

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

**ISO/IEC JTC 1/SC 2 N 3614  
ISO/IEC JTC 1/SC 2/WG 2 N 2454R  
Date: 2002-05-30**

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| <b>Source:</b> WG 2 meeting 42, Dublin, Ireland; 2002-05-20/23           |
| <b>Title:</b> Resolutions of WG 2 meeting 42                             |
| <b>Action:</b> For approval by SC 2 and for information to WG 2 and WG 3 |
| <b>Status:</b> Adopted at meeting 42 of WG 2                             |
| <b>Distribution:</b> ISO/IEC JTC 1/SC 2 and WG 2                         |

Experts from Canada, Cambodia (Guest), CEN/TC304 (liaison), China, Finland, Ireland, Japan, Republic of Korea, Pakistan (Guest), Singapore, TC46/SC4 (liaison), and the USA were present when the following resolutions were adopted.

Thirty seven (37) delegates representing ten (10) national bodies, three (3) liaison organizations and eight (8) guests / hosts attended the meeting (see attached attendance list).

(Note: Corrected ROK position from 'Abstain' to 'Against' for resolution M42.14. Several editorial corrections are also included.)

**RESOLUTION M42.1 (Eject symbol):**

**Unanimous**

WG2 resolves to encode in the BMP, 23CF EJECT SYMBOL based on details in document N2432, with a filled-in version of the glyph from figures 2 and 4 in document N2415, and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.2 (Additional Indic characters):**

**Unanimous**

WG2 resolves to encode the twelve additional Indic characters in the BMP, with their glyphs, code positions and names as detailed in document N2425, and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.3 (Syriac characters):**

**Unanimous**

WG2 resolves to encode the six additional Syriac characters the BMP for use in Sogdian and Persian languages proposed in document N2422 as follows:

- 072D SYRIAC LETTER PERSIAN BHETH
- 072E SYRIAC LETTER PERSIAN GHAMAL
- 072F SYRIAC LETTER PERSIAN DHALATH
- 074D SYRIAC LETTER SOGDIAN ZHAIN
- 074E SYRIAC LETTER SOGDIAN KHAPH
- 074F SYRIAC LETTER SOGDIAN FE

with their glyphs as shown on page 5 of document N2422, and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.4 (Tamil symbols feedback):**

**Unanimous**

WG2 accepts the change to annotation for the Tamil Number Sign at 0BFA from Akkam to Enn, proposed in document N2421, and instructs its project editor to include this change in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.5 (Uralic Phonetic Alphabet Extensions):**

**Unanimous**

WG2 resolves to encode the 134 phonetic extension characters in the BMP for use in UPA, with code positions, names and glyphs as shown in document N2442, including the entry 0357 COMBINING RIGHT HALF RING ABOVE (missing from the names list), and creating a new block 1D00-1D7F Phonetic Extensions, and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.6 (Urdu characters)****Unanimous**

WG2 resolves to encode the following characters in the BMP for use in Urdu, proposed in document N2413-4 with their glyphs from that document:

060F ARABIC SIGN MISRA

0603 ARABIC SIGN SAFHA

0659 ARABIC SMALL HIGH TAH (also to be added to the list of combining marks in Annex B)

FDFD ARABIC LIGATURE BISMILLAH ARRAHMAN ARRAHIM

and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.7 (Khmer characters):****Unanimous**

Based on the recommendations from the ad hoc group on Khmer script at meeting 42, WG2 resolves to:

Add explanatory notes in Annex P on the use of characters at code positions 17A3, 17A4, 17B4, 17B5, 17D3, and 17D8.

Change the glyphs to 17B4 and 17B5 to reflect their intended usage in the script

Refinements to a few other glyphs as agreed upon by the ad hoc group on Khmer, as reflected in the code charts in document N2491 (Table 53, Row 17)

and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.8 (Double diacritics)****Unanimous**

WG2 accepts the three double diacritics proposed in document N2457 for encoding in the BMP as follows:

035D COMBINING DOUBLE BREVE

035E COMBINING DOUBLE MACRON

035F COMBINING DOUBLE MACRON BELOW (changed from proposal in document N2457)

with glyphs shown on page 3 of document N2457, and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.9 (Clarification notes on UCS4 with UTF-32 and on the term "Canonical")****Unanimous**

WG2 accepts the notes proposed in document N2497 as clarification text in clause 5 for the term "canonical", and in clause 13.2 for UCS-4, and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.10 (Gujarati Sign Avagraha):****Unanimous**

WG2 accepts the defect and proposed correction to the glyph for 0ABD GUJARATI SIGN AVAGRAHA, (reported in document N2417) and instructs its project editor to include this editorial correction in FPDAM-2 to ISO/IEC 10646-1: 2000.

**RESOLUTION M42.11 (Removal of 2 Variation Sequences):****Unanimous**

WG2 accepts the reported defect and the rationale provided in document N2456, and resolves to remove the two variation sequences 2278 + FE00 and 2279 + FE00 from the list of sequences under clause 24.5 - Variation Selectors (in Amd. 1 to ISO/IEC 10646-1: 2000). WG2 instructs its project editor to include this correction in FPDAM-2 to ISO/IEC 10646-1.

**RESOLUTION M42.12 (ROK CJK Source reference):****Unanimous**

WG2 instructs the IRG to provide new CJK source data file by:

a. updating ROK sources, replacing K-xxxx(sp) to K4-xxxx (no space), to the project editor by 2002-06-15, and

b. fixing the error in the CJK Source Reference table for 26C29 -- J4-2544 (see disposition of ballot comments in document N2490)

IRG is also instructed to update the Super CJK database accordingly.

**RESOLUTION M42.13 (Compatibility Hanja characters):**

**Abstain: China, Singapore**

**For: Canada, Finland, Ireland, Japan, Republic of Korea, and the USA**

WG2 resolves to add 122 compatibility Hanja characters to the range FA70 to FAE9 and mapping of 38 compatibility Hanja characters to existing ideographs (see details in document N2493), to address the PDAM-2 ballot comments from DPRK.

**RESOLUTION M42.14 (FPDAM-2 to Part 1):**

**Against: Republic of Korea**

**For: Canada, China, Finland, Ireland, Japan, Singapore, and the USA**

WG 2 accepts the disposition of PDAM-2 ballot comments in document N2489 including the following significant changes:

- a. Modifications to Limbu script entries in Annex B and the corresponding charts in Table 54, Row 19, as identified in document N2489 (based on changes proposed in document N2410)
- b. Addition of 16 Arabic characters as identified in document N2489 (based on details provided in documents N2481-2483 and N2487, including changes to the names of four characters identified in document N2489), and the addition of combining marks from this list to Appendix B
- c. Removal of 06DD END OF AYAH from the list of combining characters in Annex B
- d. Addition of 24FF NEGATIVE CIRCLED DIGIT ZERO (based on details in document N2441)
- e. Addition of 43 Khmer characters in code positions 17DD, 17F0--17F9, 19E0--19FF (based on details in documents N2470 and N2471), and creating the new block 19E0--19FF called KHMER SYMBOLS.
- f. Removal of 267E DO NOT LITTER SIGN, 267F RECYCLABLE PACKAGING, 31D0--31D4 (five Vulgar Fraction characters), 2618 CIRCLED UPWARDS INDICATION, 2700 LEFTWARDS SCISSORS
- g. Changing names to 2614 UMBRELLA WITH RAIN DROPS and 2615 HOT BEVERAGE
- h. Moving and renaming of 23CF to 26A0 WARNING SIGN, and 23D0 to 26A1 HIGH VOLTAGE SIGN
- i. Renaming block name Supplemental Arrows-C to Miscellaneous Symbols and Arrows
- j. Removal of Supplemental CJK compatibility block by moving 31C0 to 32CC SQUARE HG, 31C1 to 32CD SQUARE ERG, 31C2 to 32CE SQUARE EV, 31C3 to 32CF LIMITED LIABILITY SIGN, 31C4 to 3250 PARTNERSHIP SIGN and 31C5 to 213B FACSIMILE SIGN.
- k. Addition of a new collection MODERN EUROPEAN SCRIPTS
- l. Addition of two Greek letters for Bactrian 03F7 GREEK CAPITAL LETTER BACTRIAN SHO and 03F8 GREEK SMALL LETTER BACTRIAN SHO (based on details in document N2411)

**RESOLUTION M42.15 ( Progression of Amendment 2 to 10646-1):**

**Against: Republic of Korea**

**For: Canada, China, Finland, Ireland, Japan, Singapore, and the USA**

WG2 instructs its project editor to prepare the text for FPDAM-2 to ISO/IEC 10646-1 based on the disposition of comments in document N2489, and including other accepted changes from resolutions M42.1 to M42.13 above, and submit these documents to the SC2 secretariat for FPDAM ballot with the following modified schedule of FPDAM-2 2002-10; FDAM-2 2003-04.

**RESOLUTION M42.16 (Monogram, digram and tetragram characters):**

**Unanimous**

WG2 accepts the 87 monogram, digram and tetragram Tai Xuan Jing Symbols for encoding in Plane 1 with the code positions, glyphs and character names as shown in document N2416, in a block from 1D300 to 1D356 with the block name "Tai Xuan Jing Symbols". WG2 further instructs its project editor to include these characters in FPDAM-1 to ISO/IEC 10646-2.

**RESOLUTION M42.17 (Changes to Aegean script):****Unanimous**

WG2 accepts the following changes to the Aegean script encoded in PDAM-1 to 10646-2 detailed in document N2455:

- a. Remove the annotations to character names for 1000E, 10018, 10001B, 10025, 1002D, 10042, 10049 and 10052
- b. Change the glyphs for 10009, 10014, 1000E, 10099, 100D7 and 1013D to those shown in document N2455.

WG2 further instructs its project editor to include these characters in FPDAM-1 to ISO/IEC 10646-2.

**RESOLUTION M42.18 (Four Deseret characters):****Unanimous**

WG2 accepts the request for adding four Deseret characters in documents N2473 and N2474, and allocates them as follows:

- 10426 DESERET CAPITAL LETTER OI with the third glyph on page 1 of document N2473
- 10427 DESERET CAPITAL LETTER EW with the first glyph on page 1 of document N2473
- 1044E DESERET SMALL LETTER OI with the fourth glyph on page 1 of document N2473
- 1044F DESERET SMALL LETTER EW with the second glyph on page 1 of document N2473

WG2 further instructs its project editor to include these characters in FPDAM-1 to ISO/IEC 10646-2.

**RESOLUTION M42.19 (Disunify Mathematical Script Small L):****Unanimous**

WG2 accepts the request for disunification of MATHEMATICAL SCRIPT SMALL L character from SCRIPT SMALL L at 2114 (in document N2449), and resolves to encode the disunified character as follows:

1D4C1 MATHEMATICAL SCRIPT SMALL L (with the glyph shown in document N2449)

and instructs its project editor to include it in FPDAM-1 to ISO/IEC 10646-2.

**RESOLUTION M42.20 (CJK Error Corrections):****Unanimous**

WG2 resolves to correct the following as recommended by IRG in document N2448:

- a. Change the G-source references for the following characters from G\_KX to G\_HZ:  
U+23B0E, U+23839, U+24BAD, U+26CED, U+26F5F, U+27466, U+23F72, U+27B66
- b. Drop the G-source references for the following characters:  
U+24B3E, U+24C67, U+29B3B, U+2579B, U+266A9, U+24454, U+239F7
- c. Correct the glyphs for the following eight Unified Ideographs to those shown in document N2448: U+21E45, U+236AD, U+2384F, U+24FC4, U+25D0E, U+276EB, U+27CF1, and U+2890F.

and instructs its project editor to include these corrections in FPDAM-1 to ISO/IEC 10646-2.

The IRG is instructed to update the Super\_CJK database accordingly.

**RESOLUTION M42.21 (Amendment 1 to 10646-2):****Unanimous**

WG 2 accepts the disposition of PDAM-1 ballot comments in document N2490, which includes the following notable changes from the PDAM-1 text:

- a. The block E0110-E01FF is moved left by 1 column to E0100 to E01EF and renamed VARIATION SELECTORS SUPPLEMENT, for the variation selectors in the SPP.
- b. Addition of mapping of code position 2564A to DPRK source reference KP1-6134 in the CJK Source Reference table for CJKB (also requested in document N2427)
- c. No DPRK compatibility ideographs in SIP (see resolution M42.13 above)

**RESOLUTION M42.22 (Progression of Amendment 1 to 10646-2):**

**Unanimous**

WG2 instructs its project editor to prepare the text for FPDAM-1 to ISO/IEC 10646-2 based on the disposition of comments in document N2490, and including other accepted changes from resolutions M42.16 to M42.20 above, and submit these documents to the SC2 secretariat for FPDAM ballot with the following modified schedule of FPDAM-1 2002-10; FDAM-1 2003-04.

**RESOLUTION M42.23 (Coptic disunification):**

**Unanimous**

WG2 accepts the rationale and agrees in principle to the disunification of Coptic script from Greek script proposed in document N2444 and invites the proposers to submit a refined proposal for Coptic for future consideration by WG2.

**RESOLUTION M42.24 (Roadmaps):**

**Unanimous**

WG2 accepts the snapshot of the latest roadmaps in document N2461 and requests SC2 to circulate to national bodies and liaison organizations for referencing as a guide for future submissions replacing the previous snapshot document N2409.

**RESOLUTION M42.25 (Single part standard):**

**Unanimous**

WG2 accepts in principle the proposal in document N2408 to combine the two parts of 10646 into a single part and requests its project editor to prepare a new project sub-division proposal and send to SC2 for approval with the rationale from document N2408 and the following scope:

To merge and reorganize the textual parts of 10646-1: 2000, 10646-2: 2001, Amd. 1 to 10646-1: 2000, and the final texts of Amd. 2 to 10646-1: 2000 and Amd. 1 to 10646-2: 2001 (after completion of these amendments)

To merge and reorganize the code charts and name lists of the two parts and the three amendments mentioned above, keeping the multiple-column layout for the CJKV Ideographs in the BMP unmodified.

WG2 further instructs its project editor to prepare a Working Draft of the single-part document for consideration at the next WG2 meeting following the above-outlined scope.

The project schedule will be determined at the December 2002 meeting of WG2 after a review of the working draft.

**RESOLUTION M42.26 (Basic international CJK sub-sets):**

**Unanimous**

WG2 notes resolution M19.2 from IRG in document N2447, and instructs the IRG to form an interest group, investigate and report to the next WG2 meeting on the need, scope and criteria for one or more basic international subsets of CJK Unified Ideographs.

**RESOLUTION M42.27 (CLAUI Future):**

**Abstain: Republic of Korea**

**For: Canada, China, Finland, Ireland, Japan, Singapore, and the USA**

With reference to document N2494 (SC2 N3606) containing the last CLAUI meeting minutes and recommendations SD-1 and SD-2, WG2 requests SC2 to adopt by letter ballot and communicate the following to JTC1:

We are of the opinion that JTC1 should review the role and scope of CLAUI TD. We support the goal of ensuring support for Cultural and Linguistic Adaptability and User Interface (CLAUI) related considerations in all JTC 1 standards. However, we disagree with the recommendations from the CLAUI - TD meeting contained in document SC2 N3606 (JTC 1/N 6744). Coordination of CLAUI objective-related activities should be handled by appropriate liaison relationships between JTC1 sub committees as needed. We see no need for a standing committee with a standing agenda and annual meetings recommended in SD-1 and SD-2 in document SC2 N3606 (JTC 1/N 6744). Any coordination issues that are brought to the attention of JTC1 on CLAUI topics should be dealt with by a JTC1 ad hoc group during its plenary meetings. A special face-to-face or teleconference meeting should be authorized only when there is a well-identified coordination problem that cannot be dealt with by the regular liaison relationships or by a JTC1 ad hoc group. In particular the next CLAUI face-to-face meeting for October 2002 should be cancelled pending consideration of the CLAUI meeting recommendations by the JTC1 plenary in October 2002.

**RESOLUTION M42.28 (Future Meetings):**

**Unanimous**

WG 2 meetings:

Meeting 43 – 2002-12-09/12 (to be co-located with SC 2 plenary on 2002-12-12/13) Japan  
Meeting 44 -- 2003-10-20/23, San Francisco Bay area, USA  
Meeting 45 -- 2004-10 (tentative), Europe (tentative)

IRG meetings:

IRG 20 - Hanoi, Vietnam 2002-11-18/22  
IRG 21 - China 2003-04-07/11  
IRG 22 - Taipei (tentative) - after WG2 meeting 44 (tentative)

**RESOLUTION M42.29 (Appreciation to DKUUG for web services):**

**By Acclamation**

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

**RESOLUTION M42.30 (Appreciation):**

**By Acclamation**

WG 2 thanks its host NSAI of Ireland, the sponsors Everson Typography, IBM / Lotus Ireland and Microsoft Ireland, Ms. Ann Kelsey of Microsoft, and Mr. Christian Cooke of fishamble.net, for hosting the meeting and the excursion to New Grange, their kind hospitality, and for providing excellent secretarial administrative support.

## Attendance List

The following thirty seven (37) delegates representing ten (10) national bodies, three (3) liaison organization and eight (8) guests / hosts attended the meeting.

| Name                      | Representing   | Affiliation  |
|---------------------------|--|--|
| V. S. (Uma) Umamaheswaran | Canada,<br>Recording Secretary                                   | IBM Canada   |
| He Lifeng                 | China  | Yunan Minority Languages Commission                            |
| Cai Heng Cheng            | China  | Yunan Ethnic Affairs Committee                                 |
| Xi Weining                | China  | Yunan Minority Languages Commission                            |
| Chen Min                  | China  | Ministry of Education  |
| Chen Zhuang               | China  | Chinese Electronics Standardization Institute                  |
| Zhang Zhoucai             | China, IRG Rapporteur  | CCID   |
| Klaas Ruppel              | Finland  | Research Institute for the Languages of Finland                |
| Erkki Kolehmainen         | Finland, CEN /TC304  | Finnish Information Society Development Centre                 |
| Maurice Bauhahn           | Guest  | Independent  |
| HARADA Shiro              | Guest - Cambodia   | University of Tokyo  |
| LAO Kim Leang             | Guest - Cambodia   | Japan Quality Assurance Organization                           |
| Sorasak PAN               | Guest - Cambodia   | Under Secretary of State, Prime Minister's Office,<br>Cambodia |
| Sok Huor CHEA             | Guest - Cambodia   | National Election Computer Center                              |
| Sarmad Hussain            | Guest - Pakistan   | National University of Computer and Emerging<br>Sciences       |
| Aiman Copty               | Ireland - Host   | Microsoft Corporation  |
| Ian Cowan                 | Ireland - Host   | National Standards Authority of Ireland                        |
| Christian Cooke           | Ireland  | fishamble.net  |
| Michael Everson           | Ireland, Contributing editor                                     | Everson Typography   |
| Shun ISHIZAKI             | Japan  | Keio University  |
| Takayuki K. SATO          | Japan  | Center of the International Cooperation for<br>Computerization |
| Tatsuo L. KOBAYASHI       | Japan  | Justsystem Corporation   |
| Hideki NAKADE             | Japan  | Mitsubishi Research Institute                                  |
| Yasuhiro ANAN             | Japan  | Microsoft Corporation  |
| Pak Tong Ki               | DPR of Korea   | Committee for Standardization                                  |
| Chang Jin CHOE            | DPR of Korea   | Committee for Standardization                                  |
| Tae-Sue HAN               | Republic of Korea  | Agency for Technology and Standards, MOCIE                     |
| Kyongsok Kim              | Republic of Korea  | Pusan National University                                      |
| James Seng                | Singapore  | SPRING, Singapore  |
| Kent Karlsson             | Sweden   | Chalmers University of Technology                              |
| Randall Barry             | TC46 / SC4   | US Library of Congress   |
| Cathy Wissink             | USA  | Microsoft Corporation  |
| Ken Whistler              | USA  | Sybase Inc.  |
| Mark Davis                | USA  | IBM Corporation  |
| Michael Ksar              | USA, Convener  | Microsoft Corporation  |
| Michel Suignard           | USA; Editor Parts 1 & 2  | Microsoft Corporation  |
| Asmus Freytag             | USA; Liaison - The Unicode<br>Consortium; Contributing<br>editor | Unicode, Inc.  |