

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

ISO/IEC JTC 1/SC 2 N\_\_\_\_\_  
ISO/IEC JTC 1/SC 2/WG 2 N4554  
Date: 2014-02-28

**Source:** WG 2 meeting 62, Adobe, San Jose, CA, USA; 2014-02-24/28  
**Title:** Resolutions of WG 2 meeting 62  
**Action:** For approval by SC 2 and for information to WG 2  
**Status:** Adopted at meeting 62 of WG 2  
**Distribution:** ISO/IEC JTC 1/SC 2 and WG 2

Experts from Canada, China, Finland, IRG, Japan, JTC1/SC35 (Liaison), SEI - UC Berkeley (Liaison), TCA (Liaison), the Russian Federation, the Unicode Consortium (Liaison), and the USA were present when the following resolutions were adopted (see attached attendance list).

*Character count 110181 in 3rd edition*  
*1769 additions in Amd. 1 to 3<sup>rd</sup> edition*  
*1070 additions in Amd. 2 to 3<sup>rd</sup> edition*  
*Character count 113020 (total prior to start of 4th edition)*  
*7565 additions in DIS of 4<sup>th</sup> edition*  
*73 (corrected from 72) additions in Amd. 1 to 4th edition*  
*Character count 120658 (total allocated to date)*

**RESOLUTION M62.01 (Disposition of ballot comments and progression of 4th edition):**

**Unanimous**

WG2 accepts the disposition of ballot comments on DIS 4th edition in document N4564. The following significant changes are noted:

- a. Addition of 12399 CUNEIFORM SIGN U U, with its glyph from document N4493, to the 'Cuneiform' block.
- b. Shortening the block 'LATIN EXTENDED-E' to end at AB6F (from current ABBF), and adjusting the block description and definition of collection 165 LATIN EXTENDED-E accordingly.
- c. Changing the name for 2B81 in the 'Miscellaneous Symbols and Arrows' block to:  
'UPWARDS TRIANGLE-HEADED ARROW LEFTWARDS OF DOWNWARDS TRIANGLE-HEADED ARROW',  
from:  
'UPWARDS TRIANGLE-HEADED ARROW LEFTWARDS DOWNWARDS OF TRIANGLE-HEADED ARROW'.
- d. Change the source reference for CJK Extension C ideograph 2A92F from GZJW-00827 to GCY-0665.03 along with change in the glyph, based on document N4558.
- e. Siddham changes:
  - Moving four SIDDHAM characters from 115E0-115E3 to 115D8-115DB with the following new names:  
(old 115E0) 115D8 SIDDHAM LETTER THREE-CIRCLE ALTERNATE I  
(old 115E1) 115D9 SIDDHAM LETTER TWO-CIRCLE ALTERNATE I  
(old 115E2) 115DA SIDDHAM LETTER TWO-CIRCLE ALTERNATE II  
(old 115E3) 115DB SIDDHAM LETTER ALTERNATE U
  - Moving two 'Siddham' letter variants at 115E4 and 115E5 from the 4th edition into Amendment 1 for final technical review, with the following new names and code positions:  
(old 115E4) 115DC SIDDHAM VOWEL SIGN ALTERNATE U  
(old 115E5) 115DD SIDDHAM VOWEL SIGN ALTERNATE UU

*count: 7565+1-2 = 7564 additions in 4th edition*  
*count: 73+2 = 75 additions in Amendment 1*

**RESOLUTION M62.02 (Additional changes in 4th edition):**

**Unanimous**

WG2 accepts the following additional changes to the 4th edition:

- a. Addition of 20BD RUBLE SIGN with its glyph as shown in N4529 in the 'Currency Symbols' block.
- b. Capture annotation recommendations in the Siddham ad hoc report in document N4560.
- c. Insert ", character name aliases" after "For character names" in the second paragraph in 'Clause 24.5.4 Determining uniqueness'.
- d. Add five Manichaean Standardized Variation Sequences, 10AC5 FE00, 10AC6 FE00, 10AD6 FE00, 10AD7 FE00, and 10AE1 FE00, based on documents N4029 and N4546.

*count: 7564+1= 7565 additions in 4th edition*

**RESOLUTION M62.03 (Progression of 4th edition):**

WG2 instructs its project editor to prepare and to forward the final text of the 4th edition of the standard, which will include the changes arising from resolution M62.01 and M62.02 above, along with the final disposition of comments (document N4564) to the SC2 secretariat for processing as an FDIS ballot. The code charts for additions in the 4th edition will be in document N4571. The target starting dates are unchanged: FDIS 2014-03.

*count: 7565+2-2 = 7565 additions in FDIS of 4th edition*

**RESOLUTION M62.04 (Amendment 1 additions since meeting 61):****Unanimous**

WG2 notes that in addition to the total of **73** characters listed under resolutions M61.11 and M61.12 (in document N4404) the following additions were included in the PDAM1 ballot document N4484:

- a. The following **six** characters:
  - 08B3 ARABIC LETTER AIN WITH THREE DOTS BELOW
  - 08B4 ARABIC LETTER KAF WITH DOT BELOW
  - 08E3 ARABIC TURNED DAMMA BELOW
  - 0AF9 GUJARATI LETTER ZHA
  - FE2E COMBINING CYRILLIC TITLO LEFT HALF
  - FE2F COMBINING CYRILLIC TITLO RIGHT HALF
- b. A new block named 'Nushu' in the range 1B100-1B2FF, populated with **397** characters in code positions 1B100-1B28C.

**count: 75+403 = 478 additions in Amendment 1**

**RESOLUTION M62.05 (Disposition of ballot comments of PDAM1 to 4th edition):****Unanimous**

WG2 accepts the disposition of PDAM1 ballot comments in document N4565. The following significant changes are noted:

- a. Moving of 1137D GRANTHA SIGN COMBINING ANUSVARA ABOVE to 11300 in the 'Grantha' block.
- b. Deletion of 'Nushu' script from Amendment 1, moving it to a future Amendment, with the following modifications recommended in the Nushu ad hoc report in document N4561:
  - Changing to a 'rule based' naming system, such as NUSHU CHARACTER-<codepoint>
  - Presenting the charts with an improved font, and,
  - Reducing the block range from 1B100-1B2FF to 1B100-1B28F.

**count: 478-397 = 81 additions in Amendment 1**

**count: 397 for future Amendment**

**RESOLUTION M62.06 (Additional changes in Amendment 1):****Unanimous**

WG2 accepts the following additional changes in Amendment 1:

- a. Per recommendation in document N4544, remove Note 2 in sub-clause 23.1 (Note 1 may have to be renumbered to just a 'Note', as a consequence).
- b. Based on concerns expressed on naming of Tamil fractions in document N4477, move the following Tamil characters that were added in Amendment 1, to a future Amendment for further technical review.
  - the **six** characters 0BDF, 0BFB-0BFF in the 'Tamil' block
  - the 'Tamil Supplement' block 11FC0-11FFF, and the **forty-nine** characters 11FC0-11FEF and 11FFF in that block.
- c. Since the Malayalam fractions are somewhat related, move the **ten** Malayalam fraction characters 0D58-0D5E and 0D76-0D78 that were added in Amendment 1 also to a future Amendment for further technical review.
- d. Delete 0D4F MALAYALAM LETTER CHILLU LLL from Amendment 1 (and add it to a future Amendment to be considered with other MALAYALM CHILLU letters being accepted for coding).
- e. Move 1032F OLD ITALIC LETTER TTE from Amendment 1 to a future Amendment for further technical review.

**count: 81-67 = 14 additions in Amendment 1**

**count: 397+67=464 for future Amendment**

**RESOLUTION M62.07 (Cherokee additions):****Unanimous**

WG2 accepts to

- a. Add the following **7** characters to the Cherokee block:
  - 13F5 CHEROKEE LETTER MV
  - 13F8 CHEROKEE SMALL LETTER YE
  - 13F9 CHEROKEE SMALL LETTER YI
  - 13FA CHEROKEE SMALL LETTER YO
  - 13FB CHEROKEE SMALL LETTER YU
  - 13FC CHEROKEE SMALL LETTER YV
  - 13FD CHEROKEE SMALL LETTER MV,
 with their glyphs from document N4537.
- b. Create a new block named Cherokee Supplement in the range AB70 to ABBF in the BMP, and populate it with **80** characters in code positions AB70 to ABBF, with their names and glyphs from document N4537.

**count: 14+87 = 101 additions in Amendment 1**

**RESOLUTION M62.08 (Progression of Amendment 1 to the 4th edition):****Unanimous**

WG2 instructs its project editor to prepare and to forward the final text of Amendment 1 to the 4th edition of the standard, which will include the changes arising from resolutions **M62.01**, and **M62.05** to **M62.07** above, along with the final disposition of comments (document N4565) to the SC2 secretariat for processing as a DAM ballot. The final code charts will be in document N4568. The target starting dates are modified to: DAM: 2014-04, FDAM: 2014-11.

**count: 101 additions in DAM1 to the 4th edition**

**RESOLUTION M62.09 (Character additions for a future amendment to the 4th edition)****Unanimous**

WG2 accepts the following in a future amendment to the 4th edition of the standard:

- a. Malayalam characters:
  - Add 0D54 MALAYALAM LETTER CHILLU M (with its glyph from document N4540).
  - Add 0D55 MALAYALAM LETTER CHILLU Y (with its glyph from document N4539)
  - Move 0D4F MALAYALAM LETTER CHILLU LLL (moved from Amendment 1 to a future amendment in resolution M62.06 item d, above) to new code position 0D56
  - Add 0D65 MALAYALAM SIGN PARA (with its glyph from document N4538).
- b. Add 2E43 DASH WITH LEFT UPTURN (with its glyph from document N4534) in the 'Supplemental Punctuation' block.
- c. Add **Four** Arabic characters for Bravanese, in the 'Arabic Extended-A' block:
  - 08B6 ARABIC LETTER BEH WITH SMALL MEEM ABOVE
  - 08B7 ARABIC LETTER PEH WITH SMALL MEEM ABOVE
  - 08B9 ARABIC LETTER REH WITH SMALL NOON ABOVE
  - 08BA ARABIC LETTER YEH WITH TWO DOTS BELOW AND SMALL NOON ABOVE
 with their glyphs from document N4498.
- d. Add **Three** symbols in the 'Miscellaneous Technical' block:
  - 23FB POWER SYMBOL
  - 23FC POWER ON-OFF SYMBOL
  - 23FD POWER ON SYMBOL
 with their glyphs from document N4535.
- e. Add 1F32D BLACK WANING CRESCENT MOON in the 'Miscellaneous Symbols and Pictographs' block, with its glyph from document N4535.
- f. Add A7AE LATIN CAPITAL LETTER SMALL CAPITAL I, in the 'Latin Extended-D' block, with its glyph from document N4549.

**count: 464+13=477 for future Amendment**

**RESOLUTION M62.10 (Marchen script):****Unanimous**

WG2 accepts to create a new block named 'Marchen' in the range 11C70 to 11CBF, and populate it with **69** characters in code positions 11C70 to 11C8F and 11C92 to 11CB6, with their names and glyphs as shown in document N4491.

**count: 477+69=546 for future Amendment**

**RESOLUTION M62.11 (Zanabazar Square script):****Unanimous**

WG2 accepts to create a new block named 'Zanabazar Square' in the range 11A00 to 11A4F, and populate it with **69** characters in code positions 11A00 to 11A4F, with their names and glyphs as shown in document N4541. Some of the characters are combining marks.

**count: 546+69=615 for future Amendment**

**RESOLUTION M62.12 (Tangut script):****Unanimous**

WG2 accepts to create:

- a. A block named 'Tangut' in the range 17000 to 187EF, and populate the 'Tangut' block with **6125** ideographs in code positions 17001 to 187ED, with the presentation of charts and associated information in a form similar to CJK ideograph charts, following the methodology detailed in document N4543
- b. A block named Ideographic Symbols and Punctuation in the range 16FE0 to 16FFF, and populate with **one** character 16FE0 TANGUT REPETITION MARK

with their glyphs based on documents N4522 and the charts in document N4525.

**count: 615+6126=6741 for future Amendment**

**RESOLUTION M62.13 (Addition of sub-clause on presentation of updated ideographic sources):**

**Canada, China, Finland, IRG, JTC1/SC35 (Liaison), SEI - UC Berkeley (Liaison), TCA (Liaison), the Russian Federation, the Unicode Consortium (Liaison), and the USA accepted. Japan abstained.**

**WG2 accepts the proposed text for the sub-clause 23.2, from document N4544.**

**RESOLUTION M62.14 (Project subdivision for future second amendment to the 4th edition):****Unanimous**

WG2 instructs its convener and project editor to create a project subdivision proposal document (will be document N4570) for creation of a second amendment to ISO/IEC 10646 4<sup>th</sup> edition, to include the items moved from Amendment 1 in resolution in resolution M62.06, and the items accepted in resolutions M62.09 and M62.13 above. The schedule for the Amendment will be determined by the project editor. WG2 notes that Bhaiksuki script (revised), and Mongolian Birga characters (from document N4542), are some additional candidates for inclusion in the text of Amendment 2.

**count: 6741 for future Amendment 2**

**RESOLUTION M62.15 (Urgently needed ideographs):****Unanimous**

WG2 instructs the IRG to add the missing urgently needed character, identified as serial number 6774, requested by China in document N4508 to the repertoire of CJK Extension F.

**RESOLUTION M62.16 (Availability of enquiry drafts for WG2 experts):****Unanimous**

Access to enquiry drafts are now controlled via the ISO/IEC "OpenText" content server, with many WG2 members not having sufficient rights to access these drafts in the lists of JTC1/SC2 N-documents on that system. This results in WG2 members not having access to documents that need to be discussed in ballot resolution meetings. Therefore, WG2 requests that SC2 and its secretariat explore options to enable WG2 members to have access to enquiry draft documents for review and to facilitate consideration of these drafts and ballot responses at WG2 meetings.

**RESOLUTION M62.17 (Principles and Procedures):****Unanimous**

WG2 instructs its convener to post the updated Principles and Procedures (in document N4502) to the WG2 web site and communicate the same to SC2 secretariat.

**RESOLUTION M62.18 (Roadmap snapshot):****Unanimous**

WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N4530) to the WG2 web site and communicate the same to SC2 secretariat.

**RESOLUTION M62.19 (Future meetings):****Unanimous**

WG2 endorses the following schedule for future meetings of WG2:

Meeting 63 - 2014-09-29/10-03, Colombo, Sri Lanka; (co-located with SC2)

Meeting 64 - 2015 (late summer or early fall); looking for host (Russia?)

Meeting 65 - 2016; looking for host (USA Tentative)

**RESOLUTION M62.20 (Appreciation to DKUUG for web site support):****By Acclamation**

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

**RESOLUTION M62.21 (Appreciation to Host):****By Acclamation**

WG2 thanks the US national body, the Unicode Consortium and Adobe Systems Incorporated, in particular Ms. Lisa Moore, Dr. Ken Lunde and Ms. Ellen Mastro, for hosting the meeting, providing excellent meeting facilities, and for their kind hospitality and dinner.

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1070 additions in Amd. 2 to 3<sup>rd</sup> edition  
Character count 113020 (total prior to start of 4th edition)  
7565 additions in FDIS of 4<sup>th</sup> edition  
101 additions in DAM1 to the 4th edition  
6741 for future amendment 2  
Character count 127427 (total allocated to date)*

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**Attendance List**

**JTC1/SC2/WG2 Meeting 62, Adobe, San Jose, CA, USA, 2014-02-24/28**

The following **30** attendees representing **7** national bodies, **4** liaison organizations, and **2** invited experts, were present or participated via telephone at different times during the meeting.

<b>Name</b>	<b>Representing</b>	<b>Affiliation</b>
Mike KSAR	Convener, USA	Independent
Taichi KAWABATA (Siddham ad hoc)	Expert - Japan	NTT
Andrew GLASS (Siddham ad hoc)	Expert - USA	Microsoft Corporation
LU Qin	IRG Rapporteur	Hong Kong Polytechnic University
Kuang-Shun (Rick) LIN	TCA – Liaison	Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs
Lin-Mei (Selena) WEI	TCA – Liaison	Chinese Foundation for Digitization Technology
Suh-Chyin CHUANG	TCA – Liaison	Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs
Alain LABONTÉ	Canada; Editor 14651; SC35 - Liaison (acting)	Independent
V. S. (Uma) UMAMAHESWARAN	Canada; Recording Secretary	IBM Canada Limited
CHEN Zhuang	China	Chinese Electronics Standardization Institute
PENG Haitao	China	China Publishing Group Digital Media Corporation
WEN Yingming	China	China Publishing Group Digital Media Corporation
Wushour SILAMU	China	Xinjiang University
Tero AALTO	Finland	CSC-IT Center for Science
Michael EVERSON	Ireland; Contributing Editor	Evertime
Kiyonori NAGASAKI	Japan	International Institute for Digital Humanities, Tokyo
Satoshi YAMAMOTO	Japan	Hitachi Ltd.
Toshiya SUZUKI	Japan	Hiroshima University
Eldar ABDRAHIMOV	Russian Federation	The Central Bank of Russian Federation
Yury TIMOFEEV	Russian Federation	The Central Bank of Russian Federation
Anshuman PANDEY	SEI, UC Berkeley; Liaison	University of Michigan
Craig CUMMINGS	USA	Informatica
Ken LUNDE	USA	Adobe
Lisa MOORE	USA	IBM Corporation
Roozbeh POURNADER	USA	Google
Steven LOOMIS	USA	IBM Corporation
Ken WHISTLER	USA; Contributing Editor	SAP America, Inc.
Michel SUIGNARD	USA; Project Editor	Unicode Consortium
Deborah ANDERSON	USA; SEI, UC Berkeley – Liaison	Department of Linguistics, University of California, Berkeley
Peter CONSTABLE	USA; Unicode Consortium – Liaison	Microsoft Corporation