source reference errors for about 15 ideographs. (Refer to the final disposition of comments document [N3475](#) page 6 for details.)

*T5. Names of Hangul Jamos - 11FD, A96E and A973 should have an additional "H" in their names at the end. Same as Ireland comments T.2 and T.5 from Ireland.*

Disposition: Accepted.

*T6. Opposed to adding yet another middle dot punctuation at position 10B38 - AVESTAN SEPARATION POINT.*

Disposition: Accepted. Move Avestan Separation Point out of Amd. 5. See discussion under 10.1.4 on page 46.

*T7 - support for removal of Archaic Sinhala numerals – from Amd. 5 per request from Sri Lanka.*

Disposition: Accepted.

*T8. Tai Tham*

*T8a)* Support for Tai Tham ad-hoc meeting as documented in WG2 N3379. Same as China comment, Ireland T.3 and UK T.8a.

Disposition: Accepted.

*T8b)* Support for request for two additional Tai Tham characters from document [N3384](#).

Disposition: Accepted - see discussion under item 10.1.6 on page 47.

*E1. Source header for 9FC4 and 9FC5 should be J-source*

Disposition: Accepted.

Dr. Ken Whistler: The US ballot reverses to Approval.

- **Sri Lanka (O-member)**

*Comment requesting removal of Archaic Sinhala numerals from Amd. 5.*

The comment is in the form of a letter providing the rationale for removing historic Sinhala digits from Amd. 5 pending further study. Irish comment T1 and US comment T7 support this request for removal of these from Amd. 5.

Disposition: Accepted.

- **via Email during the meeting**

Spelling of AAB7 should be MAI KHIT (original in document [N3220](#)) instead of MAY KHIT in Amd. 5.

Disposition: Accepted.

- **Corrections to Extension C from the IRG**

Mr. Michel Suignard: Document [N3370](#) from the IRG is regarding corrections in Extension C. Fourteen ideographs are reordered based on radical strokes. It affects one page of the charts and IRG will be supplying the charts anyway.

a. Accept the right side column from document [N3370](#).

b. Two additional source references to 2AC83 TD-4421 with a glyph and 2AC87 TD-4D2B are proposed.

The locations proposed in the document for these characters is incorrect. Things have moved around in the Amd. 5 charts. The first one is now in 2AC66, and second one is at 2AC69.

Discussion:

a. Mr. Masahiro Sekiguchi: We are not comfortable by reordering because it impacts the stability of encoding. IRG had a discussion -- majority of IRG members were for the reordering so we do not object. As to the second point, IRG in a very short period decided to accept the TCA, because TCA submitted that these were removed in errors. After the IRG discussion Japan discovered that the equivalencing to the CJK C ideograph was not appropriate and hence they were removed the first time around. Japan had sent an email to indicate that Japan had objection to these source references. Unfortunately IRG did not meet since. I propose that we should postpone these two source references at least till IRG convener arrives. Our concern was mainly on the

process. The general consensus in IRG was to drop any suspicious characters from Ext. C. IRG resolution stated three source references are to be brought back. However document N3370 has only two. The rationale to drop one is not clear.

- b. Dr. Lu Qin: According to TCA they were dropped from an earlier version due to editorial mistake. TCA brought these back to IRG.
- c. Mr. Michel Suignard: One of the characters was removed because its only source was the T source. This was done in Amd. 5 at a fairly late stage in production to include Ext. C. I am pretty sure that was the third character.
- d. Dr. Lu Qin: Yes we had three in the IRG resolution. But one was not included -- after talking to the editor -- inserting the third character would have made the collection unstable. There was a consensus in IRG on the third character. TCA also agreed to it. As to the two characters in document N3370 only source references were added.
- e. Mr. Masahiro Sekiguchi: The technical reason to drop from 3 to 2 is understandable. Our concern is on the process. The IRG resolution had 3 and one was dropped without an explanation.
- f. Mr. Michel Suignard: As the editor I had reviewed and had to drop the third character.
- g. Mr. Mike Ksar: It is not a technical issue -- it was a process issue and the editor checked and did not include it in the third character. We will proceed with Amd. 5 without the third character.
- h. Dr. Lu Qin: It was not a communication problem. We did not have an IRG meeting in between. The message was communicated only to the editors. Japan was in the email communications related to this character. It will be reported at the next IRG.
- i. Mr. Michel Suignard: There was another ARIB character which also had a T source. UK had identified the T source TC4A76. I want to ensure that there is no disagreement on this. This is in the disposition of comments document.
- j. Mr. Masahiro Sekiguchi: For your information, document N3365 contains Japan's confirmation of Seven Glyphs of Extension C. The document is a report that the glyphs were verified to be correct.

Disposition: Accept the corrections in principle. See final disposition of comments document N3475.

Disposition of Amendment 5:

Project editor will prepare the final disposition of comments document, updating the proposed disposition of comments reflecting the discussion at this meeting. Amendment 5 will be progressed to FDAM ballot. See relevant resolutions M52.2 and M52.3 on page 47.

### 10.1.3 6 ARIB Ideographs

Input document:

[3318](#) Proposal to encode six CJK Ideographs in UCS; Japan national body; 2008-03-25

See discussion under UK comment *T.1* on page 38 under PDAM5 disposition of comments.

### 10.1.4 Additional comments on Avestan separation point

Input documents:

[3433](#) Comments on N3426: Revised Proposal for encoding Nushu in the SMP of the UCS; US national body; 2008-04-09  
[3444](#) Expert Feedback on AVESTAN SEPARATION POINT; Skjaervo, Jamison, & Watkins via SEI; 2008-04-13

Mr. Michel Suignard: We have two opposite views on this character. Ireland in its ballot comment T.6 has reiterated to keep this character at 10B38, whereas the US ballot comment maintains its opposition to adding one more middle dot to the standard. Both national bodies have disapproved FPDAM5.

Discussion:

- a. Mr. Mike Ksar: during the lunch between Messrs. Michael Everson, Michel Suignard, and myself - we had an ad hoc. If we cannot reach consensus at this meeting we will need to pull Avestan out of Amd. 5 till the issue is resolved.
- b. Mr. Michael Everson: we need to have some discussion on this. We cannot accept moving the whole script out of Amd. 5.
- c. Dr. Ken Whistler: The US national body position is to move one character out of the ballot. Not the entire script.
- d. Mr. Mike Ksar: I meant only the Avestan separation point.
- e. Ms. Deborah Anderson: i am in favour of moving Avestan forward without the dot and help resolving the dot item.

- f. Mr. Mike Ksar: just to clarify - you are in favour of moving Avestan separation point out of Amd. 5.
- g. Dr. Ken Whistler: From the US national body point of view as long as it is out of the Amd. 5 our vote will change to 'acceptance'. Whether it goes into Amd. 6 or not is a separate issue. If it goes in to Amd. 6 we may express our comment against it later.
- h. Mr. Michael Everson: Our comment says that we will not accept moving this character from Amd. 5. We have come up with our rationale and some users still want it. People who want to use it can use it; those who don't want it don't have to use these. We have provided evidences and only one national body wants to remove it based on 'no more dots'.
- i. Mr. Mike Ksar: Even if one national body is opposed to it, we will get stuck -- and procedurally we are postponing the issue. I want to propose to progress Amd. 5.
- j. Ms. Deborah Anderson: At the last UTC we were informed by Iran that they will not object to removing the character from Amd. 5.
- k. Mr. Mike Ksar: We don't have that input from Iran to WG2.
- l. Mr. Michael Everson: We had further discussion in an ad hoc. There is a division of interest in the user community. A minority of users would like to use the Avestan separation point proposed in Irish ballot comments. The other users would use the generic separation point. Ireland therefore withdraws its comment on Avestan Separation Point in Amd. 5 ballot response.

Disposition: Move Avestan forward without the Avestan separation point (dot); Avestan Separation point could be in Amd. 6 pending further discussion.

#### 10.1.5 Korean - additional information

Input documents:

- [3419](#) Korea's additional information and comments RE: Korea's vote for ISO/IEC 10646 FPDAM5; Rep. of Korea national body; 2008-04-05
- [3420](#) Lists of Duplicate Hanja Characters in KS X 1001 - (version 10: 2008.04.05); Rep. of Korea national body; 2008-04-05
- [3421](#) 10646 ksx1001 ucs xref table; Rep. of Korea national body; 2008-04-05

Mr. Michel Suignard: (Walked through the document). Some of the comments have already been accepted. Others are related to erratum on mappings. In one instance 50-11 and 53-45 in addition to the mapping error there is a small change in glyph also. Similar glyph difference is seen for 90DE. The mapping errors are not part of Amd. 5. It is a possible separate future erratum but not as part of Amd. 5.  
Disposition: No action at this meeting.

#### 10.1.6 Two Tai Tham additions

Input document:

- [3384](#) Tai Tham Subjoined Variants; Martin Hosken; 2008-01-29

Mr. Martin Hosken: After the Tai Tham ad hoc meeting in Chiang Mai, two additional characters to address modern use of subjoined forms in Tai Tham were discovered and are proposed. This proposal is also supported by Chinese ballot comment, Ireland ballot comment T.4 and USA ballot comment T.8b.

- 1A5D TAI THAM CONSONANT SIGN BA
- 1A5E TAI THAM LETTER HIGH SA

Disposition: Accept for Amd. 5, see resolution M52.2 item a below.

#### Relevant resolutions:

<p><b>M52.1 (Glyph changes):</b> WG2 accepts the following:</p> <ul style="list-style-type: none"> <li>• Change the glyph for 19D1 NEW TAI LUE DIGIT ONE to the glyph shown on the top line in Example 1 in document <a href="#">N3380</a>;</li> <li>• Insert a dashed box around the current dash-looking glyph for 1680 OGHAM SPACE MARK, based on document <a href="#">N3407</a>;</li> <li>• Change the glyphs for 04A8, 04A9, 04BE and 04BF (Abkhasian letters) to those shown in document <a href="#">N3435</a> to reflect modern Abkhaz orthography preference.</li> </ul>	<b>Unanimous</b>
<p><b>M52.2 (Disposition of FPDAM5 ballot comments):</b> WG2 accepts the disposition of ballot comments on FPDAM5 in document <a href="#">N3475</a> and instructs its editor to prepare the final text of Amendment 5 incorporating the dispositions. The following changes are noted in particular:</p> <ul style="list-style-type: none"> <li>a) Tai Tham script is replaced based on recommendations (for 5 removals, 2 additions, several changes to names and shapes and rearrangement of the resultant set) in document <a href="#">N3379</a>, and addition of two characters at code positions 1A5D and 1A5E based on document <a href="#">N3384</a>;</li> <li>b) Removal of twenty Sri Lankan digits encoded at 0DE7 to 0DEF, 0DF5 to 0DFF, for further study;</li> </ul>	<b>Unanimous</b>

- c) Removing AVESTAN SEPARATION POINT encoded at 10B38 (recommending using 2E31 WORD SEPARATOR MIDDLE DOT instead);
- d) Correcting the names of characters at the following code positions:
  - i. AAB7 to TAI VIET MAI KHIT
  - ii. 11FD to HANGUL JONGSEONG KIYEOK-KHIEUKH
  - iii. A96E to HANGUL CHOSEONG RIEUL-KHIEUKH
  - iv. A973 to HANGUL CHOSEONG PIEUP-KHIEUKH;
- e) Remove new text that was added in Amd. 5 referencing Unicode 5.2;
- f) Move collection 309 UNICOD 5.2 out of Amd. 5 to Amd. 6;
- g) Removing discrepancy in glyphs for Hangul;
- h) Replace Unicode 5.1 with UTR 45 as reference for U-source for ideographs;
- i) Replace the current note regarding IVS from being empty to a reference to the Ideographic Variation Database, at <http://www.unicode.org/ivd/data/2007-12-14>;
- j) Update the KX source references: 3ACE (KX source added back), 2304A, 23057, 2305C, 23063, 24799 (KX source added back for these 5 characters), and 26B20 (KX source value changed);
- k) Based on WG2 N3318 update the ARIB Ideograph encodings - with 3 CJK Unified Ideographs located at 9FC4-9FC6 (former FA6D moved to 9FC6), and 3 CJK Compatibility Ideographs located at FA6B-FA6D (former FA6E moved up to FA6D);
- l) Add to 9FC4 an additional source reference: TC-4A76;
- m) Change the annotations for initial, medial and final syllables to:
  - syllable-initial characters or initial consonants
  - syllable-peak characters or medial vowels
  - syllable-final characters or final consonants.

**M52.3 (Progression of Amendment 5):**

**Unanimous**

WG2 resolves to include the glyph changes from resolution M52.1 into Amendment 5. WG2 instructs its project editor to forward the final text of Amendment 5 along with the disposition of comments document [N3475](#) to the SC2 secretariat for an FDAM ballot. The final set of charts and names lists are in document [N3465](#). The unchanged target starting date for FDAM5 is 2008-07.

## 10.2 Amendment 6

### 10.2.1 Subdivision of work – Amd. 6

Input documents:

[3358](#) Subdivision of work – AMD 6; Ksar; 2007-09-20

[3363](#) Amendment 6 Subdivision of Work ballot; Post meeting 51; SC2 Secretariat, O23973; 2007-09-27

The subdivision request to create Amendment 6 to ISO/IEC 10646:2003 was approved by SC2.

### 10.2.2 PDAM 6 ballot results

Input documents:

[3406](#) PDAM6 Ballot Results; SC2 Secretariat; 2008-03-19

Of the total of 29 member bodies of SC2, 16 approved (with comments from India, Ireland, Japan, UK and USA), 1 abstained and 12 did not respond to the ballot on PDAM6 to ISO/IEC 10646:2003; there were no disapprovals.

### 10.2.3 Disposition of comments

Input documents:

[3316](#) Result of UTC Repertoire Review for future additions; Unicode Liaison Contribution; 2007-08-26

[3414](#) Proposed disposition of comments – AMD 6; Michel Suignard; 2008-03-28

Output document:

[3476](#) Disposition of Comments AMD 6; Michel Suignard; 2008-04-24

Other related documents:

[3312](#) Proposal to encode North Indian Accounting Signs; Anshuman Pandey; 2007-05-15

[3334](#) Towards an Encoding for North Indic Number Forms in the UCS; Anshuman Pandey; 2007-07-31

[3367](#) Final versions of proposals for North Indic Number forms and Bengali GANDA; Anshuman Pandey; 2007-10-07

The above documents are for information. The proposals have all been accepted and included in PDAM6. They contain additional input to the initial proposal. There was no further discussion on these.

Document [N3476](#) contains the proposed disposition of comments to PDAM6 ballot, along with the comments from the national bodies.

*India: Approval with comments*

*T.1 Bengali Ganda Mark –proposes a glyph refinement for 09FB – Bengali Ganda Mark*

Discussion:

- a. Ms. Deborah Anderson: The shape of the character could not be recognized by the author of the original proposal.
- b. Mr. Michael Everson: There is no context for being able to evaluate this proposal from India. There is no font to go with this either. We should invite India to show more evidence to back up their comment. i.e. to show the glyph in context with other Bengali characters. Document [N3311R](#) shows other glyph variants. None of these is like what India has proposed.

Disposition: Not accepted till more evidence in context is provided.

*T.2 Tibetan symbols – request to encode 0FD5 to 0FD8, the Hindu religious symbols elsewhere than the Tibetan block*

Discussion:

- a. Mr. Michel Suignard: There may be some justification for moving into symbols block. WG2 decided the current location.
- b. Dr. Umamaheswaran: Since we know we cannot move it from where they are, at least some annotation like solution should be provided.
- c. Dr. Ken Whistler: Proposed add a header in the nameslist for this set of characters: 'symbols used in Hinduism and Buddhism'

Disposition: Accepted in principle.

*T.3 Expresses support for current encoding of North Indic number forms.*

Disposition: Noted

#### **Ireland: Approval with comments**

*T1. Expresses that PDAM6 should not be delayed by adding new scripts etc. that will need a PDAM6.2.*  
Disposition: Noted; India has expressed serious concern over some of the content of PDAM6 and it may not be wise to rush it.

*E1 - Glyphs for 0F3A and 0F3B need refinement.*

Disposition: Noted. These characters are NOT part of PDAM6, but a chart production error.

*E2. Page 9, Row 0F0: Tibetan – suggests replacing annotation for 0FCC with a pointer to 0FD6.*

Disposition: Accepted in principle.

*E3. Row 1091: Phoenician – suggests annotations to 002E and 2E31 be added to 1091F; also a note that the glyph presented could be a dot or a short vertical bar.*

Disposition: Accepted in principle. 1019F is not under ballot in PDAM6; 2E31 is under ballot.

#### **Japan – Approval with comments**

*JP-E.1: Errors in heading of first page and dates in headings for the remaining pages are pointed out.*

Disposition: Partially accepted. Typo on the first page will be fixed; year on subsequent page headings will be kept.

*JP-E.2: Missing 'new' in 'the following entries' regarding page 1351 annex A.1.*

Disposition: Accepted.

*JP-E.3: A line break before a hyphen when writing a character name should be avoided, because it can be ambiguous whether there is a space before the hyphen. For example: 0FC3 TIBETAN CANTILLATION SIGN SBUB –CHAL.*

Disposition: Accepted in principle. This is a production tool limitation. A note could be added in the standard regarding hyphens in character names.

*JP-E.4: fix the glyph for 10B51 to fit within the cell in the chart.*

Disposition: Accepted. This is a chart production error.

#### **United Kingdom: Acceptance with comments**

*E.1 Am6names.txt – Missing space in '... ONETHOUSAND', the character name for 1085E.*

Disposition: Accepted.

**USA: Acceptance with comments**

*The US notes that it is likely that substantially more content will be added to Amendment 6, in which case it would need to go through another PDAM ballot.*

Disposition: Noted.

Disposition of Amendment 6: Editor will reflect the above discussion in the final disposition of comments. Due to a number of new additions accepted for Amd. 6 during this meeting, it will be processed as a PDAM6.2 ballot with revised schedules. See relevant resolutions M52.22 and M52.23 below.

**Relevant resolutions:**

**M52.22 (Disposition of PDAM6 ballot comments): Unanimous**

WG2 accepts the disposition of ballot comments on PDAM6 in document [N3476](#) and instructs its editor to prepare the final text of Amendment 6 incorporating the dispositions, and include all the changes and additions accepted in resolutions M52.6 to M52.21 above.

**M52.23 (Progression of Amendment 6): Unanimous**

WG2 instructs its project editor to forward the final text of Amendment 6 along with the disposition of comments document [N3476](#) to the SC2 secretariat for a second PDAM ballot. The final set of charts and names lists are in document [N3466](#). The revised starting dates for this work item are: 2nd PDAM 2008-05, FPDAM 2008-11 and FDAM 2009-06.

## 11 Publication issues

### 11.1 Synchronization with Unicode

Dr. Ken Whistler: By delaying Amd. 6 by one more ballot cycle gives more time to synchronize with the next version of Unicode. It is too soon after Unicode 5.1 for planning of the next version to be able to give you any target dates.

## 12 Liaison reports

### 12.1 Unicode Consortium

Input document:

[3459](#) Unicode Liaison Report; Unicode; Peter Constable; 2008-04-21

Mr. Peter Constable: It is my pleasure to report on what is happening with Unicode standard and the collaboration with WG2 on UCS. Early this month a minor version V5.1 was released and it synchronizes with Amendments 1 to 4 to 10646:2003. In addition to changes to property values, text segmentation, new sources for Ideographs etc., we have defined (was presented earlier) provisional named sequences for Tamil - which was added in V5.1. It will be finalized once it is adopted in ISO/IEC 10646. A significant change of the resource files were in .txt format. We are providing these now in xml formats also. There was a strengthening of normalization stability policy, and some constraints added to the stability of character properties. The UTF-8 definition was updated to take care of some security considerations; there was no change to the algorithm. We reviewed the output of Hangzhou WG2 meeting. Most of these were accepted -- the only exception being Avestan Separation Point, which is resolved at this meeting. The UTC is making provisional plans for V5.2 that could be synchronized with additions to ISO/IEC 10646. CLDR V1.5 has been released. Work is in progress on V1.6. The consortium continues to invite members from any of the national bodies to review and provide input on the locale data. One item is a request to WG2 -- that the IDS-s for compatibility ideographs are published along with the standard. I had raised this with the IRG convener. A status report would be prepared and sent to WG2 and Unicode.

Discussion:

- a. Mr. Mike Ksar: was there a time frame for these from Unicode.
- b. Mr. Peter Constable: At the earliest opportunity available for WG2.
- c. Dr. Lu Qin: I explained to Mr. Peter Constable about the IDS-s that these are not complete. Some of the characters submitted cannot be described completely since not all components are encoded. As to submitting these we will await instructions to IRG. As to submitting to Unicode, agreement of IRG members is needed.

- d. Mr. Michel Suignard: Concerning the lack of encoding of components we could have empty entries for those. It will be still useful to have whatever is complete. The empty entries can be described.
- e. Dr. Lu Qin: If it is only for use as additional references we can share the work. If the request is for publication it is incomplete.
- f. Mr. Peter Constable: It is for publication as an informative annex or such.
- g. Mr. Michel Suignard: It will be informative to assist implementers.
- h. Mr. Mike Ksar: There are two action items -- to get the information from IRG. Assuming IRG members agree the next step would be to publish it as part of the standard.
- i. Mr. Michel Suignard: I would like to have an instruction to IRG so that it would be made available at the next WG2 meeting. If there are no Intellectual Property issues we should be able to get it.
- j. Dr. Umamaheswaran: What exactly are we asking IRG to provide?
- k. Dr. Ken Whistler: The request is not to force the IRG participants to complete the IDS-s for all ideographs. The information exists and we would like to see it attached as a data file to the standard.
- l. Mr. Peter Constable: As complete as possible the IDSs for CJK ideographs should be given.
- m. Mr. Mike Ksar: Would it cover all the CJK ideographs?
- n. Mr. Peter Constable: The ultimate goal would be for all the ideographs.
- o. Mr. Masahiro Sekiguchi: I would have problem if we are after the IDSs for all CJK ideographs. Currently the IRG is using the IDS-s for their work in unification. If there are multiple IDS-s, we will be needing the policies etc. on how they arrived at the IDS-s.
- p. Mr. Peter Constable: We are not asking IRG to make an exhaustive list nor are we asking to add large work item for IRG.
- q. Mr. Mike Ksar: I am uncomfortable as to the ultimate goal?
- r. Mr. Masahiro Sekiguchi: No one is asking for the entire set.
- s. Mr. Peter Constable: The issue of compatibility ideographs was brought up at this meeting. Our request is not to add new compatibility ideographs -- but use the IVS-s as the mechanism to use in the future rather than adding new compatibility ideographs. The rationale being the compatibility ideographs do not really solve the round tripping requirement. The decompositions and normalization together make the roundtripping being lost. With IVS-s the distinction can still be maintained and does not disappear. We recognize that this is a new mechanism that has not been evaluated and has not been discussed in the IRG. For the 3 ARIB characters we recognize it may be premature. But in the future we would like to see all compatibility ideographs being defined as IVSs.
- t. Dr. Umamaheswaran: We will need a contribution outlining the standardized IVSs, the principles when we will use them etc., so that we can adopt it at the next meeting as a policy to deal with compatibility ideographs.
- u. Mr. Peter Constable: I can take an action on that. We also need the feedback from IRG. The UTC representative to IRG may bring the contribution to IRG.
- v. Dr. Lu Qin: The IRG will give the feedback once we see the contribution.

Disposition: With reference to document [N3459](#), IRG is requested to discuss and make the available data for IDSs towards adding as an informative annex to the standard as helpful information for implementers. See relevant resolution **M52.27** (item b) on page 19.

Action item: Mr. Peter Constable volunteered to prepare a contribution on standardized or defined IVSs.

## **12.2 IETF**

Mr. Michel Suignard: A new version of IDN is in progress. An updated version is in preparation with far reaching changes in it -- the repertoire, the way it will be controlled, stability issues etc. The effort to open-ended repertoire is being considered. IETF applications area is open for any one to participate. The IDN considerations do show up as an issue to be considered in new character proposals. IETF is asking for stability but some changes with good reasons would make the old IDN-s invalid ... these are edge cases.

Dr. Ken Whistler: The time frame issue -- current plan is to go for final call sometime this fall. Now is the time for national bodies to participate before the final step.

Mr. Michel Suignard: Email address internationalization is another topic IETF is working on. The infrastructure - mail servers need to understand new protocols and to be updated. The mail system has a way to update itself unlike at the DNS level for IDN. It may be too late to influence this work. But you should be aware of these. The East Asian countries have been active in this work. It is obviously using UTF-8 as the base encoding. There is no restriction on the repertoire for the names in email. The control on the names is with the organization issuing the email names -- not by organizations like IANA. I can give you more information or you can find info at IETF.org website.

### **12.3 Script Encoding Initiative**

Input document:

[3434](#) Script Encoding Initiative Liaison Report; Deborah Anderson; 2008-04-13

Ms. Deborah Anderson reported on the content of document [N3434](#). The report has a list of scripts that have been contributed to WG2 and have been standardized. A list of on going work for additional proposals is also included.

Discussion:

- a. Mr. Jinseok Bae: Is there a web site for SEI?
- b. Ms. Deborah Anderson: Yes I can supply that.
- c. Mr. Mike Ksar: Thanks to SEI for the valuable contributions made to the work of the standard. SC2 would be interested in this valuable contribution.

### **12.4 JTC1/SC34**

Input documents:

[3396](#) INCITS/L2 (US Tag to SC2); Eric Muller; 2008-02-08

[3418](#) Liaison statement from SC 34 to SC 2 regarding ISO/IEC FCD 19757-7, Information technology -- Document Schema Definition Languages (DSDL) -- Part 7: Character Repertoire Description Language (CRDL); SC34; 2008-01-16

Ms. Toshiko Kimura: SC34 requested review on FCD 19757-7 for feedback from SC2 and we can forward to SC34 if WG2 or SC2 have any input.

Discussion:

- a. Mr. Mike Ksar: We do have input from the US national body. We can forward it to SC34.
- b. Dr. Umamaheswaran: We had input to the earlier CD ballot with some comments. Some of our earlier comments have been addressed but not all.

Action item: Convener is to forward document [N3396](#) from US national body to SC2 as also WG2 input, in response to document [N3418](#) regarding FCD 19757-7 from SC34.

## **13 Other business**

### **13.1 Presentation on KS X 1026-1: 2007**

Input document:

[3422](#) An introduction of Korean Standard KS X 1026-1:2007, Hangul processing guide for information interchange; Rep. of Korea national body; 2008-04-07

Prof. Kyongsok Kim: Referring document [N3422](#), in 2007 KATS published KS X 1026-1 - Hangul processing guide for Info Interchange. In 10646 there are two types of Korean characters. There was confusion as to how the characters from these two blocks are to be used. For modern Hangul we only use the precomposed Hangul syllables. For old Hangul we use only the Hangul Jamos. Two or more code positions should not be concatenated for complex letters. Code positions from different blocks should not be concatenated. Some implementation algorithms for searching sorting and normalization are in the standard. We use the filler plus the final in ISO/IEC 10646. In Unicode book somehow it is specified differently. There is some discrepancy. We have to deal with this discrepancy in the future. We request your feedback. The English translation and Korean versions are provided. Korean version is the standard - English version is only for convenience. We have suggested starting a new study period.

Discussion:

- a. Mr. Peter Constable: I am not familiar with the formalities from JTC1 procedure.
- b. Dr. Umamaheswaran: Why this cannot be handled by our normal process? Korea can submit a contribution describing the problem and what they want WG2 to do. We can study it as part of our normal business. There is no need to have a separate study period for this issue.

- c. Dr. Ken Whistler: A new study period is inappropriate for addressing the problem identified. The study period etc. is usually for a new work item that we may want to carry forward and come up with a new standard.
- d. Mr. Mike Ksar: If this impacts ISO/IEC 10646 we already have a project. A study period is usually done in JTC1 to create a new project for a new standard.
- e. Mr. Jinseok Bae: Even though corrigendum or amendment etc. may not need a study period, in order to address the problem between Unicode and ISO/IEC 10646 we need a study period.
- f. Mr. Michel Suignard: It is in our interest to synchronize Unicode / ISO/IEC 10646. You can make a contribution to WG2 and we are in strong liaison with Unicode. Due process will be done here.
- g. Mr. Jinseok Bae: Unicode is Liaison C -- it was only a suggestion that we could use the study period from JTC1 procedures.
- h. Mr. Mike Ksar: We can give Korea an action item for a contribution for WG2 and its experts to study and take any corrective action that is appropriate.
- i. Mr. Peter Constable: I certainly invite you to submit a contribution to UTC as well.
- j. Mr. Mike Ksar: Korea can send it to WG2, and we can send it to UTC also.
- k. Mr. Michel Suignard: We encourage you to prepare the contribution as early as you can -- the UTC meets in May as well as before next WG2 meeting.
- l. Mr. Yoshiko Mikami: Have you investigated using existing fillers from the standard instead of adding new fillers.
- m. Mr. Jinseok Bae: We are not asking for new fillers. The Korean standard is a localization of ISO/IEC 10646.
- n. Dr. Umamaheswaran: In addition to sending the current contributions to national bodies for feedback -- I would encourage Korea to separate the item 5 on discrepancy between ISO/IEC 10646 and Unicode from document N3422 into a single contribution for consideration by WG2 and Unicode.

Action Item:

RoK is invited to make a contribution for consideration by WG2 - for national body and Liaison feedback. RoK is invited to discuss document [N3422](#) with national bodies and liaison organizations and report back.

### **13.2 Web Site Review**

There was no discussion at this meeting.

#### **Relevant resolution:**

<b>M52.30 (Appreciation to DKUUG for web site support):</b>	<b>By Acclamation</b>
WG 2 thanks DKUUG and its staff, in particular Mr. Kristen Nielsen, for its continued support of the web site for WG 2 document distribution and the e-mail server.	

### **13.3 Future Meetings**

The previous meeting schedules were reviewed.

#### *Meeting 53 - Fall 2008*

- a. Mr. Mike Ksar: We were awaiting a host with USA as backup. Dr. Lu Qin has volunteered to host the next meeting in Hong Kong at the Hong Kong Polytechnic University.
- b. Dr. Lu Qin: The IRG meeting 31 may change location from China to Hong Kong - it is currently scheduled for 2008-11-17/21. If WG2 can be held either before or after IRG meeting 31 it would make it convenient for some to attend both. The week before is the JTC1 plenary. The Polytechnic is closed during public holidays and all the rooms are locked.

After some checking of calendars and discussion, WG2 meeting 53 was scheduled for 13 to 17 October 2008 - Hong Kong Polytechnic University, HKSAR.

- *Meeting 54 – Spring 2009*

This meeting was tentatively scheduled for Korea (Republic of) pending confirmation. However, some delegates expressed concern having consecutive meetings in Asia. It was re-scheduled for 20 to 24 April 2009 to be in the USA San Francisco Bay area. Canada is possible alternate (pending confirmation) - Dr. Umamaheswaran will check with his employer and get back to the convener.

- *Meeting 55 with SC2 plenary – Fall 2009,*

Mr. Mike Ksar: It was tentatively scheduled to be located in Japan.

Mr. Masahiro Sekiguchi: JTSC has already given the approval for the hosting. The dates are to be fixed.

After some calendar checking it was scheduled for 26 to 30 October 2009, in Tokushima, Japan.

- *Meeting 56 - Spring 2010 - USA*

Dates to be fixed.

- *Meeting 57 - Fall 2010*

Mr. Jinseok Bae: We may be able to move our hosting to year 2010. Tentatively scheduled for Korea; the dates and location are to be confirmed.

**Relevant resolution:**

<b>M52.29 (Future meetings):</b>	<b>Unanimous</b>
WG 2 meetings:	
Meeting 53 - 2008-10-13/17, Hong Kong Polytechnic University, HKSAR	
Meeting 54 - 2009-04-20/24, Bay Area (pending confirmation), USA; Toronto, Canada (alternate)	
Meeting 55 - 2009-10-26/30, Tokushima, Japan (with SC2 plenary)	
Meeting 56 - Spring 2010, Bay Area (pending confirmation), USA	
Meeting 57 - Fall 2010, Korea (pending confirmation)	

**14 Closing**

**14.1 Approval of resolutions**

The draft resolutions prepared by the recording secretary were reviewed. A total of **31** resolutions were adopted unanimously or by acclamation. Some of the draft resolutions were corrected before adoption.

*Note: The adopted resolutions document had some editorial errors and errors in some character counts. These were updated and have been posted after the meeting, along with adding hyperlinks to the referenced documents in the resolutions.*

There were a total of **100644** graphic characters till end of FDAM 4 to the standard ISO/IEC 10646:2003. Prior to this meeting there were **5633** additions in FPDAM5; and **105** additions in PDAM6, for a total of **106382**. As a result of the resolutions adopted at this meeting, the number of character additions changed in FDAM5 to **5611** and in PDAM6.2 to **7188**, for a total of **113443** graphic characters in the standard.

**Appreciation**

**Relevant resolution:**

<b>M52.31 (Appreciation to Host):</b>	<b>By Acclamation</b>
WG 2 thanks the US national body (ANSI), and Microsoft, in particular Ms. Jeanne Sheldon, Messrs. Edward Ye, Murray Sargent, Peter Constable and Michel Suignard, for hosting the meeting, for providing excellent meeting facilities, and their kind hospitality. WG2 further extends its appreciation to Mr. and Mrs. Michel Suignard and the Unicode Consortium for hosting the social event.	

**14.2 Adjournment**

The meeting was adjourned at approximately 10:15h.

**15 Action items**

All the action items recorded in the minutes of the previous meetings from M25 to M47, and M49, have been either completed or dropped. Status of outstanding action items from earlier meetings M48 and M50, and new action items from the last meeting M51 are listed in the tables that follow.

- 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 N3103)  
 Meeting 49, 2006-09-25/29, Tokyo, Japan; 2006-09-25/29 (document N3153)

### 15.1 Outstanding action items from meeting 48, 2006-04-24/27, Mountain View, CA, USA

Item	Assigned to / action (Reference resolutions in document N3104, and unconfirmed minutes in document N3103 for meeting 48 - with any corrections noted in section 3 of in the minutes of meeting 49 in document N3153).	Status
AI-48-7	<b>US national body (Asmus Freytag)</b>	
b.	To prepare updated Arabic Math proposal(s) based on documents N3085 to N3089. M48, M49, M50, M51 and M52 - in progress.	In progress.

### 15.2 Outstanding action items from meeting 50, 2007-04-23/27, Frankfurt-Am-Main, Germany

Item	Assigned to / action (Reference resolutions in document N3254, and unconfirmed minutes in document N3253 for meeting 50 - - with any corrections noted in section 3 in the minutes of meeting 51 in document N3353).	Status
AI-50-5	<b>Ad hoc group on principles and procedures (lead - Dr. V.S. UMaaheswaran)</b>	
	<i>To take note of and act upon the following items.</i>	
a.	Check and propose any updates to the P&P document arising from adopting the combined code table and enhanced names list format per document N3214. M51 and M52 - in progress.	In progress.

### 15.3 Outstanding action items from meeting 51, 2007-09-17/21, Hangzhou, China

Item	Assigned to / action (Reference resolutions in document N3354, and unconfirmed minutes in document N3353 for meeting 51 - with any corrections noted in section 3 in the minutes of meeting 52 in document N3454).	Status
AI-51-3	<b>Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)</b>	
	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:	
t.	<i>M51.21 (FCD of next edition):</i> With reference to documents N3274, N3275 and N3276, WG2 instructs its editor / convener to prepare: <ul style="list-style-type: none"> <li>c. a subdivision proposal for the next edition of the standard (see document N3360)</li> <li>d. text for the next edition of the standard incorporating the texts of Amendments 1 through Amendment 5</li> </ul> and submit the above along with the updated rationale document N3362 to SC2 for registration and balloting, with the following schedule: FCD: 2008-03 and FDIS: 2008-11.	In progress.
AI-51-4	<b>IRG Convener and IRG Editor (Dr. Lu Qin)</b>	
	To act on the resolution below.	
a.	<i>M51.35 (IRG Principles and Procedures):</i> With reference to item 3 in document N3283,	In progress.

Item	Assigned to / action (Reference resolutions in document N3354, and unconfirmed minutes in document N3353 for meeting 51 – with any corrections noted in section 3 in the minutes of meeting 52 in document N3454).	Status
	WG2 invites IRG to develop a set of principles and procedures to guide their work, with due considerations for the current WG2 Principles and Procedures.	
b.	M51.36 (IRG Annex S Review): WG2 endorses the IRG activity to review and feedback on Annex S of ISO/IEC 10646: 2003, without impacting already unified ideographs in the standard, taking into consideration the FCD ballot progression which starts in 2008-03.	In progress; start of FCD is delayed.
c.	M51.38 (IRG ideographs for Names): With reference to item 8 in document N3283, WG2 endorses the IRG activity to investigate and report back to WG2 on the issues and recommendations on ideographs for names of persons, places and the like.	In progress.
d.	M51.39 (IRG Urgent-Need ideographs): With reference to item 10 in document N3283, WG2 requests the IRG to report back to WG2 with a more complete plan related to the identified 12000 'urgent need' ideographs, along with a prioritization of this work with respect to other existing IRG work items.	In progress.
i.	IRG convener and IRG editor to assist the project editor in preparing the relevant source-reference data for Amd. 4, Amd. 5 and Amd. 6, the Ext. C charts for Amd. 5, and the multi-column unified CJK charts for the text of the second edition, respecting the schedules adopted in the relevant resolutions at this meeting.	In progress.
<b>AI-51-6</b>	<b>China (Mr. Chen Zhuang)</b>	
	To take note of and act upon the following items.	
c.	M51.31 (Simple Miao script): With reference to document N3335 on Simple Miao script, WG2 invites national bodies and liaison organizations to review and provide feedback to China and invites the Chinese national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	In progress.
<b>AI-51-7</b>	<b>Ireland (Mr. Michael Everson)</b>	
	To take note of and act upon the following items.	
c.	M51.25 (Psalter Pahlavi script): With reference to document N3286 containing a proposal on Psalter Pahlavi script, WG2 invites national bodies and liaison organizations to review and provide feedback on Psalter Pahlavi script to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	In progress.
d.	M51.26 (Book Pahlavi script): With reference to document N3294 on Book Pahlavi script, WG2 invites national bodies and liaison organizations to review and provide feedback to Ireland and invites the Irish national body to submit a revised proposal incorporating the feedback for consideration at WG2 meeting 52.	In progress.

#### 15.4 New 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, this document you are reading).	Status
<b>AI-52-1</b>	<b>Recording Secretary - Dr. V.S. UMaaheswaran</b>	
a.	To finalize the document N3454 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N3454.
b.	To finalize the document N3453 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N3453.
<b>AI-52-2</b>	<b>Convener - Mr. Mike Ksar</b>	
	To take note of and act upon the following items.	
a.	M52.28 (Roadmap snapshot): WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N3398) to the WG2 web site.	Completed; see document N3398
b.	To forward document N3396 from US national body as WG2 input to SC2, in response to N3418 regarding FCD 19757-7 from SC34.	Completed.
c.	To add to the agenda proposals carried over from meeting 52 (see action item AI-52-11-e on all national bodies later in this table).	
<b>AI-52-3</b>	<b>Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)</b>	

	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.	<p><b>M52.1 (Glyph changes):</b> WG2 accepts the following:</p> <ul style="list-style-type: none"> <li>Change the glyph for 19D1 NEW TAI LUE DIGIT ONE to the glyph shown on the top line in Example 1 in document <a href="#">N3380</a>;</li> <li>Insert a dashed box around the current dash-looking glyph for 1680 OGHAM SPACE MARK, based on document <a href="#">N3407</a>;</li> </ul> <p>Change the glyphs for 04A8, 04A9, 04BE and 04BF (Abkhasian letters) to those shown in document N3435 to reflect modern Abkhaz orthography preference.</p>	
b.	<p><b>M52.2 (Disposition of FPDAM5 ballot comments):</b> WG2 accepts the disposition of ballot comments on FPDAM5 in document <a href="#">N3475</a> and instructs its editor to prepare the final text of Amendment 5 incorporating the dispositions. The following changes are noted in particular:</p> <ol style="list-style-type: none"> <li>Tai Tham script is replaced based on recommendations (for 5 removals, 2 additions, several changes to names and shapes and rearrangement of the resultant set) in document <a href="#">N3379</a>, and addition of two characters at code positions 1A5D and 1A5E based on document <a href="#">N3384</a>;</li> <li>Removal of twenty Sri Lankan digits encoded at 0DE7 to 0DEF, 0DF5 to 0DFF, for further study;</li> <li>Removing AVESTAN SEPARATION POINT encoded at 10B38 (recommending using 2E31 WORD SEPARATOR MIDDLE DOT instead);</li> <li>Correcting the names of characters at the following code positions: <ol style="list-style-type: none"> <li>AAB7 to TAI VIET MAI KHIT</li> <li>11FD to HANGUL JONGSEONG KIYEOK-KHIEUKH</li> <li>A96E to HANGUL CHOSEONG RIEUL-KHIEUKH</li> <li>A973 to HANGUL CHOSEONG PIEUP-KHIEUKH;</li> </ol> </li> <li>Remove new text that was added in Amd. 5 referencing Unicode 5.2;</li> <li>Move collection 309 UNICOD 5.2 out of Amd. 5 to Amd. 6;</li> <li>Removing discrepancy in glyphs for Hangul;</li> <li>Replace Unicode 5.1 with UTR 45 as reference for U-source for ideographs;</li> <li>Replace the current note regarding IVS from being empty to a reference to the Ideographic Variation Database, at <a href="http://www.unicode.org/ivd/data/2007-12-14">http://www.unicode.org/ivd/data/2007-12-14</a>;</li> <li>Update the KX source references: 3ACE (KX source added back), 2304A, 23057, 2305C, 23063, 24799 (KX source added back for these 5 characters), and 26B20 (KX source value changed);</li> <li>Based on WG2 N3318 update the ARIB Ideograph encodings - with 3 CJK Unified Ideographs located at 9FC4-9FC6 (former FA6D moved to 9FC6), and 3 CJK Compatibility Ideographs located at FA6B-FA6D (former FA6E moved up to FA6D);</li> <li>Add to 9FC4 an additional source reference: TC-4A76;</li> <li>Change the annotations for initial, medial and final syllables to: <ul style="list-style-type: none"> <li>syllable-initial characters or initial consonants</li> <li>syllable-peak characters or medial vowels</li> <li>syllable-final characters or final consonants.</li> </ul> </li> </ol>	
c.	<p><b>M52.3 (Progression of Amendment 5):</b> WG2 resolves to include the glyph changes from resolution M52.1 into Amendment 5. WG2 instructs its project editor to forward the final text of Amendment 5 along with the disposition of comments document <a href="#">N3475</a> to the SC2 secretariat for an FDAM ballot. The final set of charts and names lists are in document <a href="#">N3465</a>. The unchanged target starting date for FDAM5 is 2008-07.</p>	
d.	<p><b>M52.6 (Meetei Mayek script):</b> Having resolved the question related to Dandas per resolution M52.5 above, WG2 accepts to encode in the standard 78 characters in code positions 1C80 to 1CAE and 1CB0 to 1CCE, in a new block 1C80-1CCF named Meetei Mayek, with their names and glyphs as shown in document <a href="#">N3470</a>.</p>	
e.	<p><b>M52.7 (Javanese script):</b> WG2 accepts to encode in the standard 91 characters in code positions A980 to A9CD, A9CF, A9D0 to A9D9, A9DE and A9DF in a new block A980-A9DF named Javanese, with their names and glyphs as shown in document <a href="#">N3319</a>.</p>	

f.	<b>M52.8 (Samaritan script):</b> WG2 accepts to encode in the standard 61 characters in code positions 0800 to 082D and 0830 to 083E, in a new block 0800-083F named Samaritan, with their names and glyphs as shown in document <a href="#">N3377</a> . This is a Right to Left script.	
g.	<b>M52.9 (Old Turkic script):</b> WG2 accepts to encode in the standard 71 characters in code positions 10C00 to 10C46 in a new block 10C00-10C4F named Old Turkic, with their names and glyphs as shown in document <a href="#">N3357</a> . This is a Right to Left script.	
h.	<b>M52.10 (Lisu script):</b> WG2 accepts to encode in the standard 48 characters in code positions A4D0 to A4FF in a new block A4D0-A4FF named Lisu, with their names (removing the word 'OLD' in them) and glyphs as shown in document <a href="#">N3424</a> .	
i.	<b>M52.11 (Nushu script):</b> WG2 accepts to encode in the standard 389 characters in code positions 1B000 to 1B184 in a new block 1B000-1B18F named Nushu, with their names and glyphs as shown in document <a href="#">N3462</a> . <b>(should have been N3463)</b>	
j.	<b>M52.12 (Rumi Numeral symbols):</b> WG2 accepts to encode in the standard 31 characters in code positions 10E60 to 10E7E, in a new block 10E60-10E7F named Rumi Numeral Symbols, with their names and glyphs as shown in document <a href="#">N3430</a> . <b>(Missing: It is a Right to Left set)</b>	
k.	<b>M52.13 (Myanmar additions for Khamti Shan):</b> WG2 accepts to encode in the standard 18 characters in code positions <ul style="list-style-type: none"> <li>• 109A to 109D (combining marks) in the Myanmar block,</li> <li>• AA60 to AA6D in a new block AA60-AA7F named Myanmar Extended-A, with their names from document <a href="#">N3436</a> and glyphs as shown in document <a href="#">N3423</a>.</li> </ul>	
l.	<b>M52.14 (Japanese TV Symbols):</b> WG2 accepts to encode in the standard 186 characters in code positions <ul style="list-style-type: none"> <li>• 2150 to 2152 and 2189 in the Number Forms block,</li> <li>• 269E, 269F, 26BD, 26BE, and 26C4 to 26FF in the Miscellaneous Symbols block,</li> <li>• 3244 to 324F, and 32FF in the Enclosed CJK Letters and Months block</li> <li>• 1F100 to 1F10A, 1F110 to 1F11F, 1F120 to 1F12D, 1F131, 1F13D, 1F13F, 1F142, 1F146, 1F14A to 1F14F, 1F157, 1F15F, 1F179, 1F17B, 1F17C, 1F17F, and 1F18A to 1F18D in a new block 1F100-1F1FF named Enclosed Alphanumeric Supplement, and,</li> <li>• 1F200, 1F210 to 1F230, and 1F240 to 1F248 in a new block 1F200-1F2FF named the Enclosed Ideographic Supplement,</li> </ul> with their names and glyphs as shown in document <a href="#">N3469</a> .	
m.	<b>M52.15 (Kaithi script):</b> WG2 accepts to encode in the standard 61 characters in code positions 11080 to 110BC, in a new block 11080-110CF named Kaithi, with their names and glyphs as shown in document <a href="#">N3389</a> .	
n.	<b>M52.16 (Old South Arabian script):</b> WG2 accepts to encode in the standard 32 characters in code positions 10A60 to 10A7F, in a new block 10A60-10A7F named Old South Arabian, with their names and glyphs as shown on page 10 of document <a href="#">N3395</a> . This is a Right to Left script.	
o.	<b>M52.17 (Tangut script):</b> WG2 accepts to encode in the standard 5910 characters in code positions 17000 to 18715, in a new block 17000-1871F named Tangut, with their names and glyphs as shown in document <a href="#">N3297</a> .	
p.	<b>M52.18 (Vedic additions):</b> WG2 accepts to encode in the standard 59 characters in code positions 1CD0 to 1CD3, 1CD5 to 1CE8, and 1CED to 1CF1 in a new block 1CD0-1CFF named Vedic Extensions, A8E0 to A8F7 in a new block A8E0-A8FF named Devanagari Extended, and 0900, 0955, 0973, 0974, 0979, and 097A in the current Devanagari block, with their glyphs as shown in document <a href="#">N3383</a> and their names from document <a href="#">N3456</a> .	
q.	<b>M52.19 (UCAS additions):</b> WG2 accepts to encode in the standard 39 characters in code positions 1400, 1677 to 167F in the existing UCAS block, and A9E0 to A9FC in a new block A9E0-A9FF named Unified Canadian Aboriginal Syllabics Extended-A, with their glyphs, and names from document <a href="#">N3427</a> .	

r.	<p><b>M52.20 (Character additions):</b> WG2 accepts to encode the following in the standard:</p> <ul style="list-style-type: none"> <li>a) 19DA NEW TAI LUE THAM DIGIT ONE with its glyph shown in the last line of Example 1 in document <a href="#">N3380</a>;</li> <li>b) 23E8 DECIMAL EXPONENT SYMBOL with its glyph shown in document <a href="#">N3386</a>, along with the user note 'Algol-60 token', based on the Russian standard GOST 10859-64;</li> <li>c) 20B6 LIVRE TOURNOIS SIGN with its glyph (L and T with a stroke across) in Figure 1 in document <a href="#">N3387</a>;</li> <li>d) 20B7 SPESMILO SIGN with its glyph (straight version on page 1) from page 1 of document <a href="#">N3390</a>;</li> <li>e) 20B8 TENGE SIGN with its glyph as from page 1 of document <a href="#">N3392</a>, and,</li> <li>f) The four characters: <ul style="list-style-type: none"> <li>v. 1DFD COMBINING ALMOST EQUAL TO BELOW,</li> <li>vi. 2C70 LATIN CAPITAL LETTER TURNED ALPHA,</li> <li>vii. 2C7E LATIN CAPITAL LETTER S WITH SWASH TAIL, and</li> <li>viii. 2C7F LATIN CAPITAL LETTER Z WITH SWASH TAIL</li> </ul> </li> </ul> <p>with their glyphs from document <a href="#">N3447</a>.</p>	
s.	<p><b>M52.21 (Tamil named sequences):</b> WG2 accepts to include in the standard the 289 Tamil named sequences proposed in document <a href="#">N3407</a>.</p>	
t.	<p><b>M52.22 (Disposition of PDAM6 ballot comments):</b> WG2 accepts the disposition of ballot comments on PDAM6 in document <a href="#">N3476</a> and instructs its editor to prepare the final text of Amendment 6 incorporating the dispositions, and include all the changes and additions accepted in resolutions M52.6 to M52.21 above.</p>	
u.	<p><b>M52.23 (Progression of Amendment 6):</b> WG2 instructs its project editor to forward the final text of Amendment 6 along with the disposition of comments document N3476 to the SC2 secretariat for a second PDAM ballot. The final set of charts and names lists are in document <a href="#">N3466</a>. The revised starting dates for this work item are: 2nd PDAM 2008-05, FPDAM 2008-11 and FDAM 2009-06.</p>	
v.	<p><b>M52.24 (FCD of next edition):</b> WG2 instructs its project editor to prepare a working draft of the text for the next edition of the standard updated to include the text of Amendment 6 for review at WG2 meeting M53. The new schedule is WD 2008-09, FCD: 2008-11 and FDIS: 2009-06.</p>	
AI-52-4	<p><b>IRG Convenor and IRG Editor (Dr. Lu Qin)</b></p>	
	<p><i>To take note of and act upon the following items:</i></p>	
a.	<p><b>M52.26 (Multiple column format for Ideograph charts):</b> WG2 accepts the dense formats for multiple columns as described in document <a href="#">N3448</a> as follows:</p> <ul style="list-style-type: none"> <li>• Format from page 5 for the main CJK Unified Ideographs block</li> <li>• From page 6 for CJK Extension A block</li> <li>• From page 7 for CJK Extension B and Extension C block.</li> </ul> <p>WG2 further requests IRG to use these formats in preparing the multiple column formats in cooperation with the project editor with possible updates if necessary.</p>	
b.	<p><b>M52.27 (IRG matters):</b> WG2 requests IRG</p> <ul style="list-style-type: none"> <li>a) to prepare and present plans for their work on 'Annex S revision' and 'IRG Principles and Procedures'</li> <li>b) to study and report on the request regarding Ideographic Description Sequences (IDS) from document <a href="#">N3459</a> (Unicode Liaison Report) towards inclusion in the standard</li> <li>c) to review and report on request for HKSCS extensions in document <a href="#">N3445</a></li> </ul> <p>for consideration at WG2 meeting 53.</p>	
c.	<p>To investigate and report on the availability of outline fonts for producing the CJK multiple column charts – including CJK Ext. C.</p>	
AI-52-5	<p><b>Ad hoc group on principles and procedures (lead - Dr. V.S. UMaaheswaran)</b></p>	
	<p><i>To take note of and act upon the following items.</i></p>	
a.	<p><b>M52.4 (Additions to P&amp;P):</b> WG2 accepts the request to include the list of experts contacted in proposals to WG2, to the Principles and Procedures document proposed in document <a href="#">N3441</a>.</p>	<p>Completed; see document <a href="#">N3452</a>.</p>

	b. <b>M52.5 (Principles for Dandas):</b> WG2 adopts the principles guiding the encoding of Dandas in Brahmic scripts from document <a href="#">N3457</a> , 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.	Completed; see document <a href="#">N3452</a> .
<b>AI-52-6</b>	<b>China (Mr. Chen Zhuang)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. To provide revised document N3463 in six weeks after this meeting, to be able to act on Resolution M52.11 (Nushu script): WG2 accepts to encode in the standard 389 characters in code positions 1B000 to 1B184 in a new block 1B000-1B18F named Nushu, with their names and glyphs as shown in document <a href="#">N3462</a> . ( <b>should have been N3463</b> )	Completed; see document <a href="#">N3463</a> .
<b>AI-52-7</b>	<b>Ireland (Mr. Michael Everson)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. <b>M52.5 (Principles for Dandas):</b> WG2 adopts the principles guiding the encoding of Dandas in Brahmic scripts from document <a href="#">N3457</a> , 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.	
<b>AI-52-8</b>	<b>Japan (Mr. Masahiro Sekiguchi)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. Review and feedback on two proposed Kana characters with reference to documents <a href="#">N3388</a> and <a href="#">N3394</a> for meeting M53.	
<b>AI-52-8</b>	<b>Korea (RoK) (Prof. Kyongsok Kim)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. To prepare a contribution elaborating on the differences between Unicode and ISO/IEC 10646 reported in document <a href="#">N3422</a> , and to gather and report on feedback on this document from national bodies and liaison organizations	
<b>AI-52-9</b>	<b>USA (Ms. Deborah Anderson)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. Coordinating with Mr. Michael Everson, to contact the Abkhaz user community on the alternatives for PE with descender versus PE with hook discussed at the meeting with reference to documents on Abkhaz – documents <a href="#">N3429</a> and <a href="#">N3435</a> .	
<b>AI-52-10</b>	<b>Unicode Consortium (Mr. Peter Constable)</b>	
	<i>To take note of and act upon the following items.</i>	
	a. Is invited to prepare a contribution regarding the concept of using standardized IVSs instead of encoding more compatibility ideographs for discussion at a future WG2 meeting (reference US ballot comments T.3 on FPDAM5 in document <a href="#">N3413</a> , and document <a href="#">N3459</a> ).	
<b>AI-52-11</b>	<b>All national bodies and liaison organizations</b>	
	<i>To take note of and act upon the following items.</i>	
	a. <b>M52.25 (Multi-Letter Jamo characters):</b> WG2 rejects the proposal in document <a href="#">N3458</a> to add 9 multi-letter Jamo characters based on the feedback in document <a href="#">N3464</a> and discussion at this meeting.	
	b. <b>M52.26 (Multiple column format for Ideograph charts):</b> WG2 accepts the dense formats for multiple columns as described in document <a href="#">N3448</a> as follows: <ul style="list-style-type: none"> <li>• Format from page 5 for the main CJK Unified Ideographs block</li> <li>• From page 6 for CJK Extension A block</li> <li>• From page 7 for CJK Extension B and Extension C block.</li> </ul> WG2 further requests IRG to use these formats in preparing the multiple column formats in cooperation with the project editor with possible updates if necessary.	

c.	<b>M52.29 (Future meetings):</b> WG 2 meetings: Meeting 53 - 2008-10-13/17, Hong Kong Polytechnic University, HKSAR Meeting 54 - 2009-04-20/24, Bay Area (pending confirmation), USA; Toronto, Canada (alternate) Meeting 55 - 2009-10-26/30, Tokushima, Japan (with SC2 plenary) Meeting 56 - Spring 2010, Bay Area (pending confirmation), USA Meeting 57 - Fall 2010, Korea (pending confirmation)	
d.	To review and feedback to Korea on document <a href="#">N3422</a> including the Korean standard KS X1026-1.	
e.	To review and feedback the following proposals for consideration at the next meeting M53: <ul style="list-style-type: none"> <li>a. Proposal to add two Kana characters with reference to documents <a href="#">N3388</a> and <a href="#">N3394</a>.</li> <li>b. Batak script proposal with reference to documents <a href="#">N3293</a>, <a href="#">N3320</a> and <a href="#">N3445</a>.</li> <li>c. Mandaic script proposal with reference to document <a href="#">N3373</a>.</li> <li>d. Manichaeian script proposal with reference to document <a href="#">N2544</a></li> <li>e. Egyptological Yod and Cyrillic breathings proposal with reference to documents <a href="#">N3382</a>, <a href="#">N3393</a>, <a href="#">N3431</a> and <a href="#">N3432</a></li> <li>f. Sorang Sompeng script with reference to documents <a href="#">N1957</a> and <a href="#">N3410</a></li> <li>g. Varang Kshiti script with reference to documents <a href="#">N1958</a> and <a href="#">N3411</a></li> <li>h. Last resort pictures in plane 14 with reference to document <a href="#">N3412</a></li> <li>i. Naxi Dongba pictograph with reference to documents <a href="#">N3425</a> and <a href="#">N3442</a></li> <li>j. 109 more Unified Canadian Aboriginal Syllabics with reference to document <a href="#">N3437</a></li> <li>k. Chakma script with reference to document <a href="#">N3428</a>.</li> <li>l. 22 additional Arabic pedagogical characters with reference to document <a href="#">N3460</a></li> <li>m. Old Yi script with reference to document <a href="#">N3288</a>.</li> </ul>	

*End of Minutes*