

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

**ISO/IEC JTC 1/SC 2 N 4110R  
ISO/IEC JTC 1/SC 2/WG 2 N 3704R2  
Date: 2009-11-04**

**Source:** WG 2 meeting 55, Tokyo, Japan; 2009-10-26/30  
**Title:** Resolutions of WG 2 meeting 55  
**Action:** For approval by SC 2 and for information to WG 2  
**Status:** Adopted at meeting 55 of WG 2  
**Distribution:** ISO/IEC JTC 1/SC 2 and WG 2

Experts from Canada, China, Finland, India, Ireland, Japan, Korea (Republic of), SEI - UC Berkeley (Liaison), UK, the Unicode Consortium (Liaison) and USA were present when the following resolutions were adopted (see attached attendance list).

*(Note: Revised to include Amd. 8 in the 2nd edition. Document N3728 in M55.10 is to reflect the final FPDAM8 code point allocations. Updated the counts for FCD -- Recording Secretary.)*

*(Note: R2 - Fixed error in resolution M55.9 item 'l' to fix J col. glyph of 2B7EB (instead of deleting 2B7EB), and delete 2B779; corrected Sampeng to Sompeng in M55.24. -- Recording Secretary.)*

*Character count 107292 (till end of Amd. 6)*

*Addition of 225 in FPDAM7*

*Character count 107517 in CD of 2nd edition (till end of FPDAM7)*

*Addition of 1716 in PDAM8*

**Total count: 109233 (before meeting 55)**

**RESOLUTION M55.1 (Progression of Amendment 7):**

**Unanimous**

WG2 instructs its project editor to forward the final text of Amendment 7 along with the disposition of comments document N3717 to the SC2 secretariat for an FDAM ballot. The final set of charts and names lists are in document N3718. The unchanged target starting date for FDAM is 2009-11.

*Count: (unchanged) - addition of 225 in Amd. 7*

**RESOLUTION M55.2 (Named sequence for Khinya):**

**Unanimous**

WG2 accepts the named UCS sequence identifier for inclusion in Amendment 8

BENGALI LETTER KHINYA <0995, 09CD, 09B7>

based on the request in document N3729.

**RESOLUTION M55.3 (Regional indicator symbols):**

**Unanimous**

With reference to documents N3726 and N3727, WG2 accepts 26 symbols for inclusion in Amendment 8 at code positions 1F1E6 to 1F1FF, in the Enclosed Alphanumeric Supplement block in the SMP, with their names and glyphs as shown in document N3727.

*count: 1716 + 26 = 1742 for Amd. 8*

**RESOLUTION M55.4 (Latin letters for pre-1921 Latvian):**

**Unanimous**

With reference to document N3587, WG2 accepts 10 additional Latin characters for inclusion in Amendment 8 at code positions A7A0 to A7A9 in the Latin Extended-D block in the BMP, for pre-1921 Latvian orthography with their code positions, names and glyphs from document N3587.

*count: 1742 + 10 = 1752 for Amd. 8*

**RESOLUTION M55.5 (Clock-face and other symbols):**

**Unanimous**

Based on Irish comment T11 on PDAM8 and the Emoji ad hoc report in document N3726, WG2 accepts the following 13 additional Miscellaneous Pictographic Symbols for inclusion in Amendment 8:

1F504 ANTICLOCKWISE DOWNWARDS AND UPWARDS OPEN CIRCLE ARROWS

1F55C CLOCK FACE ONE-THIRTY

1F55D CLOCK FACE TWO-THIRTY

1F55E CLOCK FACE THREE-THIRTY

1F55F CLOCK FACE FOUR-THIRTY

1F560 CLOCK FACE FIVE-THIRTY

1F561 CLOCK FACE SIX-THIRTY

1F562 CLOCK FACE SEVEN-THIRTY

1F563 CLOCK FACE EIGHT-THIRTY  
1F564 CLOCK FACE NINE-THIRTY  
1F565 CLOCK FACE TEN-THIRTY  
1F566 CLOCK FACE ELEVEN-THIRTY  
1F567 CLOCK FACE TWELVE-THIRTY

with their glyphs as shown in document N3723.

*count: 1752 + 13 = 1765 for Amd. 8*

#### **RESOLUTION M55.6 (Enclosed Alphanumeric Supplement):**

**Unanimous**

With reference to document N3671, WG2 accepts **66** additional enclosed Latin alphabetic characters for inclusion in Amendment 8, at code positions 1F130, 1F132 to 1F13C, 1F13E, 1F140, 1F141, 1F143 to 1F145, 1F147 to 1F149, 1F14F to 1F156, 1F158 to 1F15E, 1F160 to 1F169, 1F172 to 1F178, 1F17A, 1F17D, 1F180 to 1F189 and 1F18F, in the Enclosed Alphanumeric Supplement block in the SMP, with their names and glyphs as shown in document N3723.

*count: 1765 + 66 = 1831 for Amd. 8*

#### **RESOLUTION M55.7 (Devanagari additions for Kashmiri):**

With reference to document N3731 (result of ad hoc deliberations on Devanagari character additions for Kashmiri), WG2 accepts for inclusion in Amendment 8, **10** additional characters at code positions 093A, 093B, 094F, 0956, 0957, and 0973 to 0977 in the Devanagari block in the BMP, with their code positions, names and glyphs as shown on pages 3 and 4 in document N3731.

*count: 1831 + 10 = 1841 for Amd. 8*

#### **RESOLUTION M55.8 (Arabic additions for Kashmiri):**

**Unanimous**

With reference to document N3673, WG2 accepts the following **2** additional Arabic characters for inclusion in Amendment 8:

- 0620 ARABIC LETTER KASHMIRI YEH (with its glyph as shown for entry 187 for PASCII)
- 065F ARABIC WAVY HAMZA BELOW (with its glyph as shown at the end of page 2 in the document)

*count: 1841 + 2 = 1843 for Amd. 8.*

#### **RESOLUTION M55.9 (Miscellaneous character additions for Amd. 8):**

**Unanimous**

WG2 accepts the following additions and deletions of characters for inclusion in Amendment 8:

- a. **4** Pentagon characters based on Irish comment T.1 on PDAM8 in the Miscellaneous Symbols block:

26E4 PENTAGRAM  
26E5 RIGHT-HANDED INTERLACED PENTAGRAM  
26E6 LEFT-HANDED INTERLACED PENTAGRAM  
26E7 INVERTED PENTAGRAM

with their glyphs and code positions as shown in document N3723.

- b. **2** Mathematical Symbols at code positions 27CE and 27CF as shown on the last page of document N3677.
- c. **1** character - 0D4E MALAYALAM LETTER DOT REPH, with its glyph as shown under item E in document N3676, based on US comment T.1 on PDAM8.
- d. **2** Batak characters from Irish comment T.2 on PDAM8 at code positions 1BFA and 1BFB with their names and glyphs as shown in document N3723.
- e. **3** characters, based on German comment T2 and Irish comment T.6 on PDAM8:  
1F30D EARTH GLOBE EUROPE-AFRICA  
1F30E EARTH GLOBE AMERICAS  
1F310 GLOBE WITH MERIDIANS

with their glyphs as shown in document N3723.

- f. Based on German comment T.16 on PDAM8 and the Emoji ad hoc report in document N3726, Delete the following **2** symbols:

1F4EB MAILBOX, 1F4EC MAILBOX WITH RAISED FLAG

Add the following **4** symbols:

1F4EA CLOSED MAILBOX WITH LOWERED FLAG  
1F4EB CLOSED MAILBOX WITH RAISED FLAG  
1F4EC OPEN MAILBOX WITH RAISED FLAG, and  
1F4ED OPEN MAILBOX WITH LOWERED FLAG

with their glyphs as shown on page 47 in document N3723.

- g. 1 character based on Irish comment T1 and US comment T.2 on PDAM8:  
26E2 ASTRONOMICAL SYMBOL FOR URANUS with its glyph as shown in document N3672.
- h. 1 character based on Irish comment T.2 on PDAM8  
27BF DOUBLE CURLY LOOP its glyph as shown in document N3723.
- i. 4 Miscellaneous Pictographic Symbols based on Irish comment T8 and the UK comment T.1 on PDAM8, and the Emoji ad hoc report in document N3726:  
1F42A DROMEDARY CAMEL  
1F46C TWO MEN HOLDING HANDS  
1F46D TWO WOMEN HOLDING HANDS  
1F4B7 BANKNOTE WITH POUND SIGN  
With their glyphs as shown in document N3723.
- j. 1 Emoticon symbol - 1F629 FACE WITHOUT MOUTH - based on Irish comment T14 and the Emoji ad hoc report in document N3726:
- k. 1 Transport and Map symbol - 1F6C1 BATHTUB - based on Irish comment T16 and the Emoji ad hoc report in document N3726:
- l. Delete 1 CJK Extension D ideograph at 2B779 and move the following Extension D ideographs up by one position, and correct the J-column glyph for CJK Extension D ideograph 2B7EB, based on Japan comment T2 on PDAM8.

*Note: Some of these additions have caused movement of other characters in the Amendment.*

*count: 1843+21= 1864 in Amd. 8*

#### **RESOLUTION M55.10 (Progression of Amendment 8):**

**Unanimous**

WG2 notes and accepts various name changes, glyph changes and changes to code positions of characters resulting from the disposition of PDAM8 ballot comments. The mapping information for Emoji symbols in document N3728 (*revised to use the final FPDAM8 code point allocations*) is also accepted. WG2 instructs its project editor to forward the final text of Amendment 8, including all the additions and deletions mentioned in resolutions M55.2 to M55.9 above, along with the disposition of comments document N3722 to the SC2 secretariat for an FPDAM ballot. The final set of charts and names list are in document N3723. The unchanged target starting dates are FPDAM 2009-12, and FDAM 2010-06.

*count: addition of 1864 in Amd. 8*

#### **RESOLUTION M55.11 (Multilingual Latin Subset):**

**Unanimous**

WG2 accepts the proposed subset of Latin characters in document N3685 as collection number 288 named Multilingual Latin Subset (changed from the name in the proposal) for inclusion in the next edition of the standard.

#### **RESOLUTION M55.12 (Annex S revision):**

**Unanimous**

WG2 accepts the changes to Annex S proposed by the IRG in document N3661 for inclusion in the next edition of the standard.

#### **RESOLUTION M55.13 (Character stability):**

**Unanimous**

WG2 accepts the proposal in document N3715 to make the stability of the names and code points for characters as normative in the second edition of the standard, by replacing the current note under clause 7 with the following paragraph:

"The names and code point allocation of all characters in this coded character set shall remain unchanged in all future editions and amendments of this standard."

#### **RESOLUTION M55.14 (Progression of CD of 2nd edition):**

**Korea (Republic of) - Abstention**

**Canada, China, Finland, India, Ireland, Japan, UK and USA - Acceptance**

WG2 instructs its project editor to forward the final text of second edition of the standard, including the changes from resolutions M55.11 to M55.13 above, along with the disposition of comments document N3716 to the SC2 secretariat for an FCD ballot. The revised target starting dates are: FCD: 2009-12 and FDIS: 2010-07.

*count: 107517 (unchanged) in FCD of 2nd edition (till end of FDAM7)*

**Note: SC2 meeting 16 on 2009-10-30 afternoon instructed the project editor to incorporate Amendment 8 (resulting from Resolution M55.10 above) also into the FCD of the next edition.**

*revised count: 107517 +1864 = 109381 in FCD of 2nd edition (till end of FPDAM8)*

**RESOLUTION M55.15 (Change in the title of the next edition of the standard):**

**Japan - Abstention**

**Canada, China, Finland, India, Ireland, Korea (Republic of), UK and USA - Acceptance**

WG2 approves the change in the title of the next edition of the standard to:

"Information technology – Universal Coded Character Set (UCS)"

removing the words multiple-octet from the title of the current edition.

WG2 further instructs its convener to inform SC2 to endorse this change and get approvals from JTC1 and ITTF if needed.

**RESOLUTION M55.16 (Fonts for T-source from TCA for the second edition):**

**Unanimous**

WG2 requests TCA to provide the needed revised fonts urgently for the T-sources in the unified CJK multiple column charts to the project editor (the editor will continue to use the currently available fonts for production of FCD charts). TCA is further requested to classify the differences in glyphs into minor glyph changes versus mapping changes, and to inform the project editor, IRG rapporteur and the WG2 convener of any mapping related issues that need review and recommendations to WG2.

**RESOLUTION M55.17 (Unified CJK Charts for 2nd edition):**

**Unanimous**

WG2 notes that the glyphs for the TCA source for the unified CJK multiple column charts need finalization based on correct fonts being made available to the project editor. There are also missing or incorrect glyphs for other sources. WG2 instructs its project editor to produce the CJK charts of the 2nd edition with fonts to be provided by IRG members and send to the IRG rapporteur. The IRG is instructed to review and correct any errors in the glyphs for the various sources and report back to the project editor, with the objective of replacing the current CJK charts with the verified version in the FDIS (2010-07) of the second edition.

**RESOLUTION M55.18 (Missing documents for Korean source references K2 to K5):**

**Unanimous**

WG2 requests the convener and the Korean national body to search the WG2 document archives for the missing source reference documents PKS C5700-1 1994, PKS C5700-2 1994, PKS 5700-3 1998 and Korean IRG Hanja Character Set 5th edition 2001 and make it available for IRG archives and reference.

**RESOLUTION M55.19 (Unification/mapping concerns reported by Korea):**

**USA - Abstention**

**Canada, China, Finland, India, Ireland, Japan, Korea (Republic of) and UK - Acceptance**

WG2 requests the IRG to review the ballot comments T19 and T20 on the CD of second edition from Korea (Republic of) in document [N3716](#) and recommend any action to be taken by WG2 to resolve the unification and mapping concerns before the next WG2 meeting in 2010-04.

**RESOLUTION M55.20 (Missing source references for CJK Extensions A and B):**

**Unanimous**

With reference to the discussion on comment JP9 in document [N3716](#) (disposition of CD ballot comments), IRG is instructed to review and provide to the project editor all the missing indices in source references for unified CJK ideographs, specifically Extensions A and B before the next WG2 meeting in 2010-04.

**RESOLUTION M55.21 (Code points for ideographs in Annex S):**

**Unanimous**

IRG is instructed to review Annex S of the second edition and provide to the project editor the code point values for all the encoded ideographs that appear in the various examples, with the objective of replacing the images with actual characters for these ideographs in the Annex before the next WG2 meeting in 2010-04.

## RESOLUTION M55.22 (Sundanese additions):

Unanimous

With reference to document N3666, WG2 accepts to:

- add 9 characters in code positions 1BAB to 1BAD and 1BBA to 1BBF in the existing Sundanese block, and,
- create a new block named Sundanese Supplement in the range 1CC0 to 1CCF in the BMP, and populate it with 8 characters in code positions 1CC0 to 1CC7

with their code positions, names and glyphs from pages 6 to 8 in document N3666.

*count: 0 + 17 = 17 for a future Amd.*

## RESOLUTION M55.23 (Meetei Mayek extensions):

USA - Abstention

Canada, China, Finland, India, Ireland, Japan, Korea (Republic of) and UK - Acceptance

With reference to document N3478, WG2 accepts to create a new block named Meetei Mayek Extensions in the range AAE0 to AAF6 in the BMP, and populate it with the 23 characters in code positions AAE0 to hAAF6, with their code positions, names and glyphs as shown on the last page of document N3478. It contains some combining marks.

*count: 17 + 23 = 40 for a future Amd.*

## RESOLUTION M55.24 (Sora Sompeng script):

Unanimous

With reference to document N3647, WG2 accepts to create a new block named Sora Sompeng in the range 110D0 to 110FF in the SMP, and populate it with 35 characters in code positions 110D0 to 110E8 and 110F0 to 110F9, with their code positions, names and glyphs as shown on the last page of document N3647.

*Count 40 + 35 = 75 for a future Amd.*

## RESOLUTION M55.25 (Meroitic script):

Unanimous

With reference to document N3665, WG2 accepts to

- create a new block named Meroitic Hieroglyphs (changed from proposed block name) in the range 10980 to 1099F in the SMP and populate it with 32 characters in code positions 10980 to 1099F
- create another new block named Meroitic Cursive in the range 109A0 to 109FF in the SMP, and populate it with 66 characters, in code positions 109A0 to 109B7, 109BE to 109CA, 109CC to 109D9, 109DB, 109DC, 109DE to 109E5, 109E7 to 109E9, 109EB and 109F0

with their code positions, names and glyphs as shown in the charts and names lists in document N3665. This is a right-to-left script.

*count: 75 + 98 = 173 for a future Amd.*

## RESOLUTION M55.26 (Chakma script):

Unanimous

With reference to document N3645, WG2 accepts to create a new block named Chakma in the range 11100 to 1114F in the SMP, and populate it with 67 characters in code positions 11100 to 11134, and 11136 to 11143 with their code positions, names and glyphs as shown in the charts in document N3645. It contains some combining marks.

*count: 173 + 67 = 240 for a future Amd.*

## RESOLUTION M55.27 (Sharada script):

Unanimous

With reference to document N3595, WG2 accepts to create a new block named Sharada in the range 11180 to 111DF in the SMP, and populate it with 83 characters in code positions 11180 to 111D9 with their code positions, names and glyphs as shown on pages 4 and 5 in document N3595.

*count: 240 + 83 = 323 for a future Amd.*

## RESOLUTION M55.28 (Working draft of future amendment):

Unanimous

WG2 instructs its project editor to create a Working Draft of accepted characters and charts covering resolutions M55.22 to M55.27 above for the next WG2 meeting in 2010-04.

*count: Addition of 323 for a future Amd.*



**RESOLUTION M55.29 (Miao script):****Unanimous**

WG2 accepts the ad hoc report in document N3730 on Miao script and invites the national bodies of China, Ireland and UK, to provide a revised contribution, following the principles detailed in the ad hoc report.

**RESOLUTION M55.30 (IRG rapporteur):****Unanimous**

WG2 re-nominates Dr. Lu Qin as the rapporteur of IRG and instructs its convener to request SC2 to confirm the appointment.

**RESOLUTION M55.31 (Clarification on use of Fonts from Japan):****Unanimous**

WG2 notes the clarification from the Japanese national body in document N3733 on the use of Japanese fonts for the production of code charts for ISO/IEC 10646 as well as the Unicode Standard.

**RESOLUTION M55.32 (Letter to SC6):****Unanimous**

WG2 endorses document N3732 addressed to JTC 1/SC 6, and instructs its convener to send it to the SC2 secretariat for forwarding to SC6.

**RESOLUTION M55.33 (Letter to ISO DEVCO members):****Unanimous**

WG2 endorses the letter addressed to ISO DEVCO in document N3724, nominates Dr. Deborah Anderson as the SC2 representative, and instructs its convener to send it to the SC2 secretariat for endorsing and forwarding to ISO DEVCO.

**RESOLUTION M55.34 (Compatibility Ideographs for Government Use in Japan):****Unanimous**

WG2 notes the decision by the Japanese national body (reported in document N3706) to register Ideographic Variation Sequences in the Ideographic Variation Database, for encoding the compatibility ideographs identified in document N3530.

**RESOLUTION M55.35 (Updates to Principles and Procedures):****Unanimous**

WG2 accepts

- the proposed additions (with minor edits) to the Principles and Procedures from document N3675, and,
- the proposed rewording of questions 5a and 5b related to fonts in the proposal summary form from document N3709

and instructs Dr. Umamaheswaran to prepare an updated principles and procedures document (N3702) and submit it to the convener to post to the WG2 web site and communicate to SC2 secretariat.

**RESOLUTION M55.36 (Roadmap snapshot):****Unanimous**

WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N3652) to the WG2 web site and communicate the same to SC2 secretariat.

**RESOLUTION M55.37 (Future meetings):****Unanimous**

WG2 endorses the following schedule for future meetings of WG2 and of IRG:

WG 2 meetings:

- Meeting 56 - 2010-04-19/23, San Jose, CA. USA
- Meeting 57 - 2010-10-04/08, Busan, Korea (Republic of)
- Meeting 58 - 2011-04-11/15, Helsinki, Finland (along with SC2 plenary)
- Meeting 59 - Fall 2011, Mountain View, CA, USA (pending confirmation), Germany (as backup)

IRG meetings:

- IRG 34 - 2010-06-21/25, Nagaoka, Japan

**RESOLUTION M55.38 (Appreciation to DKUUG for web site support):****By Acclamation**

WG 2 thanks DKUUG and its staff for its continued support of the web site for WG 2 document distribution and the e-mail server.

**RESOLUTION M55.39 (Appreciation to Host):****By Acclamation**

WG 2 thanks the Japanese national body, JISC, for hosting the meeting, ITSCJ and its staff, in particular Ms. Toshiko Kimura, for providing excellent meeting facilities, and Messrs. Masahiro Sekiguchi, Satoshi Yamamoto and ITSCJ for the kind hospitality.

---

Character count **107292**(till end of Amd. 6)

Addition of **225** in FDAM7

Addition of **1864** in FPDAM8

Character count **109381** in CD of 2nd edition (till end of FPDAM8)

**Total count: 109381 (after meeting M55)**

Addition of **323** for WD of next Amd.

---

**Attendance List**

The following **34** attendees representing **9** national bodies, **3** liaison organizations, including **3** invited experts were present at different times during the meeting.

<b>Name</b>	<b>Representing</b>	<b>Affiliation</b>
Mike KSAR	.Convener, USA	Independent
Erich FICKLE	.Invited Expert, China	Independent
Peri BHASKARARAO	.Invited Expert, India	Tokyo University of Foreign Studies
Katsuhiro OGATA	.Invited Expert, Japan	USAPARA Corporation
LU Qin	.IRG Rapporteur	Hong Kong Polytechnic University
Tatsuo KOBAYASHI	.SC2 Chair	Scholex Co., Limited
Toshiko KIMURA	.SC2 Secretariat	IPSJ/ITSCJ
Bear S. TSENG	.TCA – Liaison	Academia Sinica
Caspar LEE	.TCA – Liaison	Paradigm Venture Partners
Lin-Mei WEI	.TCA – Liaison	Chinese Foundation for Digitization Technology
Alain LABONTÉ	Canada; Editor 14651	Independent
V. S. (Uma) UMAMAHESWARAN	Canada; Recording Secretary	IBM Canada Limited
CHEN Zhuang	China	Chinese Electronics Standardization Institute
Hillevi VUORI	Finland	Finnish Standards Association (SFS)
Tero AALTO	Finland	CSC – IT Center for Science Ltd
Swaran LATA	India	Ministry of Communications and IT, Government of India
Michael EVERSON	Ireland; Contributing Editor	Evertype
Tomokazu TAKADA	Japan	National Institute for Japanese Language and Linguistics
Masahiro SEKIGUCHI	Japan	Fujitsu Limited
Satoshi YAMAMOTO	Japan	Hitachi Limited
Suzuki TOSHIYA	Japan	Hiroshima University
Taichi KAWABATA	Japan	NTT Communications
Taro YAMAMOTO	Japan	Adobe Systems
Tetsuji ORITA	Japan	IBM Japan Limited
Yoshiki MIKAMI	Japan	Nagaoka University of Technology
KANG Mi-Young	Korea (Republic of)	National Institute of the Korean Language
KIM Kyongsok	Korea (Republic of)	Busan National University
Martin HOSKEN	UK	SIL International
Katsuhiko MOMOI	USA	Google
Markus SCHERER	USA	Google
Ken WHISTLER	USA; Contributing Editor	Sybase Inc.
Michel SUIGNARD	USA; Project Editor	Independent
Deborah ANDERSON	USA; SEI, UC Berkeley – Liaison	Dept. of Linguistics, UC Berkeley
Peter CONSTABLE	USA; Unicode Consortium – Liaison	Microsoft Corporation