ISO/IEC JTC 1/SC 2 N _____
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Source:	WG 2 meeting 47, ETSI Campus, Sophia Antipolis, France; 2005-09-12/15
Title:	Resolutions of WG 2 meeting 47
Action:	For approval by SC 2 and for information to WG 2
Status:	Adopted at meeting 47 of WG 2
Distribution:	ISO/IEC JTC 1/SC 2 and WG 2

Experts from Canada, China, Finland, Ireland, Japan, Korea (Republic of), Taipei Computer Association (Liaison), the Unicode Consortium (Liaison) and the USA were present when the following resolutions were adopted (See attached attendance list).

RESOLUTION M47.1 (Case Folding stability):

Unanimous

WG2 acknowledges the need for guaranteeing stability of case folding of characters in scripts having two cases, and accepts to adopt the guidelines in the following text in its principles and procedures:

Stability of Case Folding
For text containing characters from scripts having two cases (bicameral scripts), case folding is an essential ingredient in case-insensitive comparisons. Such comparisons are widely applied, for example in Internationalized Domain name (IDN) lookup, or for identifier matching in case-insensitive programming and mark-up languages. Because such operations require stable identifiers and dependable comparison results it is important that the standard be able to provide the guarantee of complete stability. For historic reasons, and because there are many characters with lowercase forms but no uppercase forms, the case folding is typically done by a *lowercasing* operation, and this also matches the definition used by the Unicode Standard for *case folding*.

In order to guarantee the case-folding stability, WG2 adopts the following principle when evaluating proposals for encoding characters for bicameral scripts:

"Subsequent to the publication of Amendment 2 of ISO/IEC 10646: 2003, if a character already has an uppercase form in the standard but no lowercase form, its corresponding lowercase form can not be added to the standard; the only way a lowercase form can be added, if proved to be absolutely essential, is by entertaining a new pair of uppercase and lowercase forms for encoding. If only a lowercase form exists and an uppercase form is deemed to be needed it can be added without affecting the stability of case folding."

Note that all the characters having only the uppercase forms in the current standard have been dealt with by resolution M47.5 below.

RESOLUTION M47.2 (Combining diacritic marks):

Unanimous

With reference to documents N2976 and N2978, WG2 acknowledges the need for additional guidelines when considering generic diacritical marks that may be used across different scripts, and accepts the text proposed in document N2978 as additional guidelines for inclusion in its principles and procedures.

RESOLUTION M47.3 (Adding to FDAM):

Unanimous

With reference to document N2997, WG2 acknowledges the need for additional guidelines on handling requests with some urgency in providing solutions, and accepts the text proposed in document N2987, modified per discussions at M47, for inclusion in its principles and procedures.

RESOLUTION M47.4 (Disunification, Stability of Identifiers):

Unanimous

With reference to document N2987, WG2 accepts the text proposed in document N2987, modified per discussions at M47, for inclusion in its principles and procedures.

RESOLUTION M47.5 (Glottal Stop, Claudian and other characters):

Unanimous

With reference to documents N2942, N2960, and N2962, WG2 accepts the following reassignment of fourteen (**14**) characters and addition of eleven (**11**) new characters in Amendment 2 to the standard:
   a. Move the characters currently encoded in positions from 0242 to 024E down by one code position to 0243 to 024F, and move the character currently encoded at 024F to 2C74.
   b. 0242 - LATIN SMALL LETTER GLOTTAL STOP; with its glyph from document N2962 in the Latin Extended block; (at the code position 0242 vacated as a result of a. above)
   c. 037B - GREEK SMALL REVERSED LUNATE SIGMA SYMBOL; with its glyph from document N2991 in the Greek and Coptic block
   d. 037C - GREEK SMALL DOTTED LUNATE SIGMA SYMBOL; with its glyph from document N2991 in the Greek and Coptic block
   e. 037D - GREEK SMALL REVERSED DOTTED LUNATE SIGMA SYMBOL; with its glyph from document N2991 in the Greek and Coptic block.
   f. 04CF - CYRILLIC SMALL LETTER PALOCHKA; with its glyph from document N2991 in the Cyrillic block
   g. 214E - TURNED SMALL F; with its glyph from document N2962 in the Letterlike Symbols block
   h. 2184 - LATIN SMALL LETTER REVERSED C; with its glyph from document N2962 in the Number Forms block
   i. 2C75 - LATIN CAPITAL LETTER HALF H; with its glyph from document N2962 in the Latin Extended-C block
   j. 2C76 - LATIN SMALL LETTER HALF H; with its glyph from document N2962 in the Latin Extended-C block
   k. 2C65 - LATIN SMALL LETTER A WITH STROKE; with its glyph from document N2991 in the Latin Extended-C block
   l. 2C66 - LATIN SMALL LETTER T WITH DIAGONAL STROKE; with its glyph from document N2991 in the Latin Extended-C block

RESOLUTION M47.6 (Additional Cyrillic characters):

Unanimous

With reference to document N2933, WG2 accepts the following ten (**10**) additional Cyrillic characters, with their glyphs as shown in document N2933 page 3, and modified during resolution of Irish ballot comment T.1 in document 2959, for inclusion in Amendment 2 to the standard:
   04FA CYRILLIC CAPITAL LETTER GHE WITH STROKE AND HOOK
   04FB CYRILLIC SMALL LETTER GHE WITH STROKE AND HOOK
   04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
   04FD CYRILLIC SMALL LETTER HA WITH HOOK
   04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
   04FF CYRILLIC SMALL LETTER HA WITH STROKE
         in the Cyrillic block, and
   0510 CYRILLIC CAPITAL LETTER REVERSED ZE,
   0511 CYRILLIC SMALL LETTER REVERSED ZE,
   0512 CYRILLIC CAPITAL LETTER EL WITH HOOK,
   0513 CYRILLIC SMALL LETTER EL WITH HOOK
         in the Cyrillic Supplement block.

RESOLUTION M47.7 (Additional Latin characters in support of Uighur & Kazakh):

Unanimous

With reference to documents N2931and N2992, on additional Latin characters in support of Uighur, WG2 accepts the following six (**6**) Latin characters, with their glyphs as shown in document N2931 on page 3, for inclusion in Amendment 2 to the standard:
   2C67 - LATIN CAPITAL LETTER H WITH DESCENDER
   2C68 - LATIN SMALL LETTER H WITH DESCENDER
   2C69 - LATIN CAPITAL LETTER K WITH DESCENDER
   2C6A - LATIN SMALL LETTER K WITH DESCENDER
   2C6B - LATIN CAPITAL LETTER Z WITH DESCENDER, and
   2C6C - LATIN SMALL LETTER Z WITH DESCENDER
   in the Latin Extended-C block.

RESOLUTION M47.8 (Dotted Square):

Unanimous

With reference to document N2943, WG2 accepts for inclusion in Amendment 2:
> 2B1A - DOTTED SQUARE; with its glyph as shown in document N2943, in the Miscellaneous Symbols and Arrows block.

RESOLUTION M47.9 (Bottom Tortoise Shell Bracket):
Unanimous

With reference to document N2842 and the Irish ballot comment T.2 in document N2959 regarding Bottom Tortoise Shell Bracket, WG2 accepts for inclusion in Amendment 2:
> 23E1 BOTTOM TORTOISE SHELL BRACKET, with glyph shown in document N2842, and move the character ELECTRICAL INTERSECTION currently encoded at 23E1 to new code position 23E7 in the Miscellaneous Technical block.

RESOLUTION M47.10 (Phags-Pa):
Unanimous

With reference to the Phags-Pa glyph corrections in document N2972 and N2979, WG2 accepts the new glyphs proposed in document N2991 for A843, A844, A845, A852, A856, A857, A859, A863, A864, A867, A868, A870, and A871 for Amendment 2. WG2 also accepts (with reference to editor's note E.2 on the last page of document N2980) to remove the erroneous word 'SMALL' in the Description of variant appearance column (on pages 1 and 2 of FPDAM-2 text) in the second, third, fourth and fifth entries in the table describing Mongolian variation sequences.

RESOLUTION M47.11 (Uralicist characters):
Unanimous

With reference to document N2989, WG2 accepts six (**6**) Uralicist phonetic characters for encoding in the standard:
> 1DFE - COMBINING LEFT ARROWHEAD ABOVE
> 1DFF - COMBINING RIGHT ARROWHEAD AND DOWN ARROWHEAD BELOW
> in the Combining Diacritical Marks Supplement block,
> 27CA - VERTICAL BAR WITH HORIZONTAL STROKE
> in the Miscellaneous Mathematical Symbols-A block, and
> 2C77 - LATIN SMALL LETTER TAILLESS PHI
> in the Latin Extended-C block, and
> A720 - MODIFIER LETTER STRESS AND HIGH TONE
> A721 - MODIFIER LETTER STRESS AND LOW TONE
> in a new Latin Extended-D block from A720 to A7FF

In view of the technical completeness of the proposal and the urgency expressed by the user community for the need of these characters to complete the Uralic Phonetic Alphabet set of characters, WG2 further resolves to include these in Amendment 2 to the standard.

RESOLUTION M47.12 (Cuneiform script):
Unanimous

With reference to changes requested on the Cuneiform script in the ballot comments from several national bodies in document N2959, WG2 accepts to replace tables 199-205 Rows 20-24 Cuneiform in Amendment 2, with new code table and names list (including name changes and character reassignments) based on Irish national body comments in document N2959. The final list of changes is in document N2990 (pages 7 and 8) and the revised charts are in document N2991 (pages 456 to 468).

RESOLUTION M47.13 (Redundant line collection 370 definition):
Unanimous

WG2 accepts to remove the redundant entry D4 C1 in definition of collection 370 and include this correction in Amendment 2.

RESOLUTION M47.14 (Glyph correction for Malayalam digit zero):
Unanimous

WG2 accepts the proposed corrected glyph for U+0D66 MALAYALAM DIGIT ZERO similar to that in document N2971 and to include the corrected glyph in Amendment 2.

RESOLUTION M47.15 (Defect in names of Tai Xuan Jing symbols):
Unanimous

With reference to technical defect in names of Tai Xuan Jing symbols reported in document N2988, WG2 resolves to add an informative annotation and additional text in Annex P, based on input in document N2998 for inclusion in Amendment 2.

RESOLUTION M47.16 (Miscellaneous glyph defects):

Unanimous

WG2 accepts the proposed corrected glyphs for 33AC, 06DF, 06E0, 06E1, 17D2 and 10A3F (taking note of the new convention of using dashed square boxes to indicate invisible characters, from document N2956, and 1D09F and 1D09C (from US T.7 resolution in document N2990) for inclusion in Amendment 2.

RESOLUTION M47.17 (N'Ko):
Accept: China, Finland, Ireland, Japan, Korea (Republic of), Taipei Computer Association (Liaison), the Unicode Consortium (Liaison) and the USA
Abstain: Canada

WG2 accepts new names for the following four N'Ko characters for inclusion in Amendment 2 based on Irish comment T.1 in document N2959:
    07E8 NKO LETTER JONA JA
    07E9 NKO LETTER JONA CHA
    07EA NKO LETTER JONA RA
    07F6 NKO SYMBOL OO DENNEN

RESOLUTION M47.18 (Progression of Amendment 2):
Accept: China, Finland, Ireland, Japan, Korea (Republic of), Taipei Computer Association (Liaison), the Unicode Consortium (Liaison) and the USA
Abstain: Canada

WG2 instructs its editor to prepare the FDAM text based on the disposition of comments in document N2990, the updated code charts in document N2991, and other resolutions from this meeting for additional text for inclusion in Amendment 2 to ISO/IEC 10646: 2003, and forward to SC2 secretariat for FDAM processing, with unchanged schedule.
*(Note: the total number of characters added in FDAM2 has changed to **1365**.)*

RESOLUTION M47.19 (Inverted Interrobang character):

Unanimous

With reference to document N2935 on Inverted Interrobang character, WG2 accepts to encode in a future Amendment to the standard:
    2E18 - INVERTED INTERROBANG; with its glyph as shown in document N2935 in the Supplemental Punctuation block.

RESOLUTION M47.20 (Musical symbols):

Unanimous

With reference to document N2983, WG2 resolves to:
    a. Add appropriate informative text in Annex P for U+1D13A MUSICAL SYMBOL MULTI REST to indicate that it is used as a rest corresponding in length to a breve note, which is usually called double rest in American usage or breve rest in British usage.
    b. Add 1D129 MUSICAL SYMBOL MULTIPLE MEASURE REST with glyph as shown in document N2983 in the Musical Symbols block.
in a future amendment to the standard.

RESOLUTION M47.21 (Malayalam numerals):

Unanimous

With reference to document N2970, WG2 accepts the following six (**6**) Malayalam numerals for inclusion in a future amendment to the standard:
    0D70 MALAYALAM NUMBER TEN
    0D71 MALAYALAM NUMBER ONE HUNDRED
    0D72 MALAYALAM NUMBER ONE THOUSAND
    0D73 MALAYALAM FRACTION ONE QUARTER
    0D74 MALAYALAM FRACTION ONE HALF
    0D75 MALAYALAM FRACTION THREE QUARTERS
in the Malayalam block, with glyphs similar to those in figure 2 of document N2970.

RESOLUTION M47.22 (Sindhi characters):

With reference to document N2934, WG2 accepts the following four (**4**) Sindhi characters for inclusion in a future amendment to the standard:

> 097B - DEVANAGARI LETTER GGA
> 097C - DEVANAGARI LETTER JJA
> 097E - DEVANAGARI LETTER DDDA
> 097F - DEVANAGARI LETTER BBA

in the Devanagari block, with glyphs similar to those in figure 2 of document N2934.

RESOLUTION M47.23 (Greek epigraphical characters):

With reference to document N2946, WG2 accepts the following six (**6**) Greek epigraphical characters for inclusion in a future amendment to the standard:

> 0370 - GREEK CAPITAL LETTER HETA
> 0371 - GREEK SMALL LETTER HETA
> 0372 - GREEK CAPITAL LETTER ARCHAIC SAMPI
> 0373 - GREEK SMALL LETTER ARCHAIC SAMPI
> 0376 - GREEK CAPITAL LETTER PAMPHYLIAN DIGAMMA
> 0377 - GREEK SMALL LETTER PAMPHYLIAN DIGAMMA

in the Greek and Coptic block, with glyphs based on those in document N2946.

RESOLUTION M47.24 (Lepcha script):

WG2 resolves to encode the Lepcha script proposed in document N2947 in a new block 1C00 – 1C4F named 'Lepcha', in a future amendment to the standard, and populate it with seventy four (**74**) characters (some of which are combining) with the names, glyphs and code position assignments as shown on pages 17 and 18 in document N2947.

RESOLUTION M47.25 (Vai script):

WG2 resolves to encode the Vai script proposed in document N2948 in a new block A500 – A61F named 'Vai', in a future amendment to the standard, and populate it with two hundred and eighty four (**284**) characters with the names, glyphs and code position assignments as shown on pages 22 thruough 27 in document N2948.

RESOLUTION M47.26 (Saurashtra script):

WG2 resolves to encode the Saurashtra script proposed in document N2969 in a new block A880 – A8DF named 'Saurashtra', in a future amendment to the standard, and populate it with eighty one (**81**) characters (some of which are combining) with the names, glyphs and code position assignments (A880 to A8C4 and A8CE to A8D9) as shown on pages 11 and 12 in document N2969.

RESOLUTION M47.27 (Ol Chiki script):

WG2 resolves to encode the Ol Chiki script proposed in document N2984 in a new block 1C50--1C7F named 'Ol Chiki', in a future amendment to the standard, and populate it with forty eight (**48**) characters with the names, glyphs and code position assignments as shown on pages 11 and 12 in document N2984.

RESOLUTION M47.28 (Hangul clarification):

With reference to documents N2994 and N2996, WG2 recognizes there is a need for some clarification regarding Hangul syllables and invites interested experts to participate in the discussion. WG2 also instructs its editor to draft appropriate clarification text to address the different items in these documents for further discussion and adding to the agenda for the next meeting.

RESOLUTION M47.29 (Amendment 3 – subdivision and PDAM text):

WG2 instructs its editor to prepare a project sub division proposal and PDAM text based on the various resolutions from this meeting accepting characters for inclusion in a future amendment to ISO/IEC 10646: 2003, and forward them to the SC2 secretariat for simultaneous ballot of sub division approval and PDAM registration (see documents N2993 and N2999). The proposed completion dates

for the progression of this work item are: PDAM 2006-02-15, FPDAM 2006-09-15, and FDAM 2007-02. *(Note: A total of **517** characters were accepted for inclusion in Amendment 3 at this meeting).*

RESOLUTION M47.30 (Todo Mongolian punctuation marks):

<div align="right">**Unanimous**</div>

With reference to document N2963 on three punctuation marks for Todo Mongolian, WG2 rejects the request since these characters can be unified with already coded characters in the standard as follows:
> TODO COMMA ONE with 002C - COMMA
> TODO COMMA TWO with 3001 - IDEOGRAPHIC COMMA
> TODO FULL STOP with 3002 - IDEOGRAPHIC FULL STOP

RESOLUTION M47.31 (10646 free availability):

<div align="right">**Unanimous**</div>

WG2 requests SC2 to request to JTC1 to make ISO/IEC 10646: 2003 and its amendments freely available on the web.

RESOLUTION M47.32 (CJK Ext C2):

<div align="right">**Unanimous**</div>

WG2 takes note of item 3 in document N2968 and authorizes IRG to start its deliberations regarding CJK Extension C2.

RESOLUTION M47.33 (Future meetings):

<div align="right">**Unanimous**</div>

WG 2 meetings:
> Meeting 48 – 2006-04-24/28, Mountain View, US; along with SC2 plenary
> Meeting 49 – 2006-09-25/28, Tokyo, Japan
> Meeting 50 – Spring 2007, Europe (seeking Host)

IRG meeting:
> IRG #25 - 2005-11-28/12-02, Berkeley, CA, USA (host: Unicode Consortium)
> IRG #26 - 2006-06-12/16, Hue, Vietnam
> IRG #27 - 2006-11-27/12-01 (to be confirmed), Taipei, Taiwan (host: TCA)
> IRG #28 - 2007 May / June, Hangzhou, China (place to be confirmed)

RESOLUTION M47.36 (Principles and procedures):

<div align="right">**Unanimous**</div>

WG2 accepts the draft updates to its principles and procedures as presented in document N2952 and instructs its convener to post a revised document N3002 based on discussions at M47 and the proposal summary form to the WG2 web site.

RESOLUTION M47.37 (Roadmap snapshot):

<div align="right">**Unanimous**</div>

WG2 instructs its convener to post an updated snapshot of the roadmaps (document N2986) as soon as it is ready to the WG2 web site.

RESOLUTION M47.34 (Appreciation to DKUUG for web services):

<div align="right">**By Acclamation**</div>

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

RESOLUTION M47.35 (Appreciation to Host):

<div align="right">**By Acclamation**</div>

WG 2 thanks Ecma-International and its staff, in particular Mr. Jan Van den Beld and Ms. Isabelle Walch for hosting the meeting and their kind hospitality; and European Telecommunications Standards Institute (ETSI) and its staff, in particular Ms. Geneviève Georges and Ms. Elodie Rouveroux for providing excellent meeting facilities.

Meeting 47 Attendance List

JTC1/SC2/WG2 Meeting 47, ETSI Campus, Sophia Antipolis, France; 2005-09-12/15
The following 31 delegates representing 8 national bodies, 2 liaison organizations, and 1 guest were present at different times during the meeting.

Name	Representing	Affiliation
Alain LaBonté	Canada Editor 14651	Ministère des services gouvernementaux du Québec
V. S. (Uma) Umamaheswaran	Canada; Recording Secretary	IBM Canada Ltd.
GAO Xia	China	Xinjiang Informationization Office
HEXIGEDUREN	China	Council for Mongolian Language, Government of Inner Mongolia, China
JIA Jiehua	China	Ethnic Affairs Committee
JIA Lasen	China	Inner Mongolia University
LIU Xiaokai	China	General Administration of Press and Publications
SLAMU Wushouer	China	Department of Computer Sciences, Xinjiang University
CHEN Zhuang	China Contributing Editor	Chinese Electronics Standardization Institute
Erkki I. Kolehmainen	Finland	Research Institute for the Languages of Finland
Klaas Ruppel	Finland	Research Institute for the Languages of Finland
Andreas Stötzner	Germany	SIGNA
Jan Van den Beld	Host	Ecma-International
Michael Everson	Ireland; Contributing Editor	Evertype
LU Qin	IRG Rapporteur	Hong Kong Polytechnic University
Kazuhito OHMAKI	Japan	National Institute of Advanced Industrial Science and Technology
Masahiro SEKIGUCHI	Japan	Fujitsu Limited
Taichi KAWABATA	Japan	NTT Cyber Solutions Laboratories
Yasuhiro ANAN	Japan	Microsoft Japan
Dae Hyuk AHN	Korea (Republic of)	Microsoft Korea
Kyongsok KIM	Korea (Republic of)	Pusan National University
Seung Jae LEE	Korea (Republic of)	National Institute of the Korean Language
Taik-Joo NAM	Korea (Republic of)	Korean Agency for Technology and Standards
Tatsuo KOBAYASHI	SC2 Chair, Japan	Justsystem Corporation
C. C. HSU	TCA	Taipei EC/EDI Committee; IBM Taiwan Corporation
TSENG Shih-Shyeng	TCA	Academia Sinica
WEI Lin-Mei	TCA	CMEX
Asmus Freytag	USA Liaison - The Unicode Consortium; Contributing Editor	Unicode Inc.
Ken Whistler	USA; Contributing Editor	Sybase Inc.
Mike Ksar	USA; Convener	Microsoft Corporation
Michel Suignard	USA; Project Editor	Microsoft Corporation