Universal Multiple-Octet Coded Character Set
(UCS)

ISO/IEC JTC 1/SC 2 _____

ISO/IEC JTC 1/SC 2/WG 2 N 3254
Date: 2007-04-28

Source:	WG 2 meeting 50, German National Library, Frankfurt-am-Main, Germany; 2007-04-23/27
Title:	Resolutions of WG 2 meeting 50
Action:	For approval by SC 2 and for information to WG 2
Status:	For Adoption at meeting 50 of WG 2
Distribution:	ISO/IEC JTC 1/SC 2 and WG 2

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

Character count 99016 (till end of Amd. 2)
1094 additions in FPDAM3)
4655 Additions in PDAM4
Total 104765 (prior to meeting M50)

RESOLUTION M50.1 (Devanagari Candra A):

Unanimous

With reference to document N3249, WG2 accepts to encode:
        0972 DEVANAGARI CANDRA A
in the Devanagari block, with its glyph as shown in document N3249.

count: +1 = 1095 in Amd.3

RESOLUTION M50.2 (Vai script glyph corrections and character additions):

Unanimous

With reference to documents N3243, WG2 accepts to correct the glyphs highlighted in the code charts shown on pages 6 and 7. WG2 also accepts to encode the following two additional Vai characters:
        A62A VAI SYLLABLE NDOLE MA
        A62B VAI SYLLABLE NDOLE DO
with their glyphs shown in document N3243.

count: +2 =1097 in Amd 3

RESOLUTION M50.3 (Arabic math symbols):

Unanimous

With reference to document N3259, WG2 accepts to encode the following 6 characters:
        2B47 REVERSE TILDE OPERATOR ABOVE RIGHTWARDS ARROW
        2B48 RIGHTWARDS ARROW ABOVE REVERSE ALMOST EQUAL TO
        2B49 TILDE OPERATOR ABOVE LEFTWARDS ARROW
        2B4A LEFTWARDS ARROW ABOVE ALMOST EQUAL TO
        2B4B LEFTWARDS ARROW ABOVE REVERSE TILDE OPERATOR
        2B4C RIGHTWARDS ARROW ABOVE REVERSE TILDE OPERATOR
with their glyphs based on descriptions provided in document N3259.

count: +6 = 1103 in Amd.3

RESOLUTION M50.4 (Disposition of FPDAM3 ballot comments):

Unanimous

WG2 accepts the disposition of ballot comments on FPDAM3 in document N3260 and instructs its editor to prepare the final text of Amendment 3 incorporating the dispositions. The following changes are noted in particular:
    a. 0C71 TELUGU SIGN ARDHAVISARGA is removed from this amendment.
    b. 2C78 is renamed LATIN SMALL LETTER E WITH NOTCH
    c. VAI block is extended by 1 column
    d. Updates to three Collection names as provided by Japan
    e. Names of characters in the range 0773 to 077D are changed by replacing the word 'EASTERN' with 'EXTENDED' in them.
    f. 0972 DEVANAGARI CANDRA A is added (see resolution M50.1 above)

count: -1 = 1102 in Amd. 3

RESOLUTION M50.5 (Phonetic characters glyph correction):

Unanimous

With reference to documents N3219 and N3215 item 4, WG2 accepts to correct the glyphs for:
    027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK, and
    0285 LATIN SMALL LETTER SQUAT REVERSED ESH
by adjusting the vertical alignment of these glyphs as shown in document N3219.

RESOLUTION M50.6 (IVD reference):

Unanimous

With reference to document N3256, the project editor is instructed to update the reference to the Ideographic Variation Database at the earliest opportunity. If the relevant final information is available before FDAM3 ballot is issued it should be included in the final text of FDAM 3.

RESOLUTION M50.7 (Math symbol glyph correction):

Unanimous

With reference to documents N3198 item 12, WG2 accepts to correct the glyph for:
    22C4 DIAMOND OPERATOR
to the shape shown in Table 1 in document N3198, with a more symmetric aspect ratio.

RESOLUTION M50.8 (Cyrillic glyph corrections):

Unanimous

With reference to documents N3184, N3194, N3226 and N3215 item 5, WG2 accepts to correct the glyphs for:
    0460 CYRILLIC CAPITAL LETTER OMEGA
    0478 CYRILLIC CAPITAL LETTER UK
    0479 CYRILLIC SMALL LETTER UK
    047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO,
    047D CYRILLIC SMALL LETTER OMEGA WITH TITLO
    047E CYRILLIC CAPITAL LETTER OT
with their glyphs as shown in the code chart on page 9 in document N3194.

RESOLUTION M50.9 (Progression of Amendment 3):

Unanimous

WG2 resolves to include all the items accepted for inclusion in the standard noted in resolutions M50.4 to M50.8, into Amendment 3. WG2 instructs its project editor to forward the final text of Amendment 3 along with the disposition of comments document N3260 to the SC2 secretariat for an FDAM ballot. The final set of charts and names lists are in document N3263. The target starting date for FDAM is 2007-06-30.

Count =net 1102 additions in FDAM3
Total: 99016+1102 = 100118 till end of FDAM3

RESOLUTION M50.10 (Lanna - changes)

Unanimous

WG2 notes the following significant changes to Lanna script in Amd. 4 given in document N3261:
   a. Remove Vowel Signs AM and TALL AM at 1A65 and 1A66, and move up characters at 1A67 to 1A7D up by two code positions to 1A65 to 1A7B
   b. Move down characters at 1A29 to 1A5E by one code position to 1A2A to 1A5F per document N3207
   c. Add two characters:
        1A29 LANNA LETTER KHUEN HIGH CHA
        1AAD LANNA SIGN CAANG
   d. Use the Khün font style for the code chart (shown in page 16 of document N3207), and
   e. Change the names for several characters as given in document N3261
   f. Add (Old Tai Lue) to the block name Lanna in A.2.2
   g. Add clarification that parenthetical items are not part of the block names

count: +2-2 = 4655 in Amd.4

RESOLUTION M50.11 (Cyrillic additions)

Unanimous

With reference to documents N3194R and N3215, WG2 accepts to encode 106 additional Cyrillic characters at code positions:
    0487 in Cyrillic block (1 combining mark)
    0514 to 0523 in Cyrillic Supplement block (16 characters)

2DF6 to 2DFF in Cyrillic Extended-A block (10 characters)
A640 to A65F, A662 to A673, A67C to A697 in Cyrillic Extended-B block (78 characters)
2E3B in Supplemental Punctuation Block (1 charcater)
with their names and glyphs as shown in document N3194R.

count: +106 = 4761 in Amd.4

RESOLUTION M50.12 (CJK Unified Ideographs Extension C):

Unanimous

With reference to the report of the ad hoc in document N3267, and the summary table in the PDAM4 disposition of ballot comments document N3261, related to CJK Ext-C, WG2 resolves to remove six ideographs from the current CJK Ext-C repertoire and move the remaining CJK Ext-C characters out of Amendment 4 and process it as part of a new Amendment 5.

count: - 4219 = 542 in Amd.4
count: + 4213 = 4213 in Amd.5

RESOLUTION M50.13 (Disposition of PDAM4 ballot comments):

Unanimous

WG2 accepts the disposition of ballot comments on PDAM4 in document N3261 and instructs its editor to prepare the final text of Amendment 4 incorporating the dispositions. The following changes are noted in particular:
a. Changes to Lanna encoding as in resolution M50.10 above
b. Adjusting CJK Ext-C repertoire, source references and glyphs and moving these out for processing in a new Amendment
c. Correcting the glyphs for 4 Mahjong Tiles and annotating the name for another Tile.
d. Changes to Cyrillic Extension-A repertoire arising out of resolution M50.11 above.

count: =542 in Amd.4

RESOLUTION M50.14 (Qur'anic Arabic letters):

Unanimous

With reference to documents N3185 and N3215 item 4, WG2 accepts to encode the following combining characters:
    0617 ARABIC SMALL HIGH ZAIN
    0618 ARABIC SMALL FATHA
    0619 ARABIC SMALL DAMMA
    061A ARABIC SMALL KASRA
with their glyphs as shown in the code chart on page 7 in document N3211.

count: +4= 546 in Amd.4

RESOLUTION M50.15 (Old Persian and Azerbaijani characters):

Unanimous

With reference to documents N3180 and N3215 item 4, WG2 accepts to encode 8 Arabic characters at code positions 0616, and 063B to 063F in the Arabic block, and 077E and 077F in the Arabic Supplement block, with their names and glyphs as shown on pages 7 to 10 in document N3211. The first one of these is a combining mark.

count: +8= 554 in Amd.4

RESOLUTION M50.16 (Mathematical and Symbol characters):

Unanimous

With reference to documents N3198, WG2 accepts to encode 29 mathematical and symbol characters at code positions:
a. 2064 in the General Punctuation block, with its name and glyph from pages 22 and 23 in document N3211
b. 20F0 in the Combining Diacritical Marks for Symbols block, with its name and glyph from pages 24 and 25 in document N3211
c. 27CC, 27EE and 27EF in the Miscellaneous Mathematical Symbols block, with their names and glyphs from pages 30 and 31 in document N3211
d. 2B1B to 2B1F, 2B24 to 2B2F 2B45, 2B46, and 2B50 to 2B54 in the Miscellaneous Symbols and Arrows block, with their names and glyphs from pages 31 and 32 in document N3211.

count: +29= 583 in Amd.4

RESOLUTION M50.17 (Symbol for Samaritan Source):

Unanimous

With reference to document N3217, WG2 accepts to encode:
    214F SYMBOL FOR SAMARITAN SOURCE
in the Letterlike Symbols block, with its glyph as shown on page 25 in document N3211.

count: +1= 584 in Amd.4

RESOLUTION M50.18 (Latin capital letter sharp S):

For: Canada, China, Germany, Ireland, Japan, Korea (Republic of), UK and Vietnam
Against: USA

With reference to document N3227R, WG2 accepts to encode:
    1E9E LATIN CAPITAL LETTER SHARP S
in the Latin Extended Additional block, with its glyph as shown in document N3227R.

count: +1= 585 in Amd.4

RESOLUTION M50.19 (Bopomofo character):

Unanimous

With reference to documents N3179 and N3215 item 2, WG2 accepts to encode:
    312D BOPOMOFO LETTER IH
with its glyph as shown on page 36 in document N3211.

count: +1= 586 in Amd.4

RESOLUTION M50.20 (Disunification of CJK ideograph 4039):

For: Canada, China, Germany, Ireland, Korea (Republic of), UK, USA and Vietnam
Abstention: Japan

With reference to documents N3196, WG2 accepts to encode the new CJK Ideograph at code position 9FC3, with the second glyph in the figure on page 1 of document N3196, and the source references G_KX0809.020, KP1-5E2B and T4-3946. WG2 also accepts to add a new source reference T6-4B7A to CJK ideograph at code position 4039 (keeping its current source references G3-5952 and KP1-5E34 and removing its source reference T4-3946).

count: +1= 587 in Amd.4

RESOLUTION M50.21 (Orthographic and Modifier characters):

Unanimous

With reference to document N3216, WG2 accepts to encode the following 4 combining marks:
    A789 MODIFIER LETTER COLON
    A78A MODIFIER LETTER SHORT EQUALS SIGN
    A78B LATIN CAPITAL LETTER SALTILLO
    A78C LATIN SMALL LETTER SALTILLO
in the Latin Extended-D block, with their glyphs as shown on page 41 in document N3211.

count: +4= 591 in Amd.4

RESOLUTION M50.22 (3 Combining Macrons):

Unanimous

With reference to document N3235R, WG2 accepts to encode the following 3 combining marks:
    FE24 COMBINING MACRON LEFT HALF
    FE25 COMBINING MACRON RIGHT HALF
    FE26 COMBINING CONJOINING MACRON
in the Combining Half Marks block, with their glyphs as shown in document N3235R.

count: +3= 594 in Amd.4

RESOLUTION M50.23 (Indic characters for Vedic):

Unanimous

With reference to document N3235R, WG2 accepts to encode the following 4 combining marks:
    0B44 ORIYA VOWEL SIGN VOCALIC RR
    0B62 ORIYA VOWEL SIGN VOCALIC L
    0B63 ORIYA VOWEL SIGN VOCALIC LL
    in the Oriya block, and,
    0D63 MALAYALAM VOWEL SIGN VOCALIC LL
    in the Malayalam block
with their glyphs as shown in document N3264.

count: +4= 598 in Amd.4

RESOLUTION M50.24 (Ancient Roman characters)

Unanimous

With reference to documents N3218 and N3215 item 6, WG2 accepts to encode 11 additional characters at code positions:

     2185 to 2188 in the Number Forms block,
     2E19 in the Supplemental Punctuation block,
     A7FB to A7FF in the Latin Extended-D block, and
     1019B in the Ancient Symbols block,

with their names and glyphs as shown in document N3211.

count: +11 = 609 in Amd.4

RESOLUTION M50.25 (CJK Unified Ideographs additions):

Unanimous

WG2 accepts to encode the 7 CJK Unicode-sourced ideographs, with their glyphs as shown in document N3210 at code positions 9FBC to 9FC2.

count: +7 = 616 in Amd.4

RESOLUTION M50.26 (Medievalist and Iranianist punctuations): (see note 1 below)

Unanimous

With reference to document N3193, WG2 accepts to encode the following 20 characters at code positions 2E1A, 2E1B, 2E1E, 2E1F, 2E2A, 2E2C, 2E2E, 2E2F, 2E34, 2E38, and 2E40 to 2E49 in the Supplemental Punctuation block, with their names and glyphs as shown on pages 34 and 35 in document N3211.

count: +20= 636 in Amd.4

RESOLUTION M50.27 (Progression of Amendment 4):

Unanimous

WG2 resolves to include all the items accepted for inclusion in the standard noted in resolutions M50.10 to M50.26 above into Amendment 4. WG2 instructs its project editor to forward the final text of Amendment 4 along with the disposition of comments document N3261 to the SC2 secretariat for an FPDAM ballot. The final set of charts and names lists are in document N3264. The corrected starting dates for this work item are: FPDAM 2007-06-01, and FDAM 2007-12.

count: net 636 additions in FPDAM4
Total: 100118+636 = 100754 till end of FPDAM4

RESOLUTION M50.28 (Archaic Sinhala numbers):

Unanimous

With reference to document N3195R, WG2 accepts to encode 20 characters in the Sinhala block at code positions 0DE7 to 0DEF and 0DF5 to 0DFF, with their names and glyphs as shown on pages 3 and 4 in document N3195R.

count: 4213 +20= 4233 in Amd.5

RESOLUTION M50.29 (Egyptian Hieroglyphs):

Unanimous

With reference to document N3237, WG2 accepts to encode in the standard 1063 hieroglyphs in code positions 13000 to 13426 in a new block 13000 to 1342F named Egyptian Hieroglyphs, with their names and glyphs as shown in document N3237.

count: +1063= 5296 in Amd.5

RESOLUTION M50.30 (Coptic additions):

Unanimous

With reference to documents N3222, WG2 accepts to encode in the standard 7 characters in code positions 2CEB to 2CF1 in the Coptic block, with their names and glyphs as shown in document N3222. Three of these characters are combining marks.

count: +7= 5303 in Amd.5

RESOLUTION M50.31 (Tai Viet script): (see note 2 below)

Unanimous

With reference to documents N3220 and N3221, WG2 accepts to encode in the standard 73 characters in code positions AA80 to AAC3 and AADB to AADF in a new block AA80 to AADF named Tai Viet, with their names and glyphs as shown in document N3220. Several of the characters are combining marks.

count: +73= 5376 in Amd.5

RESOLUTION M50.32 (Bamum script):

Unanimous

With reference to document N3209, WG2 accepts to encode in the standard 88 characters in code positions A6A0 to A6F7 in a new block A6A0 to A6FF named Bamum, with their names and glyphs as shown in document N3265. Two of these characters are combining marks.

count: +88= 5464 in Amd.5

RESOLUTION M50.33 (Meitei Mayek script):

Unanimous

WG2 accepts to encode in the standard 76 characters in code positions 1C80 to 1CBC, 1CBF to 1CCC and 1CCF, in a new block 1C80 to 1CCF named Meitei Mayek, with their names and glyphs as shown in document N3206.

count: +76= 5540 in Amd.5

RESOLUTION M50.34 (Hangul Jamo additions):

Unanimous

WG2 accepts to encode in the standard 117 Hangul Jamo characters as detailed in document N3242. This includes creating two new blocks A960 to A97F, named Hangul Jamo Extended-A and D7B0 to D7FF named Hangul Jamo Extended-B, along with annotations proposed in document N3172.

count: +117= 5657 in Amd.5

RESOLUTION M50.35 (Avestan script):

Unanimous

With reference to document N3197, WG2 accepts to encode in the standard 62 characters in code positions 10B00 to 10B35 and 10B38 to 10B3F in a new block 10B00 to 10B3F named Avestan, with their names and glyphs as shown in document N3197.

count: +62= 5719 in Amd.5

RESOLUTION M50.36 (Amendment 5 – subdivision and PDAM text):

Unanimous

WG2 instructs its editor to prepare a project sub division proposal and PDAM text based on resolutions M50.27 to M50.35 above, and forward them to the SC2 secretariat for ballot. The proposed start dates for the progression of this work item are: PDAM 2007-05-10, FPDAM 2007-10-30, and FDAM 2008-07. Due to the tight schedule prior to meeting M51 national bodies are encouraged to copy the project editor on their ballot comments at the same time they submit them to SC2 secretariat.

count: net 5719 additions in PDAM5
Total: 100754+5719 =106473 till end of FPDAM4

RESOLUTION M50.37 (WD of next edition):

Unanimous

With reference to documents N3229, N3230, N3248 and N3214, WG2 instructs its editor to prepare working draft of the next edition of the standard for consideration at meeting M51, incorporating the texts of Amendments 1 through Amendment 4, along with a rationale document for the proposed changes in document N3229, and including the expanded names list based on the *NamesList.txt* file publicly available from the Unicode Consortium's web site.

RESOLUTION M50.38 (Hangul Jamo usage model):

Unanimous

With reference to document N3257, WG2 notes that national body of Republic of Korea has withdrawn their proposal for a new Hangul Jamo usage model in document N3113.

RESOLUTION M50.39 (Orkhon):

Unanimous

With reference to document N3258, WG2 invites the national bodies of China, Ireland and the UK to prepare a revised proposal taking into account the discussion at meeting M50 on Orkhon, for consideration at meeting M51.

RESOLUTION M50.40 (Addition of 3 Tibetan characters):

Unanimous

WG2 invites the Chinese national body to discuss and resolve the concerns raised at meeting M50 on the proposal for 3 additional Tibetan characters in document N3240 by other WG2 experts.

RESOLUTION M50.41 (Letter from SEI- UC Berkeley):

WG2 appreciates the valuable contributions on Minority Scripts by the SEI at UC Berkeley, and instructs the convener to forward documents N3232 and N3233 to SC2 and JTC1 for information.

RESOLUTION M50.42 (Roadmap snapshot):

WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N3228) to the WG2 web site.

RESOLUTION M50.43 (Future meetings):

WG 2 meetings:
> Meeting 51 - 2007-09-17/21, Hangzhou, China (note new location); along with SC2 plenary.
> Meeting 52 - 2008-05-19/23 (to be confirmed), West Coast, USA.
> Meeting 53 - 2008-10, (tentative) Tokushima (near Osaka), Japan; along with SC2 plenary.
> Meeting 54 - 2009-05, (tentative) Hong Kong SAR.
> Meeting 55 - 2009-10 - seeking host.

IRG meetings:
> IRG #28 - 2007-06-04/08, Xi'an, China (note new location)
> IRG #29 - 2007-11-12/16, San Jose, California, USA (host Adobe; to be confirmed).

RESOLUTION M50.44 (Contributing Editor):

By Acclamation

WG 2 thanks Dr. Asmus Freytag for the excellent support provided by him as a contributing editor of ISO/IEC 10646 and his valuable contributions as a WG2 expert, over the last several years. WG2 wishes him all the success in his future endeavours.

RESOLUTION M50.45 (Appreciation to DKUUG for web site support):

By Acclamation

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.

RESOLUTION M50.46 (Appreciation to Host):

By Acclamation

WG 2 thanks the German National Library and the German national body (DIN), and in particular Ms. Ute Schwens and Mr. Reinhold Heuvelmann, for hosting the meeting, for providing excellent meeting facilities, and their kind hospitality.

Character count 99016 (till end of Amd. 2)
1102 additions in FDAM3
636 additions in FPDAM4
5719 additions in PDAM5
Total count: 106473 (after meeting M50)

Notes:
The following changes arising out of post meeting reconciliation of the charts created by the contributing editors and the adopted resolutions have been made in this final set of resolutions. The resolutions have been also repositioned and renumbered. The character count information has been updated.
Note 1*: The ad hoc had accepted the 20 'Medievalist and Iranianist punctuations' for Amendment 4 and not for Amendment 5.*
Note 2*: The ' Tai Viet script' has 73 characters instead of 72. The first range of code positions is corrected to ' AA80 to AAC3' instead of 'AA80 to AAC2'.*

Attendance List

The following **44** delegates representing **11** national bodies, **3** liaison organizations, SC2 secretariat, including **5** invited experts were present at different times during the meeting.

Name	Representing	Affiliation
Mike KSAR	.Convener, USA	Independent
Ute SCHWENS	.Host, Germany	Director, German National Library
Johannes BERGERHAUSEN	.Invited Expert, Germany	University of Applied Sciences, Mainz
Malcolm HYMAN	.Invited Expert, Germany	Max-Planck Institute for the History of Science, Berlin
Bruce PATERSON	.Invited Expert, UK	Previous editor of 10646
Peter CONSTABLE	.Invited Expert, USA	Microsoft Corporation
Peter M. SCHARF	.Invited Expert, USA	Dept. of Classics, Brown University
Alain LABONTÉ	Canada Editor 14651	Ministère des services gouvernementaux du Québec
V. S. (Uma) UMAMAHESWARAN	Canada Recording Secretary	IBM Canada Ltd.
Azhati PIREDEWUSI	China	Xinjiang University
CHEN Zhuang	China	Chinese Electronics Standardization Institute
DAI Hong	China	Chinese Electronics Standardization Institute
DALUOSANGLANGJIE	China	Tibet University
Lobsang TOKME	China	Tibet Autonomous Region
NGODRUP	China	Tibet University
TAN Yuting	China	Yunnan Ethnic Affairs Committee
WANG Shizhong	China	National Culture Research Institute, Bijie University
WU Xuejun	China	Ancient Yi Text Research Institute, Bijie University
Wushour SILAMU	China	Xinjiang University
ZHANG Liwei	China	Zhonghua Book Company
Anssi YLI-JYRÄ	Finland	CSC - Scientific Computing Ltd.
Andreas STÖTZNER	Germany	Signography
Mark KÜSTER	Germany	University of Applied Sciences, Worms
Paul DETTMER	Germany	DIN
Reinhold HEUVELMANN	Germany	German National Library
Michael EVERSON	Ireland Contributing Editor	Evertype
LU Qin	IRG Rapporteur	Hong Kong Polytechnic University
Masahiro SEKIGUCHI	Japan	Fujitsu Ltd.
Yasuhiro ANAN	Japan	Microsoft Japan
Dae Hyuk AHN	Korea (Republic of)	Microsoft Korea
KIM Kyongsok	Korea (Republic of)	Pusan National University
Zong Su KIM	Korea (Republic of)	Department of Korean Linguistics and Literature, Hanyang University
Teodor STATESCU-NEGULESCU	Romania	Romanian Standards Association
Tatsuo KOBAYASHI	SC2 Chair, Japan	Justsystem Corporation
Lin-Mei WEI	TCA - Liaison	Chinese Foundation Of Digitization Technology
Shih-Shyeng TSENG	TCA - Liaison	Academia Sinica
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Thiem CAM BACH	Vietnam	Centre for Ethnic Education Studies, Ministry of Education and Training
Viet NGO TRUNG	Vietnam	Institute of Information Technology - VAST