

**Universal Multiple-Octet Coded Character Set  
(UCS)**

ISO/IEC JTC 1/SC 2 N4497R  
ISO/IEC JTC 1/SC 2/WG 2 N4772R  
Date: 2016-10-04

<b>Source:</b> WG 2 meeting 65, Adobe, San Jose, CA, USA; 2016-09-26/30
<b>Title:</b> Recommendations from WG 2 meeting 65 (revised)
<b>Action:</b> For approval by SC 2 and for information to WG 2
<b>Status:</b> Adopted at meeting 65 of WG 2
<b>Distribution:</b> ISO/IEC JTC 1/SC 2 and WG 2

Experts accredited by the national bodies or liaison organizations for Canada, IRG, Japan, SEI - UC Berkeley (Liaison), the Unicode Consortium (Liaison), and the USA were present when the following recommendations were adopted (see attached attendance list). *All the recommendations were accepted without any objection.*

*Note: This is a revision to document N4772 which was adopted at the meeting. Recommendation **M65.19 (Small Seals script)** was missed during preparation and adoption of the meeting recommendations, and at the request of the authors of the proposal, is added in this revision. It is understood that NOT all the experts who were present while these recommendations were adopted may be in agreement to add this missed recommendation.*

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*Character count **120585** in 4th edition  
**101** additions in DAM1 to the 4th edition  
**7278** in FDAM2 (end of meeting 64)  
Character count prior to additions to 5<sup>th</sup> edition **127964**  
**4833** additions in 2<sup>nd</sup> CD of 5<sup>th</sup> edition (end of meeting 64)  
Character count **132797** (total allocated till end of meeting 64)*

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**Observation M65.01 (Additions in 5<sup>th</sup> edition since meeting 64):**

WG2 notes that document N4728 lists **8447** character additions over and above 4<sup>th</sup> edition plus its two amendments, as sent out for DIS ballot. This is an increase in the count from **4833** noted as part of CD for 5<sup>th</sup> edition at the end of meeting 64, an increase of **3614** characters.

**Count: 132797+3614=136411 in DIS for 5<sup>th</sup> edition**

**Observation M65.02 (Additions in Amendment 1 to 5<sup>th</sup> edition):**

WG2 also notes that the balloted text for PDAM1 to the 5<sup>th</sup> edition, per document N4729, added **359** characters.

**Count in Amd. 1 to 5<sup>th</sup> edition: 359**

**Recommendation M65.03 (Hentaigana)**

WG2 recommends that SC2 accept the repertoire of **285** Hentaigana characters from document N4732 (Hentaigana\_Revised\_Repertoire-201606.pdf), and encode the first 254 of these in code points 1B002 to 1B0FF in the Kana Supplement block, and the remaining 31 characters at code points 1B100...1B11E, in a new block named Kana Extended-A (in the range 1B100..1B12F), for inclusion in Amendment 1 to the 5<sup>th</sup> edition. WG2 also recommends adding the character name alias 'HENTAIGANA LETTER E-1' to 1B001 as proposed in document N4731.

**Count in Amd. 1 to 5<sup>th</sup> edition: 359+285=644**

**Recommendation M65.04 (Disposition of ballot comments of PDAM-1 to 5<sup>th</sup> Edition):**

WG2 recommends that SC2 accept the disposition of PDAM-1 ballot comments in document N4767. The following significant changes are noted:

- a. Dropping the word 'ASTROLOGICAL' in the character names for the 4 Astrological Symbols for Pluto: 2BD4...2BD7.
- b. Dropping the word 'ASTROLOGICAL PLANET' in the character names for the 8 Uranian Astrological symbols: 2BE0...2BE7.
- c. Correcting the name for 2E4B to 'TRIPLE DAGGER'
- d. Removing 13430 EGYPTIAN HIEROGLYPH LIGATURE JOINER, moving characters at 13431...13432 up by one code position to 13430..13431, naming the column 13430...1343F as a new block 'Egyptian Hieroglyphs Format Controls', and, moving the start of the Egyptian Hieroglyphs Extended-A block to 13440.
- e. Adding Tangut ideographs 187ED...187F1 to TangutSrc.txt file.

**Recommendation M65.05 (Khitan Small Script)**

WG2 accepts the recommendations of the ad hoc on Khitan Small Script, in document [N4768](#), and recommends that SC2 accept to encode the script in a new block 18B00...18CFF named 'Khitan Small Script' and populate it with 484 characters with their names, code positions and glyphs based on document [N4771](#).

Count in Amd. 1 to 5<sup>th</sup> edition: 643+484=1127

**Recommendation M65.06 (Xiangqi game symbols)**

WG2 recommends that SC2 accept the set of 30 Xiangqi game symbols (circled ideographs) in the Enclosed Ideographic Supplement block, with their names, code positions and glyphs based on document [N4766](#).

Count in Amd. 1 to 5<sup>th</sup> edition: 1127+30=1157

**Recommendation M65.07 (Japanese core Kanji collection)**

WG2 recommends that SC2 accept to add a new collection named 'Japanese core Kanji' consisting of 2136 ideographs to add to clause A.4 CJK Collections, along with the JapaneseCoreKanji.txt file, based on document [N4744](#).

**Recommendation M65.08 (Additional changes in Amendment 1 to 5<sup>th</sup> edition):**

WG2 recommends that SC2 accept the following additional changes in the Amendment 1 to the 5<sup>th</sup> edition of the standard:

- a. Add the following 4 circled characters in the Geometric Shapes Extended block (with their glyphs from document [N4719R](#)):  
1F7D5 CIRCLED TRIANGLE  
1F7D6 NEGATIVE CIRCLED TRIANGLE  
1F7D7 CIRCLED SQUARE  
1F7D8 NEGATIVE CIRCLED SQUARE
- b. Add the following 3 Medieval punctuation marks in Supplemental Punctuation block.  
2E4C MEDIEVAL COMMA (with its glyph from document [L2/16-220](#))  
2E4D PARAGRAPHUS MARK, and, 2E4E PUNCTUS ELEVATUS MARK (with their glyphs from document [L2/16-235](#))
- c. Move up characters 2BD4...2BD7 by one code position to 2BD3...2BD6 in Miscellaneous Symbols and Arrows block.
- d. Add following 9 astrological symbols (with their glyphs from document [L2/16-080R](#)) in Miscellaneous Symbols and Arrows block:  
2BD7 TRANSPLUTO  
2BD8 PROSERPINA  
2BD9 ASTRAEA  
2BDA HYGIEA  
2BDB PHOLUS  
2BDC NESSUS  
2BDD WHITE MOON SELENA  
2BDE BLACK DIAMOND ON CROSS  
2BDF TRUE LIGHT MOON ARTA
- e. Add following 4 half-star symbols (with their glyphs from document [N4747](#)) in Miscellaneous Symbols and Arrows block:  
2BE8 LEFT HALF BLACK STAR  
2BE9 RIGHT HALF BLACK STAR  
2BEA STAR WITH LEFT HALF BLACK  
2BEB STAR WITH RIGHT HALF BLACK
- f. Add 0A76 GURMUKHI ABBREVIATION SIGN (with its glyph from document [L2/16-209R](#)) in Gurmukhi block

Count in Amd. 1 to 5<sup>th</sup> edition: count 1157+21=1178

**Recommendation M65.09 (Progression of Amendment 1 to the 5<sup>th</sup> edition):**

WG2 recommends that its project editor prepares the final text of Amendment 1 to the 5<sup>th</sup> edition of the standard, which will include the changes arising from recommendations **M65.03** to **M65.08** above, along with the final disposition of comments (document [N4767](#)), and forward it to the SC2 secretariat for processing as a PDAM 1.2 ballot. The draft code charts are in document [N4770](#).

The target starting dates are modified to PDAM 1.2 2016-12, DAM 1 2017-04.

Count: 1178 additions in Amendment 1

**Recommendation M65.10 (Mongolian ad hoc report):**

WG2 accepts the Mongolian ad hoc report in document N4769, and recommends to SC2 that the project editor prepares the recommended updates to the Standardized Variation Sequences for Mongolian in the standard. At the discretion of the project editor, these changes could be considered as part of disposition of ballot comments on the DIS of the 5<sup>th</sup> edition (which is currently under ballot).

**Recommendation M65.11 (Project subdivision for Amendment 2 to the 5th edition of the standard):**

Anticipating the need for encoding additional scripts and characters that will have mature proposals prior to the next SC2 meeting, WG2 recommends to its convener and project editor to generate a new project subdivision proposal for a second amendment to the 5<sup>th</sup> edition of the standard, and submit it to SC2 for approval. WG2 notes that adding 'CJK Extension G characters' is a candidate for inclusion in Amendment 2. Tentative target starting dates for Amendment 2 to the 5<sup>th</sup> edition are: PDAM2 2017-07, DAM2 2017-12.

**Recommendation M65.12 (Shuishu script):**

WG2 invites the authors of document N4758 to revise their proposal on the Shuishu script taking into account the feedback received at this meeting, working with other experts interested in this script.

**Recommendation M65.13 (Primitive Scripts of South West China):**

WG2 invites the authors of document N4759 to revise their proposal on the Primitive Scripts of South West China taking into account the feedback received at this meeting, working with other experts interested in this script.

**Recommendation M65.14 (Request from SAT Daizokyo for Cat. C liaison):**

WG2 welcomes the liaison relationship with SAT (as requested in document N4714) and accepts the offer from Dr. Ken Lunde to be the liaison representative to SAT from WG2. WG2 recommends that SC2 accept the request, and process it further.

**Recommendation M65.15 (Future meetings):**

WG2 endorses the following schedule for future meetings:

WG2 Meeting 66 - 2017-09-25/29, Hohhot, Inner Mongolia, China, (co-located with SC2).

(Date to be confirmed)

WG2 Meeting 67 - 2018-09 or 10 (London, UK).

IRG Meeting 49 – San Jose, CA, USA (Adobe), 2017-10-16/20.

**Appreciation M65.16 (Appreciation to DKUUG for web site support):**

WG2 thanks DKUUG and its staff for its continued support of the web site for the older WG2 documents.

**Appreciation M65.17 (Appreciation to Unicode Consortium for web site support):**

WG2 thanks the Unicode Consortium and its staff for providing the new web site and its support for WG2.

**Appreciation M65.18 (Appreciation to Host):**

WG2 thanks the national body of USA (INCITS) for hosting the meeting. WG 2 expresses its appreciation to the Unicode Consortium and Adobe Systems Inc. and their staff, in particular to Ms. Ellen Mastro and Dr. Ken Lunde, for arranging the meeting facilities and for the administrative support. WG2 also expresses its appreciation to the Unicode Consortium for their kind hospitality.

*(The following is added in this revision.)*

**Recommendation M65.19 (Small Seals script):**

WG2 invites the authors of document N4688 to revise their proposal on the Small Seals script, taking into account the feedback documents received prior to this meeting and the discussion at this meeting, working with other experts interested in this script. The base for the encoding proposal is the Tenghuaxie version of the book Shuowen Jiezi. WG2 also recommends that an ad hoc meeting be conducted before the next WG2 meeting (#66).

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*Character count prior to additions to 5<sup>th</sup> edition***127964**

*8447 additions in DIS of 5<sup>th</sup> edition (prior to and at end of meeting 65)*

*1178 additions in PDAM 1.2 (end of meeting 65)*

*Character count* **137589***(total allocated till end of meeting 65)*

**Attendance List**

**JTC1/SC2/WG2 Meeting 65, Adobe, San Jose, CA, USA; 2016-09-26/30**

The following 29 experts and guests accredited by 5 national bodies and 3 liaison organizations were present at different times during the meeting.

<b>Name</b>	<b>Accreditation</b>	<b>Affiliation</b>
Shuichi TASHIRO	.Acting SC 2 Chairman	Information-technology Promotion Agency
Ayuko NAGASAWA	.Acting SC 2 Secretariat	IPSJ/ITSCJ
Qin LU	.IRG rapporteur	Hong Kong Polytechnic University
Chui-Hsing CHIU	.TCA (Cat.C Liaison)	Bureau of Standards, Ministry of Economic Affairs
Lin Mei WEI	.TCA (Cat.C Liaison)	Chinese Foundation for Digitization Technology
Suh-Chyin CHUANG	.TCA (Cat.C Liaison)	Bureau of Standards, Ministry of Economic Affairs
Michel SUIGNARD	.WG 2 Convenor; USA	Unicode Inc.
Alain LABONTÉ	Canada	Independent
V.S. (Uma) UMAMAHESWARAN	Canada	IBM Canada
Chaolin PAN	China	Guizhou Minzu University
Ching-Ju (Daisy) LAI	China	SIL International
Jinshi WEI	China	Archives of Sandu County
Liming ZHAO	China	Tsinghua University
Nashunwuritu	China	Inner Mongolia University
Qinjun YAO	China	Shui Scripts Research Center of Libo County
Yingzhe WU	China	Inner Mongolia University
Zhuang CHEN	China	CESI
Michael EVERSON	Ireland	Evertype
Tatsuo KOBAYASHI	Japan	Meiji University
Wataru TAKAGI	Japan	Hitachi Ltd.
Craig CUMMINGS	USA	VMware
Ken LUNDE	USA	Adobe Systems Inc.
Kenneth WHISTLER	USA	Unicode Inc.
Steven LOOMIS	USA	IBM Corporation
Isabelle ZAUGG	USA (Guest)	American University
Miryam KOFMAN	USA (Guest)	IBM Corporation
Ou RILEKE	USA (Guest)	Greyson Translation Service
Deborah ANDERSON	USA, UC Berkeley (Cat.C Liaison)	University of California, Berkeley
Lisa MOORE	USA, Unicode (Cat.A Liaison)	Unicode Inc.