



ISO/IEC JTC 1/SC 2/WG 2  
Universal Multiple-Octet Coded Character Set (UCS) - ISO/IEC 10646  
Secretariat: ANSI

**DOC TYPE:** Meeting Minutes

**TITLE:** Unconfirmed minutes of WG 2 meeting 42, Microsoft EPDC2, South County Business Park, Dublin 18, Ireland; 2002-05-20/23

**SOURCE:** V.S. Umamaheswaran, Recording Secretary, and Mike Ksar, Convener

**PROJECT:** JTC 1.02.18 – ISO/IEC 10646

**STATUS:** SC 2/WG 2 participants are requested to review the attached unconfirmed minutes, act on appropriate noted action items, and to send any comments or corrections to the convener as soon as possible but no later than 2002-11-30.

**ACTION ID:** ACT

**DUE DATE:** 2002-11-30

**DISTRIBUTION:** SC 2/WG 2 members and Liaison organizations

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**ISO**  
**International Organization for Standardization**  
**Organisation Internationale de Normalisation**

**ISO/IEC JTC 1/SC 2/WG 2**  
**Universal Multiple-Octet Coded Character Set (UCS)**

**ISO/IEC JTC 1/SC 2/WG 2 N2453Draft**  
**Date: 2002-10-30**

<b>Title:</b>	Unconfirmed minutes of Meeting 42, Microsoft, EPDC2, South County Business Park, Dublin 18, Ireland; 2002-05-20/23
<b>Source:</b>	V.S. Umamaheswaran (umavs@ca.ibm.com), Recording Secretary Mike Ksar (mikeksar@microsoft.com), Convener
<b>Action:</b>	WG 2 members and Liaison organizations
<b>Distribution:</b>	ISO/IEC JTC 1/SC 2/WG 2 members and liaison organizations

## 1 Opening

**Input document:**  
N2451 Updated WG2 Experts List; Ksar; 2002-05-15

The meeting was convened at 10:05 h by the convener. Mr. Mike Ksar welcomed the delegates to the meeting.

The meeting host is the National Standards Authority of Ireland, NSAI; co-host is Microsoft Ireland. Thanks were extended to Mr. Brendan Murray of IBM-Lotus for hosting the social event on Sunday, the day before the meeting started.

Dr. Ian Cowan, on behalf of NSAI, the Irish national body, welcomed and addressed the delegates to Ireland. "NSAI has been involved with the work of JTC1 and has been involved with it from the beginning -- also with its predecessor TC97. NSAI is a P member of JTC1, to SC2 and also to SC22. NSAI is also involved with CEN, ETSI and to CEN / CENELEC. The work of SC2/ WG2 is a single example of modern international cooperation. Inclusion of characters from all the languages in the Multiple Octet Character set is very useful work. ICT (Information and Communications Technology) is one of the areas specified for support for R&D in Ireland in addition to Biotechnology. The Science Foundation has been formed to single out areas for fundamental research and focus in Ireland. NSAI is indebted to Microsoft, Ireland, for the meeting facilities provided. You had a trip to Newgrange and Knowth yesterday -- courtesy of IBM-Lotus, Ireland. A CD-ROM containing the work of NSAI is available for the delegates. If any delegate would like to discuss mutual cooperation with NSAI please contact me. Once again, it is my privilege and pleasure to welcome the delegates and thanks to the co-host Microsoft for providing the meeting facilities."

Mr. Aiman Copt, Director of Localization for the Platforms Division of Microsoft, welcomed the delegates to Ireland. "I know many of the delegates from previous work. If you have any questions please contact Ms. Ann Kelsey".

Mr. Michael Everson invited the delegates to a visit the Chester Library. It has an interesting collection of documents on scripts for western and Arabic scripts. This visit will be arranged for 14:00h on Thursday after the meeting closes.

Mr. Mike Ksar: I see some new faces -- please contact me if you need any assistance. We are here to collaborate with everyone. New documents should be given to me. Most documents have been posted to the WG2 web site. We have available one hard copy of the documents up to document N2472. LAN facilities and a printer have been made available by Microsoft for this meeting. (Eighteen delegates wanted hardcopy of the meeting documents - these were made available later in the day).

## 1.1 Roll Call

The following thirty seven (37) delegates representing ten (10) national bodies, three (3) liaison organizations and eight (8) guests / hosts attended the meeting. Pakistan was represented at a WG2 meeting for the first time.

Name	Representing	Affiliation
V. S. (Uma) Umamaheswaran	Canada, 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, Cambodia
Sok Huor CHEA	Guest - Cambodia	National Election Computer Center
Sarmad Hussain	Guest - Pakistan	National University of Computer and Emerging Sciences
Aiman Coptly	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 Computerization
Tatsuo L. KOBAYASHI	Japan	Justsystem Corporation
Hideki NAKADE	Japan	Mitsubishi Research Institute
Yasuhiro ANAN	Japan	Microsoft Corporation
Tong Ki PAK	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 Consortium; Contributing editor	Unicode, Inc.

Drafting committee: The draft resolutions were prepared by the recording secretary Dr. V.S. Umamaheswaran with assistance from Messrs. Michel Suignard (the editor) and Mike Ksar (the convener).

## 2 Approval of the agenda

Input document:

**N2469** Updated agenda - meeting 42 - Dublin; Ksar; 2002-05-17

The draft agenda in document N2469 was approved with some modifications, and additions of new documents to the different agenda items. All changes made during the progress of the meeting are captured and are reflected in the appropriate sections in these minutes. Some of the agenda items have been reorganized or renumbered in these minutes.

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### 3 Approval of minutes of meeting 41

**Input document:**

**N2403 Minutes of meeting 41 in Singapore; Uma/Ksar; 2002-04-17**

Dr. Umamaheswaran introduced document N2403 containing the minutes of meeting 41, which was sent out on 2002-04-22 with a request for comments by 2002-05-15. The draft minutes were accepted with the following editorial changes:

- Cover page:
  - Update address and phone number for Mr. Mike Ksar.
- Section 16 - Action Items:
  - Re-sequence AI-41-12 to 14 as AI-41-13 to 15; label -12 was duplicated.
  - Re-sequence AI-41-14-e to h as AI-41-14-d to g; label -d was missing.

### 4 Review action items from previous meeting

**Input document:**

**N2403 Minutes of meeting 41 in Singapore; Uma/Ksar; 2002-04-17**

Dr. Umamaheswaran reviewed the outstanding action items in section 16 of document N2353. The updated status for each item is shown in the tables in the following sections. All action items that were not completed are carried forward to the next meeting and are shown in section 16 on page 49 in these minutes.

#### 4.1 Action items from previous WG 2 meetings (numbers 25 to 36)

All action items recorded in the minutes of the following meetings have been either completed or dropped. Only new action items from the last meeting and outstanding action items from earlier meetings are listed in the tables that follow.

- a. meeting 25, 1994-04-18/22, Antalya, Turkey (document N1033)
- b. meeting 26, 1994-10-10/14, San Francisco, CA, USA (document N1117)
- c. meeting 27, 1995-04-03/07, Geneva, Switzerland (document N1203)
- d. meeting 28, 1995-06-22/26, Helsinki, Finland (document N 1253)
- e. meeting 29, 1995-11-06/10, Tokyo, Japan (document N1303)
- f. meeting 30, 1996-04-22/26, Copenhagen, Denmark (document N1353)
- g. meeting 31, 1996-08-12/16, Québec City, Canada (document N1453)
- h. meeting 32, 1997-01-20/24, Singapore (document N1503)
- i. meeting 33, 1997-06-30/07-04, Heraklion, Crete, Greece (document N1603)
- j. meeting 34, 1998-03-16/20, Redmond, WA, USA (document N1703)
- k. meeting 35, 1998-09-21/25, London, UK (document N1903), and,
- l. meeting 36, 1999-03-09/15, Fukuoka, Japan (document N2003).

#### 4.2 Outstanding action items from meeting 37, 1999-09-17/21, Copenhagen, Denmark

Item	Assigned to / action (Reference resolutions in document N2104, and minutes in document N2103, with the corrections to the minutes noted in section 3 of document N2203, for Meeting 37)	Status
<b>AI-37-11</b>	<b>Japanese national body (Mr. Takayuki Sato)</b>	
<b>b</b>	To communicate document N2055 - Comment on Proposal for Nepalese Script, Hugh McG. Ross, 1999-07-29, as feedback to Nepal. M38, M39, M40 and M41 - in progress.	Completed; see document N2466.

#### 4.3 Outstanding action items from meeting 38, 2000-07-18/21, Beijing, China

Item	Assigned to / action (Reference resolutions in document N2204, and minutes in document N2203, with the corrections to the minutes noted in section 3 of document N2253, for Meeting 38)	Status
<b>AI-38-12</b>	<b>Myanmar national body</b>	
<b>a</b>	(Myanmar script experts in particular) to review document N2033 - Proposal for Extension of Myanmar Coded Set, John Okell and Hugh McG Ross, UK, 1999-06-03, with particular attention to the proposed DOUBLE COMBINING MARKS in the document. M38: action item M17-5 d, reassigned to Myanmar national body. M39, M40 and M41 - in progress.	Completed; see document N2430R.

#### 4.4 Outstanding action items from meeting 39, 2000-10-08/11, Vouliagmeni, Athens, Greece

Item	Assigned to / action (Reference resolutions in document N2254, and minutes in document N2253, with the corrections to the minutes noted in section 3 of document N2353, for Meeting 39)	Status
<b>AI-39-6</b>	<b>Irish national body (Mr. Michael Everson)</b>	
<b>b</b>	With reference to document N2241 on Egyptological characters, to refine the proposal working in an ad hoc group with other experts in Egyptology. M40 - in progress.	Dropped.
<b>c</b>	Is invited to prepare a contribution on guidelines on the use of DIGITS versus NAMES of DIGITS in character names in ISO/IEC 10646. M40 and M41 - in progress.	In progress.

#### 4.5 Outstanding action items from meeting 40, 2001-04-02/05, Mountain View, CA, USA

Item	Assigned to / action (Reference resolutions in document N2354, and unconfirmed minutes in document N2353 with the corrections noted in section 3 of document N2403, for Meeting 40)	Status
<b>AI-40-2</b>	<b>Convener - Mr. Mike Ksar</b>	
<b>b</b>	With assistance from Dr. Joe Becker and Mr. Michael Everson to prepare and send a response to the questions on Lao script in document N2333. M41 - In progress.	Dropped.
<b>c</b>	To finalize arrangements for Spring 2002 and Fall 2002 WG 2 meetings. M41 - In progress.	Completed; Fall 2002 meeting has been moved to December 2002 in Japan.
<b>AI-40-3</b>	<b>Editor of ISO/IEC 10646-1 Mr. Michel Suignard with assistance from contributing editors</b>	
	To prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:	
<b>a</b>	With the help of contributing editor Dr. Asmus Freytag: <ul style="list-style-type: none"> <li>a. to ensure that the glyphs used in the FPDAM-1 charts are of the correct proportions and size (reference Swedish comment SE12 on PDAM-1).</li> <li>b. to produce a Summary of Glyph Changes in the charts for information to WG 2.</li> <li>c. to get the proper glyph for the Arabic Tail Fragment from the font provider for Arabic charts</li> </ul> M41 - In progress.	Completed; Amd.1 sent to ITTF.
<b>b</b>	To satisfy the Canadian ballot comment on PDAM-1 to ISO/IEC 10646-1: "Comment 3: Regarding Variant Selector character, some explanatory text should be provided, A specific list of variants was also supposed to be	Completed; Amd.1 sent to ITTF.

Item	Assigned to / action (Reference resolutions in document N2354, and unconfirmed minutes in document N2353 with the corrections noted in section 3 of document N2403, for Meeting 40)	Status
	<p>included”,  an ad hoc group consisting of Messrs. Michel Suignard (Lead), Asmus Freytag, Ken Whistler and Michael Everson, is to meet and provide the necessary text to WG 2 before end of this meeting.  M41 - In progress.</p>	
e	<p>Resolution M40.6 (Correction of Glyph Errors): WG 2 acknowledges several glyph errors in ISO/IEC 10646-1 reported in the ballot responses in document N2238 to PDAM-1 and instructs its editor with assistance from the contributing editors to add the necessary corrections to the editorial corrections accumulated at the end of meeting 39 (updated document N2232 to be prepared by the editor per Relevant Resolution M39.5, in document N2254R).</p> <p>WG 2 further resolves to process those glyph corrections needed for the code tables in FPDAM-1 as part of FPDAM-1, and instructs its editor with assistance from the contributing editors to include the necessary corrigenda in FPDAM-1 text per Relevant Resolution M40.4 above.</p> <p>WG 2 further instructs its editor to create with the assistance of the contributing editors the text for a corrigendum to ISO/IEC 10646-1: 2000 containing the remaining items from the editorial corrigenda, and submit to SC 2 secretariat for further processing as a minor revision.  M41 - In progress.</p>	Completed; Amd.1 sent to ITTF.
<b>AI-40-4</b>	<b>Editor of ISO/IEC 10646-2: Mr. Michel Suignard with assistance from contributing editors</b>	
	To take note of the following and incorporate the needed text in the next draft of ISO/IEC 10646-2:	
a	<p>Resolution M40.3 (FDIS 10646-2): WG 2 notes the ballot results and comments in document N2337 to FDIS 10646-2 (N2309) and instructs its editor with assistance from the contributing editors, to prepare the .PDF files containing the final text of IS 10646-2, incorporating editorial changes discussed during the meeting, and forward it in a form suitable for ITTF publication on a CDROM, to meet the original publication target date of December 2001.  M41 - In progress.</p>	Completed; 10646-2 has been published.
b	<p>Editor / Editorial committee to take care in naming of files on the CD-ROM version of the standard to be suitable for ease of use of the standard.  M41 - In progress.</p>	Completed; 10646-2 has been published.
<b>AI-40-7</b>	<b>Irish national body (Mr. Michael Everson)</b>	
b	Together with Dr. Joe Becker to prepare a response on question on Lao script in document N2333 and send to the convener to respond.	Dropped.
c	<p>To prepare a document (jointly with the US) summarizing the email discussion on document N2317 and clarifying the behaviour / interactions of Combining Grapheme Joiner character.  M41 - In progress.</p>	Completed; published as part of Unicode 3.2 (UTR 28) at <a href="http://www.unicode.org">www.unicode.org</a> .
<b>AI-40-9</b>	<b>The US national body (Messrs. Michel Suignard, Joe Becker)</b>	
a	<p>To get a cleaner copy / rationale with glyphs of 17DD Khmer Laak and 17D8 Beyyal suitable for Mr. Takayuki Sato to be able to send for feedback to Cambodian Khmer experts (reference US comment T.1 to PDAM-1).  M41 - In progress.</p>	Dropped.
b	<p>Dr. Joe Becker - together with Mr. Michael Everson to prepare a response to the questions on Lao script in document N2333 and send to the convener to respond.  M41 - In progress.</p>	Dropped.
c	<p>US (Mr. Edwin Hart) and Japan (Mr. Takayuki Sato) are invited to prepare the working document for revising the TR15285 based on the ad hoc report in document N2359.  M41 - In progress.</p>	In progress.
<b>AI-40-11</b>	<b>Japanese national body (Mr. Takayuki Sato)</b>	
c	<p>US (Mr. Edwin Hart) and Japan (Mr. Takayuki Sato) are invited to prepare the working document for revising the TR15285 based on the ad hoc report in document N2359.</p>	In progress.

Item	Assigned to / action (Reference resolutions in document N2354, and unconfirmed minutes in document N2353 with the corrections noted in section 3 of document N2403, for Meeting 40)	Status
	M41 - In progress.	
<b>AI-40-12</b>	<b>Swedish national body (Dr. Kent Karlsson)</b>	
<b>a</b>	Is invited to submit a contribution on the question of “whether IDS are graphic characters?” and related concerns raised during the discussion on disposition of comment SE2 from Sweden on PDAM-1. M41 - In progress.	In progress.
<b>b</b>	Is invited to propose annotation text regarding Scan Line characters for inclusion (with reference to discussion on Swedish comment SE6 on PDAM-1). M41 - In progress.	Completed; published as part of Unicode 3.2 (UTR 28) at <a href="http://www.unicode.org">www.unicode.org</a> ..

#### 4.6 Action items from meeting 41, 2001-10-15/18, Singapore

Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
<b>AI-41-1</b>	<b>Meeting Secretary - Dr. V.S. UMaaheswaran</b>	
<b>a</b>	To finalize the document N2404 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N2404R.
<b>b</b>	To finalize the document N2403 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N2403.
<b>AI-41-2</b>	<b>Convener - Mr. Mike Ksar</b>	
<b>a</b>	To prepare the document register with the list of documents in the reverse order and with hot links to the documents. Agenda document should be made available to meeting in hardcopy form.	Completed; see document N2351R.
<b>b</b>	To work with the web site administrator to ensure that zipped file for meetings is self contained -- it contain links to documents in a local directory after unzipping, instead of links to remote sites.	Completed. See zipped documents for meeting 42.
<b>c</b>	To follow up and ensure that SC2 and JTC 1 have adopted the policy per resolution M41.11 (Policy regarding acceptable changes to ISO/IEC 10646)	Completed. Document N2304 sent to SC2.
<b>d</b>	To follow up and ensure that SC2 and JTC 1 have adopted the policy per resolution M41.13 (Policy regarding fonts for submissions to ISO/IEC10646)	Completed. Document N2304 sent to SC2.
<b>e</b>	To follow up and ensure adoption by SC2 of resolution M41.12 (Principles and Procedures).	Completed. Document N2304 sent to SC2.
<b>AI-41-3</b>	<b>Editor of ISO/IEC 10646-1 Mr. Michel Suignard with assistance from contributing editors</b>	
	<i>To prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:</i>	



Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
a	<p>Resolution M41.1 (Disposition of FPDAM-1 ballot comments):  WG 2 accepts the disposition of comments in document N2389 to ballot responses in documents N2388 (SC 2 N3556) on FPDAM-1 to 10646-1: 2000.  The following significant changes are included in document N2389:</p> <ol style="list-style-type: none"> <li>a. Add two new fixed collections corresponding to Unicode versions 3.1 and 3.2 (per Canadian comment).</li> <li>b. Fix the defect in existing fixed collections 301 and 302 per document N2377 (and Canadian comment).</li> <li>c. Add RIAL SIGN at FDFC per document N2375 (and Iranian comment) with appropriate glyph.</li> <li>d. Remove FA45 – CJK compatibility character and move the following code positions up by one (Japan and US comments).</li> <li>e. Add a new normative clause for Bi-directional algorithm with a normative reference to the Unicode Bi-Di algorithm (US comment).</li> <li>f. Postpone addition of collections MES-3A and MES-3B to Amendment 2 to Part 1 pending clarification of their contents and their names (based on several NB comments).</li> <li>g. Based on acceptance of disunification of mathematical and CJK symbols in resolution M40.7, add eight new characters per document N2389 (US comment T.6)</li> <li>h. Accept 15 new Variation Selectors at positions FE01 to FE0F per document N2370 (Unicode liaison report) and document N2389 (US comment T.9).</li> <li>i. Accept new clause on variation selectors and the identified specific variants and sequences for mathematical and Mongolian variant characters (US comment).</li> <li>j. Adjustments to the names of a few characters (see N2389).</li> </ol>	Completed; see documents N2389R (SC 2 N3564R) and SC 2 N3588.
b	<p>Resolution M41.2 (Inconsistency in UTF-8 definition):  WG 2 acknowledges the inconsistency in definition of UTF-8 in ISO/IEC 10646-1: 2000 reported in document N2369 and instructs its editor to process the correction as part of FDAM-1 on 10646, by deleting the middle sentence of Note 1 in clause D.4: “Values FFFE and FFFF also do not occur .. “. WG 2 further resolves to include this correction in Amendment 1 to ISO/IEC 10646-1: 2000.</p>	Completed; see documents N2389R (SC 2 N3564R) and SC 2 N3588.
c	<p>Resolution M41.4 (Progression of FDAM-1):  WG 2 instructs its editor to prepare and submit the FDAM-1 text along with the disposition of comments in document N2389, and reflecting resolutions M41.1 and M41.2 above, to the SC 2 secretariat for further processing with unchanged target completion dates -- FDAM 2002-02, AM 2002-06.</p>	Completed; see documents N2389R (SC 2 N3564R) and SC 2 N3588.
d	<p>Resolution M41.6 (CJK Source References for Part 1)  WG 2 instructs the IRG to prepare source-reference data tables (as .txt formatted files) for the CJK, and Extension A unified ideographs in ISO/IEC 10646-1: 2000 (similar to the data tables in ISO/IEC 10646-2: 2001).</p> <p>WG 2 further instructs the IRG with assistance of DPR of Korea to incorporate the source-reference data tables (including the KP sources - KPS 9566-97 and KPS 10721-2000 as sources, as identified in document N2376 for the national standards of DPR of Korea).</p> <p>The above must be completed by 2001-12-15, in order to be able to meet the schedules for Amendment 2 in resolution M41.5 above.</p> <p>WG 2 further instructs its editor to incorporate the above source-reference information into data tables to be processed as part of the Amendment 2 to ISO/IEC 10646-1: 2000.</p>	Completed; see document SC 2 N3584.
e	<p>Resolution M41.5 (Amendment 2 to 10646-1: 2000)  WG 2 accepts the following for inclusion in the BMP:</p> <ol style="list-style-type: none"> <li>a. 70 characters proposed in document N2373 for encoding in Part 1 with revised encodings: 268A and 268B (2 monograms), 268C—268F (4 digrams) and 4DC0—4DFF (64 hexagrams)</li> <li>a. 6 phonetic characters proposed in document N2366R at 0221, 0234—</li> </ol>	Completed; see document SC 2 N3584.

Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
	<p>0236</p> <ul style="list-style-type: none"> <li>b. Limbu script proposed in document N2339 in the range 1900—194F (following the roadmap) (subject to revision based on any feedback from Nepal)</li> <li>c. Tai Le (Dai) script proposed in document N2372 in the range 1950—197F (subject to revision based on any feedback from Dai experts in China)</li> <li>d. Two recycling symbols 267E - PITCH-IN and 267F - GREEN DOT symbols from proposal in document N2342</li> <li>e. 8 Tamil Symbols at positions 0BF3 to 0BFA proposed in document N2381R (subject to revision based on any feedback from Tamil experts), with TAMIL DITTO SIGN renamed TAMIL AS-ABOVE SIGN</li> <li>f. 46 symbols with the names proposed in document N2397 for inclusion in the BMP, with the shapes and code positions as detailed in document N2395</li> <li>g. Source-reference data tables for the CJK Ideographs including information for DPR of Korea sources per resolution M41.6 below</li> <li>h. Collection identifiers and names corresponding to refined definitions of MES-3A and MES-3B (refer postponed item f under resolution M41.1)</li> <li>i. Referencing Unicode Normalization Forms per resolution M41.3 above</li> <li>j. Incorporation of policy regarding acceptable changes to ISO/IEC 10646 per resolution M41.11 below.</li> </ul> <p>WG 2 further requests SC 2 to approve a project subdivision for Amendment no. 2 of ISO/IEC 10646-1: 2000, with the scope of including the above-identified characters. Document N2395 contains the code charts and name tables proposed for inclusion in this PDAM-2. The completion schedule is PDAM-2 2002/04; FPDAM-2 2002/10; FDAM-2 2003-02.</p> <p>WG 2 instructs its editor to prepare the text of PDAM-2 to Part 1 incorporating the above characters and submit it to SC 2 for further processing to meet the above target dates.</p>	
f	<p>Resolution M41.11 (Policy regarding acceptable changes to 10646):</p> <p>WG 2 requests SC 2 adopt the following policy regarding acceptable changes to ISO/IEC 10646 and convey the same to JTC 1 for information and to SC 2 membership to take note:</p> <ul style="list-style-type: none"> <li>a. Once a character is assigned a code position in the standard it cannot be reassigned in the interest of ensuring interoperability of standardized characters.</li> <li>b. The arrangement of the characters in the standard is fixed; sorting and collation of the characters is outside the scope of the standard.</li> <li>c. The character names chosen by WG 2 for the English version of the standard are unique, fixed and may be arbitrary; once a character name is assigned, it cannot be changed even if additional information is provided later. These name strings are used , for example to establish correspondences with characters in other standards.</li> <li>d. Any inconsistencies in names could be adjusted in other language versions either when the standard is translated or in supplementary external documentation.</li> </ul> <p>WG 2 further instructs its editor to prepare suitable text to reflect the above policy and incorporate it into Amendment 2 of Part 1.</p>	Completed; see document SC 2 N3584.
AI-41-4	<b>Editor of ISO/IEC 10646-2: Mr. Michel Suignard with assistance from contributing editors</b>	
	<i>To prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:</i>	
a	<p>Resolution M41.8 (Amendment 1 to Part 2):</p> <p>WG 2 accepts the following for inclusion in the Supplementary Planes:</p> <ul style="list-style-type: none"> <li>a. Linear B Syllabary in code positions 10000—1007D proposed in document N2378</li> <li>b. Linear B Ideograms in code positions 10080—100FA proposed in document N2378</li> <li>c. Aegean Numbers in code positions 10100—10130 proposed in document N2378</li> </ul>	Completed; see document SC 2 N3585.

Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
	<p>d. Cypriot Syllabary in positions 10800—1083F proposed in document N2378</p> <p>e. Ugaritic characters in positions 10380—1039F proposed in document N2338</p> <p>f. Shavian characters in positions 10450—1047F proposed in document N2362R</p> <p>g. Osmanya characters in positions 10480—104AD proposed in document N2361R</p> <p>h. Variation selectors -17 through 256 in positions E0110—E01FF from document N2370</p> <p>i. Update to source-reference data tables for CJK ideographs reflecting national standards from DPR of Korea as sources, which has been prepared with assistance of the IRG.</p> <p>WG 2 further requests SC 2 to approve a project subdivision for Amendment no. 1 to ISO/IEC 10646-2: 2001, with the scope of including the above-identified characters. Document N2396 contains the code charts and name tables proposed for inclusion in this PDAM-1. The completion schedule is PDAM-1 2002/04; FPDAM-1 2002/10; FDAM-1 2003-02.</p> <p>WG 2 instructs its editor to prepare the text of PDAM-1 to Part 2 incorporating the above characters and submit it to SC 2 for further processing to meet the above target dates.</p>	
<b>AI-41-5</b>	<b>Ad hoc group on principles and procedures (lead - Dr. V.S. UMaaheswaran)</b>	
<b>a</b>	To check for any suitable enhancement needed regarding resolution M41.13 (Policy regarding fonts for submissions to 10646).	In progress.
<b>b</b>	To take note of document N2383 - updated roadmap documents on the Unicode web site and update the pointers in principles and procedures / wg2 web site accordingly.	Completed; see documents N2409 and 2461.
<b>c</b>	To address how to reference ISO/IEC 10646 in other publications and include in principles and procedures document.	In progress.
<b>d</b>	To look at the Principles and Procedures document and see if the guidelines have to be enhanced re: glyph related guidelines / defect reports etc. based on document N2382 (along with Mr. Tatsuo Kobayashi, Japan).	In progress.
<b>AI-41-6</b>	<b>IRG Rapporteur (Mr. Zhang Zhoucai)</b>	
<b>a</b>	<p>To act on resolution M41.6 (CJK Source References for Part 1): WG 2 instructs the IRG to prepare source-reference data tables (as .txt formatted files) for the CJK, and Extension A unified ideographs in ISO/IEC 10646-1: 2000 (similar to the data tables in ISO/IEC 10646-2: 2001).</p> <p>WG 2 further instructs the IRG with assistance of DPR of Korea to incorporate the source-reference data tables (including the KP sources - KPS 9566-97 and KPS 10721-2000 as sources, as identified in document N2376 for the national standards of DPR of Korea).</p> <p>The above must be completed by 2001-12-15, in order to be able to meet the schedules for Amendment 2 in resolution M41.5 above.</p>	Completed; see document SC 2 N3584.
<b>b</b>	To act on resolution M41.9 (Single column layout for CJK in Part 1): Towards being able to deal with additional source information for CJK ideographs and avoid the resulting physical layout complexities in publication, arising from the request for a sixth column from DPR of Korea, WG 2 instructs the IRG and its members to review and provide feedback on the impact of reducing the number of columns in the CJK layout in Part 1 to a single column (similar to what is in Part 2) for the next edition of ISO/IEC 10646-1. The source information specified by the current multiple-column layout could be replaced with equivalent source-reference data tables.	Completed; see document N2447.
<b>c</b>	To examine the guidelines document N2382 (from Japan - Mr. Tatsuo Kobayashi) and provide feedback to WG 2.	In progress.
<b>AI-41-7</b>	<b>The Cambodian national body (Mr. Sorosak Pan)</b>	

<b>Item</b>	<b>Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)</b>	<b>Status</b>
<b>a</b>	Is invited to take note of resolution M41.14 (Khmer script): With reference to document N2380R from Cambodia, WG 2 accepts document N2394 from ad hoc on Khmer. WG 2 invites Cambodia to: <ul style="list-style-type: none"> <li>a. Take note of resolution M41.11 above regarding the policy on acceptable changes to ISO/IEC 10646.</li> <li>b. Communicate with other Khmer experts (for example, authors of document N2385) to get clarification on any question on the current Khmer encoding model, repertoire and assignments in the standard.</li> <li>c. Propose any additional characters based on the above clarification, following the guidelines in document N2352R (Principles and Procedures)</li> <li>d. Propose any explanatory texts towards clarifying the use of encoded Khmer characters.</li> </ul>	Completed; see documents N2406, N2412, N2458 and N2459R.
<b>AI-41-8</b>	<b>Greek national body (Mr. Evangelos Melagrakis)</b>	
<b>a</b>	Is invited to submit a corrigendum request for changing the names of Table 9 to Basic Greek and Table 10 to Greek Symbols and Coptic, that was sent in as ballot comments to FPDAM-1 to ISO/IEC 10646-1: 2000.	Dropped.
<b>AI-41-9</b>	<b>Chinese national body (Mr. Zhang Zhoucai)</b>	
<b>a</b>	Is invited to confirm with the Chinese Dai experts, working with the contributing editor Dr. Asmus Freytag, on the acceptability of Irish proposal for the Dai scripts in document N2372.	In progress.
<b>AI-41-10</b>	<b>The US national body (Mr. Michel Suignard)</b>	
<b>a</b>	Is invited to assist the editor in completing the list of Mongolian variants for FDAM-1 text (ballot comments on FPDAM-1 to ISO/IEC 10646-1: 2000).	Completed; Adm.1 to 10646-1 has been sent to ITTF.
<b>AI-41-11</b>	<b>The Irish and Finnish national bodies (Messrs. Michael Everson and Erkki Kolehmainen)</b>	
<b>a</b>	Are invited to propose replacements for MES-3 collections with agreement from affected parties, especially the European national bodies who had expressed concern over these collections, for consideration for inclusion in the next amendment to Part 1.	Completed; see document N2440.
<b>AI-41-12</b>	<b>Japanese national body (Mr. Takayuki Sato, Mr. Tatsuo Kobayashi)</b>	
<b>a</b>	Is invited to look at the Principles and Procedures document and see if the guidelines have to be enhanced re: glyph related guidelines / defect reports etc. based on document N2382 (along with Dr. Umamaheswaran).	In progress.
<b>b</b>	To seek input from experts in Nepal on the final code positions for the Limbu script.	Completed; see document N2428.
<b>AI-41-13</b>	<b>DPRK national body (Mr. YANG Song Jin)</b>	
<b>a</b>	Is invited (per resolution M41.10 -Additional CJK compatibility characters from DPR of Korea) to examine their proposal for 160 CJK compatibility characters towards reducing the total number to maximum of 151 with the goal of being able to fit them into the available space in the BMP. WG 2 further invites DPR of Korea to input this revised proposal as part of their ballot comments to Amendment 2 of ISO/IEC 10646-1: 2000.	Completed; see documents N2434 and N2435.
<b>b</b>	Is invited (per resolution M41.7 - DPR of Korea source information in Part 1) to co-operate with and assist the IRG in preparation of the source information for CJK ideographs in the BMP by 2001-12-15.	Completed; see document SC2 N3596
<b>c</b>	To revise document N2374 -- add copies of pages from DPRK standard as exhibits for the different fractions and other proposed symbols.	Completed; pages distributed at the meeting M41.
<b>AI-41-14</b>	<b>Canadian national body (Dr. V.S. Umamaheswaran)</b>	
<b>a</b>	To seek additional explanation on of some the proposed Tamil symbols from INFITT Tamil experts.	Completed; see document N2421.
<b>AI-41-15</b>	<b>All national bodies and liaison organizations</b>	

Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
a	<p>To take note of resolution M41.11 (Policy regarding acceptable changes to 10646): WG 2 requests SC 2 adopt the following policy regarding acceptable changes to ISO/IEC 10646 and convey the same to JTC 1 for information and to SC 2 membership to take note:</p> <ol style="list-style-type: none"> <li>a. Once a character is assigned a code position in the standard it cannot be reassigned in the interest of ensuring interoperability of standardized characters.</li> <li>b. The arrangement of the characters in the standard is fixed; sorting and collation of the characters is outside the scope of the standard.</li> <li>c. The character names chosen by WG 2 for the English version of the standard are unique, fixed and may be arbitrary; once a character name is assigned, it cannot be changed even if additional information is provided later. These name strings are used , for example to establish correspondences with characters in other standards.</li> <li>d. Any inconsistencies in names could be adjusted in other language versions either when the standard is translated or in supplementary external documentation.</li> </ol> <p>WG 2 further instructs its editor to prepare suitable text to reflect the above policy and incorporate it into Amendment 2 of Part 1.</p>	Noted.
b	<p>To take note of resolution M41.12 (Principles and Procedures): WG 2 accepts the revisions to the principles and procedures in document N2352R. WG 2 further requests SC 2 to adopt this document and the associated updated Proposal Summary Form and roadmap documents made available on the WG 2 web site dkuug.dk/JTC 1/SC 2/WG 2. WG 2 invites national bodies and liaison organizations to use these latest documents.</p>	Noted.
c	<p>To take note of resolution M41.13 (Policy regarding fonts for submissions to ISO/IEC 10646): WG 2 adopts the following policy and invites all proposers to take note regarding fonts, towards being able to publish the standard and its amendments on schedule:</p> <ol style="list-style-type: none"> <li>a. The fonts must be made available to the editor in True Type Format. The fonts provided must not be subject to restrictions that will prevent their use in the process of editing or on-line publication of the standard and other related publications such as the Unicode Standard.</li> <li>b. For a complete script proposal or addition of small repertoires to existing scripts, the font must be made available prior to the FDAM / FDIS ballot. Otherwise, they will not be included in the FDAM/FDIS.</li> <li>c. For refinements of glyphs in the standard the font must be provided to the editor – otherwise the refinement will not be done.</li> </ol>	Noted; some feedback - see document N
d (was e)	<p>To take note of and provide feedback on resolution M41.9 (Single column layout for CJK in Part 1): Towards being able to deal with additional source information for CJK ideographs and avoid the resulting physical layout complexities in publication, arising from the request for a sixth column from DPR of Korea, WG 2 instructs the IRG and its members to review and provide feedback on the impact of reducing the number of columns in the CJK layout in Part 1 to a single column (similar to what is in Part 2) for the next edition of ISO/IEC 10646-1. The source information specified by the current multiple-column layout could be replaced with equivalent source-reference data tables.</p>	Completed; some feedback - see documents N2443, N2447.
e (was f)	<p>To take note - When a contribution is ready for submission to WG2, send the document for initial review and request the convener for a document number. The document should be sent to the convener for posting to WG2 site with the document number inserted and incorporating all attachments into a single soft copy or file.</p>	Noted.
f (was g)	<p>To inform the convener of any missing documents from the WG2 web site.</p>	Noted. A set of old missing documents have been sent to wg2 web site by V.S. Umamaheswaran.

Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
g (was h)	To take note of resolution M41.17 (Future Meetings): WG 2 meetings: <ul style="list-style-type: none"> <li>• Meeting 42 – 2002-05-20/23 – Dublin, Ireland</li> <li>• (the week following International Unicode Conference in Dublin)</li> <li>• Meeting 43 – 2002-12-02/05 (to be co-located with SC 2 plenary) Japan</li> </ul> IRG meetings: <ul style="list-style-type: none"> <li>• IRG 18                                      Japan, 2001-12-03/07</li> <li>• IRG 19                                      Macau SAR, 2002-05 (to be confirmed)</li> </ul>	Noted.

## 5 JTC1 and ITTF matters:

### 5.1 JTC1 ad hoc on Futures

JTC1 is having ad hoc meetings on deciding the future of JTC1 and its work. Delegates were referred to the web site of JTC1 / SC2 ([www.dkuug.dk/JTC1/SC2](http://www.dkuug.dk/JTC1/SC2)) for more information. There was no discussion.

## 6 SC2 matters:

### 6.1 SC2 Program of Work

For information only to the delegates. Delegates were referred to the SC2 web site [www.dkuug.dk/JTC1/SC2](http://www.dkuug.dk/JTC1/SC2). There was no discussion.

### 6.2 Submittals to ITTF

The final text of Amendment 1 to ISO/IEC 10646-1: 2000 has been submitted to ITTF.

### 6.3 Ballot results

#### 6.3.1 10646-1 Amendment 2

Input documents:

N2434        Summary of Voting/Table of Replies - 10646-1/Amd 2 - SC02N3596; SC2 Secretariat; 2002-03-28  
 N2436        Late Irish vote - 10646-1/Amd 2; SC2 Secretariat; 2002-03-29  
 N2438        Late German vote - 10646-1/Amd 2; SC2 Secretariat; 2002-04-04

From the summary of voting table in document N2434, of 35 P-members of SC2, 15 had not responded; Of those who responded there were 15 approvals (some had comments), 2 disapprovals (with reasons) and 3 abstentions. See section 7.1 below for disposition of comments. Late vote from Ireland is not included in this tally.

#### 6.3.2 10646-2 Amendment 1

Input documents:

N2435        Summary of Voting/Table of Replies - 10646-2/Amd 1 - SC02N3597; SC2 Secretariat; 2002-03-28  
 N2437        Late Irish vote - 10646-2/Amd 1; SC2 Secretariat; 2002-03-29  
 N2439        Late German vote - 10646-2/Amd 1; SC2 Secretariat; 2002-04-04

From the summary of voting table in document N2435, of 35 P-members of SC2, 15 had not responded; Of those who responded there were 18 approvals (some had comments), no disapproval, and 2 abstentions. See section 8.1 on page 34 for disposition of comments. Late vote from Ireland is not included in this tally.

## 7 10646-1: 2000

### 7.1 Disposition of ballot comments - 10646-1 Amendment 2

Input documents:

N2434        Summary of Voting/Table of Replies - 10646-1/Amd 2 - SC02N3596; SC2 Secretariat; 2002-03-28  
 N2435        Summary of Voting/Table of Replies - 10646-2/Amd 1 - SC02N3597; SC2 Secretariat; 2002-03-28  
 N2436        Late Irish vote - 10646-1/Amd 2; SC2 Secretariat; 2002-03-29  
 N2438        Late German vote - 10646-1/Amd 2; SC2 Secretariat; 2002-04-04  
 N2478        Proposed Disposition of Comments 10646-1 – Amd 2 Project Editor – Suignard; 2002-05-08  
 N2481        Proposal to add Parkari letters to Arabic block; Jonathan Kew, SIL International 2001-11-01  
 N2482        Bidi committee consensus on Arabic additions from L2/01-425; Jonathan Kew, SIL International; 2002-01-29  
 N2483        Proposal to add Arabic-script honorifics and other marks - WG2; Jonathan Kew, SIL International; 2001-11-01

N2486 Notes on proposed Symbols from DPRK; US; 2002-05-21  
N2487 Proposal summary form for N2481, 2482, 2484; US; 2002-05-21

**Output documents:**

N2489 Disposition of Comments – 10646-1 AMD 2; Project Editor – Suignard; 2002-05-22  
N2491 Charts – 10646-1 AMD2; Freytag; 2002-05-22  
N2493 Proposal to add 122 compatibility Hanja; DPR Korea 2002-05-22

Mr. Michel Suignard: The original ballot comment text and the proposed dispositions are recorded together in document N2478. (The final disposition of comments is contained in document N2489 along with the revised charts in document N2491.)

*Canada - Approval with comments.*

Technical comment -request for a new collection identifier for Unicode 4.0.

Accepted. 305 will be assigned to identify Unicode 4.0.

Editorial comments: Accepted.

*Germany - (Delayed response) Approval with comments*

Comment 1 - regarding printable version of the standard part of which is made available as source data files only.

Partly accepted. Add some more information to the foreword. ITTF does not have to take any additional policy changes. CD-ROM distribution permits the ITTF and national bodies to print copies locally as needed. A pointer to the files that are intended to be used mostly in machine readable form will be added. From ITTF point of view, the standards are being produced on CDROM; and also made available on line to national bodies. The price of the standard has also been brought down considerably.

(Same comment was made also in German response to PDAM-1 to Part 2. Same disposition of comments as above is proposed for there as well.)

Comment 2 - request to remove GREEN DOT. Also requested by Ireland and US.

Germany's comment indicates that the symbol is used in school books also. They want the copyright / legal issues be addressed if possible to be able to keep the character.

Accepted: Character will be removed from this amendment. If future legal permission becomes available, then we can add it later.

(Since many of the comments made by US were also made by Ireland and others, the US were taken up next.)

*US - Disapproval with comments:*

T.1 - Limbu (same as Ireland T.1) - Proposal to change names and code positions. Names provided by Ireland and glyphs are in the current PDAM-2.

Accepted.

T.2 - Normalization reference - Missed including in the PDAM reference to Normalization, from resolution M41.3 in document N2404.

Accepted.

T.3 - Proposal for 16 additional Urdu characters

Document N2481 has 3 characters - for Parkari. Document N2483 has proposal summary form for 13 Urdu characters - along with justification. Document N2482 is a discussion document with a summary of discussion on the above 13 in document N2483. Document N2482 prevails if there are differences between documents N2483 and N2482. Document N2487 has the proposal summary form for these characters. Most of these are for Koranic use -- but also for use in India and Pakistan. US is requesting the 13 characters based on document N2482. Some minor changes are proposed to names in N2483. The ballot comments has the final code positions and names.

**Discussion:**

- a. Dr. Sarmad Hussain: Comment on naming of the characters. The original source is there. The names do not reflect which language these come from. Most of these characters are used only in Urdu not in Persian or Arabic languages. Urdu has names for these.

- b. For example: 0614 Arabic Sign Nom de Plume -- has an Urdu name; a few others also have Urdu names.
- c. Dr. Asmus Freytag: One of the principles we have is that the language of the standard is English. Many countries have translated them into their own languages. It is easier for translating these names into other languages if we give the names in English versus their Urdu names.
- d. Mr. Michael Everson: In fairness 'Nom de Plume' for 0614 is not an English name. Because this is new proposal, it may be better to go with current names -- and take up the differences as ballot comments for FPDAM. Many of these names are translations any way and it may not be a reason for using the Urdu names.
- e. Dr. Sarmad Hussain: Some of these names are translated. Nom du Plume does not seem to be in English. Many of these symbols are used by the language speaking community -- who will not understand these names. You will be posing hindrances in adoption of the standard.
- f. Dr. Ken Whistler: The US national body will not be opposed to suggested improvements to these names.

An ad hoc group with participation of Messrs. Sarmad Hussain, Ken Whistler and Mike Ksar reviewed and finalized the names for including in the final disposition of comments and for inclusion in FPDAM-2. (See document N2489 for the final disposition of comments and document N2491 for the final names list.)

**Disposition:** Accept the code positions 0600 -- 0602, 060D-060E, 0610--0614, 0656-0658, 06EE-06EF, 06FF. An ad hoc will get together and decide on the names. See for glyphs - document N2481 has 3 and document N2482 has 13 characters. 060D and 060E -- should swap the characters assigned in document N2482.

T.4 - Description for Combined Grapheme Joiner

Accepted.

T.5 - Korean Compatibility character - mapping of F951 to 96FB should be changed to 964B.

Professor Kyongsok Kim checked and it is acceptable.

Accepted.

T.6 - VS Typo - 2269 FE00

Accepted.

T.7 Addition of symbols are proposed.

24FF NEGATIVE CIRCLED DIGIT ZERO

Accepting this will complete the series of circled digits.

Will make the collection 43 ENCLOSED ALPHANUMERICS fixed.

Accepted.

23CF EJECT SYMBOL

Accepted in principle - based on discussion under section 7.2. on page 24.

T.8 Khmer - a number of new characters are proposed. The US request is based on discussion between Khmer NB experts and UTC experts on the Khmer script.

An ad hoc group was set up to deal with Khmer topic. Mr. Michel Suignard will lead the ad hoc discussion group with participation of the Cambodian delegates, Messrs. Ken Whistler, Michael Everson, Kent Karlsson, Maurice Bauhahn, Takayuki Sato, and Mike Ksar.

The ad hoc group is to address: a - what is requested in US comments; b - any additional characters in other contributions.

Mr. Michel Suignard: The ad hoc group met and agreed to accept the US comments minus the first two characters. A new block of 32 characters - Khmer Symbols - should be created. There are five more characters that there is no agreement on (at this point in time). The ad hoc group will meet again. Some existing characters are to be discouraged when implementing Khmer.

**Discussion:**

- a. Mr. Mike Ksar: An Annex P explanation could be added to describe the discouragement of use.
- b. Dr. Umamaheswaran: A new annex is suggested to explain the Unicode concepts of "deprecated" and "strongly discouraged" etc.



- c. Mr. Mike Ksar: ISO should not be entertaining Deprecation / Strongly discouraged etc. A new informative clause
- d. Dr. Asmus Freytag: The new clause should include the set of characters that Unicode calls deprecated or strongly discouraged.
- e. Dr. Ken Whistler: Annex P is the place to put such usage related information in the standard. 17D3 is candidate for inclusion in the list of such characters.

(See also further ad hoc report regarding Khmer script in section 7.10 on page 30.)

T.9 - a. Request to remove 267E DO NOT LITTER SIGN, 267F RECYCLABLE PACKAGING

**Discussion:**

- a. Mr. Michael Everson: The US comments indicate these characters are not mature. Need to know what are the issues. Ireland sees no reason to postpone these.
- b. Mr. Mike Ksar: US and Ireland are invited to meet and discuss.
- c. Mr. Michael Everson: Based on an ad hoc discussion between Ireland and the US delegates, Ireland withdraws its request to keep 267E Do Not Litter Sign.

**Disposition:**

Accept removal of both 267E DO NOT LITTER SIGN, and 267F RECYCLABLE PACKAGING SIGN from this amendment.

T.9 - b. 31D0-31D4 (VULGAR FRACTIONS with horizontal bar) -- US proposes that these should be unified with the other encoded number forms - slash fractions.

- a. Dr. Umamaheswaran: DPRK was explicitly asked at the Singapore meeting before we accepted these characters in the PDAM to show some evidence that these are different. They did show us and that is why we proceeded. The US proposal is to Unify these with existing fraction symbols. DPRK should have some input on this.
- b. Mr. Tong Ki PAK: We accept the US proposal.

The US proposal is accepted.

T.10 - DPRK Symbols

- a. Change of names to be more generic - 2614 to Umbrella with Raindrops; 2615 - Hot Beverage ( remove "SYMBOL" from the name - Irish comment)
- b. 2618 - Circled upwards indication - is very similar to 261D White Up Pointing Index.

**Discussion:**

- i. Dr. Asmus Freytag: The Glyph was given to us from a DPRK source. It probably does not need changing. There is a question about whether this character is needed as a single character. Ireland has suggested that it can be encoded as a combining sequence using the Combining Enclosing Circle.
- ii. Dr. Ken Whistler: The US suggestion disagrees with the proposal of combining sequence. The question we had was that this is a glyph variant of an existing symbol without the circle around. Is there a difference in meaning with or without the circle around the symbol.
- iii. Dr. Asmus Freytag: The glyph set from DPRK for the symbols have a horizontal pointing index and a circled up index.
- iv. Mr. Tong Ki PAK: We can remove this symbol from our request.

**Disposition:** Accepted the removal of the circled upward index symbol from this amendment.

- c. 2700 LEFT SCISSOR seems to be a variation of 2702 SCISSORS  
Ireland also request the same. DPRK accepts removal of this character.  
Accept removal of 2700

- d. New name and position suggested for 23CF - Warning Sign and 23D0 - High Voltage Sign

Mr. Tong Ki PAK: These changes are acceptable to us.  
Accepted.

- e. Rename block name row 2B to Miscellaneous Symbols and Arrows.  
Accepted.

- f. CJK Supplemental Compatibility characters - no need Suggested moving code positions for these six to proposed new code positions in other existing blocks.  
Accepted.

T.11 - Addition of Indic scripts - The proposed additions of characters are based on communication between Indian Government and the Unicode technical committee. See section 7.5 on page 25 and document N2425.  
Proposed additions were all accepted.

Dr. Ken Whistler: With the above dispositions, US changes its Disapproval vote to Approval.

*Ireland - (Delayed Response) Disapproval with comments*

T.1 Limbu script (Also US comment T.1)

Proposal to change name and code positions. These are in line with the US comment.

Accepted - see US disposition of comments.

T.2 - Tables and names for Limbu script were proposed as replacement.

Accepted.

T.3 Refer to document N2398 -- per agreement in Singapore.

Accepted -- (see US disposition of comments)

T.4 - 2614 SHOWER WEATHER - Same as US T.10.

Accepted.

T.5 - 2618 CIRCLED UPWARD INDICATION

Accept in principle. Agreed not to encode the character.

T.6 - 267F Green Dot - do not encode this character at this time. Copyright issue is not resolved.

Accepted.

T.7 - 267E DO NOT LITTER symbol -- await US/Ireland ad hoc.

Dr. Ken Whistler and Mr. Michael Everson met in ad hoc and agreed to remove this character from this amendment. Ireland withdrew the comment.

T.8 - Delete 2700

Accepted.

T.9 - 31D0 --31D4 Fractions with horizontal bar - should not be coded.

Accepted.

T.10 - 2615 - change name to Hot Beverage

Accepted.

T.11 - Precomposed Latin abbreviations.

Accepted in principle -- also in US T.10

T.12 - FE47 and FE48 are duplicates of 23B4 and 23B5.

Dr. Asmus Freytag: No. These are two different types of compatibility. The requested characters function similar to the characters that are around them -- to be used in the East Asian context. The 23B4, 23B5 are in the context of Terminal emulation -- appearing in vertical columnar writing. These brackets are used differently than for the East Asian case. It causes oodles of problems in glyphs, fonts, implementations etc. though they are superficially similar.

Mr. Michael Everson: Ireland withdraws the comment.

T.13 - Row 31 CJK Compatibility Supplement

Accepted in principle - also US comment.

The block has been removed by reallocating the symbols to other positions.

T.14 - MES 4 collection

Name for the OPEN collection should be "Modern European Scripts".

Boundary for the (sub) collection "LTR Alphabetic Presentation" should be FB00-FB1C; "RTL Alphabetic Presentation Forms" FB1D-FB4F.

**Discussion:**

- a. Mr. Erkki Kolehmainen: The CWA was under the auspices of CEN TC304 - but WG2 can entertain the collection extensions etc. in the future.
- b. Mr. Mike Ksar: At one time, CEN TC304 wanted to retain the ownership of the collection definition. In light of uncertainty of CEN TC304 continuation, we hear that WG2 should take over the role.
- c. Mr. Michel Suignard: Future insertion of other collections in between identified ranges will need new collection identification -- for example, adding Uralic Phonetic Alphabet.
- d. Dr. Umamaheswaran: Yes; we will need a new collection id if it is not just filling the holes in existing ranges.

**Disposition:** Accept as modified.

T.15 -1 Two Greek letters for Bactrian - see section 0 on page 31 and document N2411.

Accepted.

T.15 -2 Audio Visual Media symbols -- see section 7.2 on page 24 and document N2415.

Accepted only the 23CF EJECT SYMBOL - with Filled-In Glyph (Figure 4 in document N2415)

T.15-3 - request for nine map and guidebook symbols from document N2486 are proposed by Ireland.

**Discussion:**

- a. Mr. Michael Everson: Inspired by several symbols from DPRK, several of these symbols have been found also in other types of documents in the West. Several symbols were identifying buildings etc. It would be reasonable to add more of this category of symbols. There were also some characters like shrines already in the standard.
- b. Dr. Ken Whistler: US has looked at this set of documents. We have not agreed on the level of maturity of these symbols. These are potential candidates for consideration. Sufficient justification has not been provided. They are interesting for future addition.
- c. Dr. Asmus Freytag: I created document N2486 as an expert contribution on symbols -- not part of any ballot comments. These are some symbols that we have not accepted in the last go around. We have yet to consider these for future. DPRK has not come back with additional justification -- perhaps they have misunderstood the intent. They probably thought that we have rejected them. We do have crossed black and white flag symbol. There are others which are triangles etc. The DPRK symbols belong to other collections of similar symbols also. We could consider these and reduce these sets. Perhaps the Irish set could be considered.
- d. Mr. Michel Suignard: Crossed white and black flags may be obvious one. All the others seem to have wide variation due to cultural preferences etc. in different guide books etc. If these are really local -- we have to be careful, for example if French usage of these symbols is different from their English usage.
- e. Mr. Michael Everson: I hear that these are interesting characters that could be included. But why not at this time?
- f. Dr. Ken Whistler: Irish comments takes 9 characters from document N2486. US has seen document N2486 and do not consider any of the characters from that document to be mature enough.
- g. Dr. Umamaheswaran: Ireland has taken the jump of taking a bunch of notes in document N2486 and provided them as ballot comments input. We need some more evidence of use of these -- copies of use of these.
- h. Dr. Mark Davis: We need some more evidence of use of these in plain text rather than just as icons in books etc. Also if there are differences in cultural use etc. we need to research these. Some more work and exploration is needed on these symbols.
- i. Dr. Asmus Freytag: In terms of writing some more observations on these symbols -- Ireland seems to have taken the step of referencing to this document without adding more evidence or additional information. I can associate only one symbol the crossed flags to be consistent with the single white and black flags that are going in to the standard.
- j. Dr. Ken Whistler: The crossed flags can easily get into problems with semaphore symbols etc. It needs some more research.
- k. Dr. Mark Davis: Do we know if it is not black and white instead of white and black?

**Disposition:** We cannot accept these characters at this time. Ireland withdrew their comment.

**Action item:** Ireland is invited to prepare a separate contribution for consideration by WG2 / UTC.

T15.4-Khmer

- A. Khmer new characters - MOOT.
- B. Secondly -- proposal to change the names - Withdrawn by Ireland.

Editorial comments were all Accepted.

Mr. Michael Everson: Ireland changes its (delayed) Disapproval to Approval.

## *JAPAN - Approval with Comments*

Technical: One Limbu character is in question based on input from Nepal. An ad hoc group met and reviewed document N2428.

Dr. Ken Whistler: N2428-1, -2 and -3 were reviewed by an ad hoc (Messrs. Michael Everson, Takayuki Sato, and Ken Whistler as participants). The consensus of the group was that all the Nepali concerns have been addressed during the combination of changes from US and Ireland requests in their ballot responses. Few punctuation characters Nepal requested were not added. For several of these they should use either Devanagari or general punctuation characters. Double-Hyphen is the remaining one. It is a general problem for many other scripts also. The ad hoc felt that more consideration be given to this character -- in the context of whether in Limbu-specific only or in the wider context.

**Disposition:** No changes for this PDAM. We will deal with the character when a contribution is brought up to WG2.

**Action item:** Mr. Takayuki Sato will take feedback to Nepal, based on the above ad hoc discussion.

## *Korea, Democratic People's Republic of - Approval with Comments*

T.1 - New entry KP1-61A0 to U06B76 in CJK Mapping table is requested

Accepted in principle.

Mr. Michel Suignard will check if this KP character is not mapped elsewhere.

T.2 CJK Compatibility Ideographic Extension

Singapore ad hoc and resolution requested DPRK to see if the total can be reduced from 160 to 151. The ballot comment is to add 144 in plane 0 and 16 into plane 2.

### **Discussion (set 1):**

- a. Mr. Michel Suignard: Should we be also checking if these compatibility characters can be unified with other compatibility characters? The question is - whether it is desirable to split the DPRK compatibility ideographs? It also will leave 7 positions unused in Plane 0.
- b. Mr. Mike Ksar: Was this discussed in the IRG?
- c. Mr. Zhang Zhoucai: No.
- d. Dr. Asmus Freytag: DPRK has come back and said that they cannot reduce the total number.
- e. Mr. Michel Suignard: The topic of unifying compatibility characters was discussed in the IRG. Also remember that there is no room in the Plane 2 Compatibility Ideograph Extension. We have to open up another block and bringing open questions.

An ad hoc of Korean experts from DPRK, ROK, and Japan met and discussed the points made in the above comments.

Professor Kyongsok Kim: There are two kinds of Han characters. 160 DPRK characters are Variant characters. 60 from Japan 30 and from Canada are in the BMP. There are also 500 Compatibility ones in Plane 2. The task is to compare the 160 from DPRK with these 600 existing ones -- cannot compare with the ROK compatibility characters because they look the same but are different.

### **Discussion (set 2):**

- a. Mr. Mike Ksar: The option for DPRK is to review the proposal before end of this meeting. The option of including the proposal at the FDAM stage is open.
- b. Mr. Zhang Zhoucai: As ideographic expert and Chinese delegate we are concerned about the compatibility areas. WG2 has to setup some strict controls on adding Compatibility Character. China has not submitted even one compatibility character so far. We should also setup a deadline or time period for comparison of national standards. We have extension C -- there are many linguists coming up and making up national standards without considering / knowing about the unification rules etc. This will lead to more requests for round tripping and cause problems.

- c. Mr. James Seng: We are already found some duplicates for DPRK etc. Careful review is required before we handle the compatibility characters.
- d. Mr. Takayuki Sato The variation selector mechanism is another way of dealing with the compatibility characters.
- e. Dr. Ken Whistler: US echoes comments from Mr. Zhang Zhoucai, and Mr. Takayuki Sato's concern about the variant selector use Many characters coming into the IRG may be dealt with using the variation selectors and issues about mapping etc. will have to include these variant selectors. A rationale as to why the compatibility characters have to be provided adequately.. It may not be solvable by just having comments at the FPDAM stage. The problems have to be ironed out at this meeting if it even gets considered for this amendment.
- f. Dr. Asmus Freytag: One of the reasons we were open to the 151 was -- even if we do change our method to use of VSs to deal with compatibility characters, the space of 151 would have been filled. In that context it is disappointing to see the DPRK proposal has not gone through the exercise of checking and cross checking by the submitters from DPRK. Being a participant in the ad hoc meeting on Korean in Singapore, our suggestions have not been entertained.
- g. Mr. Erkki Kolehmainen: I will be concerned about introducing a number of new characters at the FDAM stage. The issue has to be resolved at this meeting.
- h. Mr. Mike Ksar: My suggestion is that we hold the disposition till tomorrow evening -- allowing the Korean ad hoc to evaluate the 160 to eliminate duplicates and check for possible unification with other compatibility characters in the standard. The Korean ad hoc was given the home work to get this reviewed at the last meeting. They did not meet between the last meeting and this meeting. The current proposal will not be included in this amendment if the work is not finished before tomorrow evening.
- i. Mr. Erkki Kolehmainen: Tomorrow end may be sufficient time to reduce the number to 151 .. however, during the FPDAM stage we should be open for reducing possible reduction even more.
- j. Mr. Takayuki Sato: We have to be a little bit patient with the Korean ad hoc group. The matter of unification etc. is new for them, and we should not close the door for entertaining input from them during the FPDAM ballot.
- k. Mr. Mike Ksar: I cannot stop the DPRK to make comments during FPDAM ballot. However, the likelihood of accepting those may not be high at that stage

DPRK and other experts worked some more and reduced the number to 139. The discussion continued.

### **Discussion (set 3)**

- a. Mr. Takayuki Sato: The total number of DPRK compatibility characters was adjusted to 139 after unifying the rest with existing compatibility characters. This is based on a single night's effort of review. A review is required on the set of 139. The total number is under 151. Suggestion is for DPRK to review the remaining 139 and take the resultant set into the BMP - and input into FPDAM ballot.
- b. Mr. Michel Suignard: I would like to see the input from DPRK to include in the final list in the FPDAM text and not wait for comments to the FPDAM.
- c. Mr. Mike Ksar: I do not want to hold the FPDAM to await input from the DPRK. DPRK should provide the input to the editor by a certain deadline.
- d. Mr. Takayuki Sato: How many weeks are you proposing to DPRK? (We will decide that in this meeting).
- e. Mr. Erkki Kolehmainen: I also believe that the input from DPRK should be part of the FPDAM text so that all the other NBs also get to review them as part of FPDAM ballot review. No technical changes are allowed at the FDAM stage. It is important to give the other NBs a chance to review.
- f. Dr. Mark Davis: Did the IRG look into these? It is purely coming from DPRK into WG2. They were presented Now? No - it was input from Singapore.
- g. Dr. Asmus Freytag: The time period for finalizing list is before a resolution being prepared. I am not comfortable with a large set of characters at this time - if we have to get new fonts etc. If the set is provided before the end of this meeting it will be ideal. We can always remove characters etc.

- h. Mr. Michael Everson: If we cannot agree on new character positions and names etc. at this meeting procedurally it will be difficult to accommodate later.
- i. Mr. Takayuki Sato: If that is the case we have to agree to whatever the input will be from DPRK based on the existing review.
- j. Mr. Mike Ksar: If we can refine these character set at this meeting we should do it at this meeting.
- k. Mr. Erkki Kolehmainen: Even if we choose the 139 we can always reduce the number during the FPDAM ballot comments.
- l. Mr. Takayuki Sato: It may be the ideal case. DPRK will need assistance in finalizing the selection they have.
- m. Mr. James Seng: I feel that if we cannot come up with a list at this meeting, it should not be included in the FPDAM.
- n. Dr. Ken Whistler: Unless the set of characters is not reviewed and made mature during this meeting it should not be allowed for this FPDAM. It should be given enough time to mature.
- o. Dr. Mark Davis: I think we should not rush in with this set.
- p. Mr. Mike Ksar: WG2 experts would like to get these compatibility characters from DPRK in the standard -- but would like to get these refined at this meeting. I appreciate the work DPRK has done in reducing the 151 to 139. DPRK needs help - other experts should assist DPRK in reviewing the 139 and finalize the set. As others have stated the set could be refined based on FPDAM ballot review.
- q. Dr. Mark Davis: The refinement should be sufficient level that only minor adjustments may be needed. The number of potential errors should be minimized. You would not like to put something into the FPDAM which is not in good shape and risk it being rejected during the FPDAM ballot review.

Further work was done by DPRK delegates with help from other experts who met in ad hoc. The following was the outcome.

**Discussion (set 3):**

- a. Mr. Michel Suignard: The ad hoc met and have reduced the set from 160 to 122 compatibility characters. I will need the mapping of the 38 compatibility characters that were mapped to existing characters. We may also need the fonts / glyphs.
- b. Dr. Asmus Freytag: I do have a font -- not verified as to whether that font covers all the needed characters. Some additional work needs to be done.
- c. Mr. Yasuhiro Anan: I will provide the information on mapping the 38 characters. It is nice to have a contribution showing the mapping of the glyphs and the data table.
- d. Mr. Michel Suignard: Then I have all the needed information.

**Disposition:** Accepted the reduced set of 122 DPRK Compatibility Ideographs; code positions - FA70 to FAE9. Mapping of the remaining 38 will be added to CJK Source Reference data files -- one in plane 0 and remaining 37 in plane 2. See document N2493 for details.

Korean ad hoc meetings should happen in between WG2 meetings to address technical issues.

Editorial comments E1, E2 were Accepted.

*Korea, Republic of - Disapproval with Comments*

T.1 - Symbol name issue

Professor Kyongsok Kim: We have four characters whose last parts are not spelled right according to Korean syllabification used in TTS 11941.

**Discussion:**

- a. Mr. Michel Suignard: These characters are from DPRK submission. ROK and DPRK have to get together and agree.
- b. Mr. Tong Ki PAK: Since transliteration rules are not within the scope of 10646 we will not discuss that topic at the meeting.
- c. Parenthesized Korean characters and Circled Korean characters are the symbols in question.
- d. Professor Kyongsok Kim: We could propose alternate names. I was not able to get the transliteration rules used by DPRK.

- e. Dr. Asmus Freytag: The two NBs seem to be in disagreement on which transliteration scheme to use on the symbols. We should be using possibly a translation rule.
- f. Mr. Michael Everson: We should use one scheme for a complete set of symbols. If a translation scheme can be used to resolve the problem we can try it
- g. Dr. Ken Whistler: ROK can propose suggested alternate names. These -- if acceptable -- may be used for the next amendment. These name can be commented on at the FPDAM stage.

Not Accepted. ROK Disapproval remains.

*Sweden - Approval with Comments:*

SE1 MES - Accepted (Same comments as Ireland)

SE2- Editorial - accepted.

SE-3 Data File Format

While it may be desirable -- the format given to us by IRG is what we will use and keep. Also these files are being currently used with parsing etc. As to introducing semicolon separated file, it is too late at this time.

1st part of the comment is Not accepted.

2nd part of the comment is partially accepted.

SE-4 - Change 'code value' to 'code position'.

Code position is defined in the standard. Code value has crept in.

Accepted. Replace code value with code position.

SE-5- Tamil Symbols

0BF3 to 0BFA -- Fonts are different for the symbols from the rest of the characters.

Accepted in principle.. If better fonts are available we will use that.

SE-6 - Fractions with horizontal bars

These characters have been removed - under earlier dispositions. This comment is moot.

SE-7 - WG2 has decided to remove the characters listed in the comment, based on US and Irish comments. Sweden withdrew the comment.

Relevant resolutions:

**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.

**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).

**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.

## 7.2 Proposal to add Eject Key Symbol & Playback Symbols

**Input documents:**

- N2415** Characters and Symbols used in user interface for removable and audio-visual media; Freytag, Everson, Goldsmith; 2002-02-12
- N2432** Proposal to Add the Eject Key Symbol to Unicode; Deborah Goldsmith; 2002-04-30

Mr. Michael Everson: Document N2415 contains a set of symbols from user interface related documentation. The Eject key is also in another proposal.

**Discussion:**

- a. Dr. Ken Whistler: US is in favour of Eject Key symbol. As to the remaining -- there are questions on potential unification with other existing symbols. There are questions like should these be coded graphically (potentially different shapes to be accommodated), or functionally with possible different graphical shapes. We are not in favour of adding the others at this time.
- b. Mr. Takayuki Sato: These are possibly useful. We are not sure of which way to go -- glyph based or function based.
- c. Mr. Erkki Kolehmainen: We will support US position.
- d. Dr. Sarmad Hussain: Looks like we are putting code positions for icons rather than characters. Are we open to coding icons now? There are several others possible. Is the icon also accepted?
- e. Mr. Mike Ksar: This is not the first time -- symbols which may be considered to be icons are already there. These are additional characters being proposed.
- f. Dr. Ken Whistler: See document N2432 -- it asks only for the Eject Key Symbol. There is some information and technical Justification. Apple Computers asked for this particular symbol for use in their documentation. They had the option of using the private use area. They are well aware of many others potential icons -- but they are not asking for the others.
- g. Mr. Michael Everson: I hear that we need further study on the five characters besides the Eject Key Symbol. We can await further study on these.
- h. Mr. Takayuki Sato: Is a keycap with EJECT on it also unifiable with it? Are we encoding the functionality?
- i. Dr. Asmus Freytag: We have to make a decision which form of the icon to use -- filled in form or outline form. This symbol is shown in many different forms -- filled in, reversed, different colours etc. We had similar discussion with the keyboard symbols -- these are subsets of those.
- j. Dr. Umamaheswaran: Do we want to consider the naming this based on its component shapes -- rectangle with triangle below, for example.
- k. Dr. Ken Whistler: No. The intent is to name EJECT KEY SYMBOL, at 23CF -- explicitly unify with other possible forms of this icon. It is in the same block as other similar symbols.

**Disposition:** Accepted only the Eject Key Symbol at 23CF -- glyph from Irish contribution -- but filled. (See also N2415 Figure 2 and Figure 4). See also ballot comments from Ireland and US - T.7 - on Amd 2 to Part 1, and their dispositions under section 7.1 on page 14.

**Relevant 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.

## 7.3 Myanmar script

**Input document:**

- N2430** Status in Myanmar on N2033 (Extension of Myanmar -UK); Expert Contribution - Takayuki K. Sato -CICC Japan; 2002-03-31



Mr. Takayuki Sato: UK had proposed some extension to Myanmar script. I had an action item on getting feedback from Myanmar. Myanmar's feedback was that the request was to go back to the older coding model -- in London meeting, Myanmar experts were convinced to go to the new encoding model. They are not convinced. Myanmar is in the process of implementing UCS. If they need more characters they will make a contribution and at that time they will consider the UK proposal.

#### 7.4 Addition of one Hanja code

Input document:

**N2426** Proposal to add 1 Hanja code of D P R of Korea into ISO/IEC 10646-1:2000; Committee for the Standardization of the D P R of Korea (CSK); 2002-03-18

Mr. Mike Ksar: Was this discussed in IRG?

Dr. Ken Whistler: The request is not for a new Han CJK character. It is a request for mapping. It is part of the ballot comments from DPRK, and has been accepted.

#### 7.5 Additional characters for Indic scripts

Input document:

**N2425** Additional Characters for Indic Scripts; Unicode Consortium; 2002-03-21

Dr. Ken Whistler: Document N2425 contains a short summary of proposed additions. This is a short list based on a feedback received from the Government of India, which in turn is based on feedback on UCS from experts in India. The proposed 12 characters are well-formed additions to enable many of these scripts for use in Sanskrit -- with the exception of the Gujarati Rupee sign. US requests that these be added to the BMP.

##### Discussion:

- a. Mr. Michael Everson: I have a question on the Rupee Sign. It seems to be a combination of R with OO followed by a small circle. Could these not be composed. The Devanagari one is similar. I am uncomfortable with it. They have been asking for KSHA and we have been telling them no so far. We have no objection to it,
- b. Dr. Ken Whistler: There are also other rupee signs -- Latin, Tamil etc.
- c. Dr. Asmus Freytag: We have ample precedents for such combined signs.
- d. Mr. Mike Ksar: The user community wants that symbol.

**Disposition:** We accept the names and code positions in N2425.

**Action Item:** US will verify the accuracy of the glyph for Oriya letter VA

Relevant 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.

#### 7.6 Proposal to add six Syriac characters

Input document:

**N2422** Proposal to add six Syriac letters for Sogdian and Persian to the UCS; Nicholas Sims-Williams and Michael Everson; 2002-03-30

Mr. Michael Everson: Mr. Nicholas Sims-Williams is an expert on Indo Iranian languages. He provided information on Bactrian. He also came up with a proposal for Six Syriac letters used in Sogdian and Persian languages. Proposed locations are at 072D, 072D, 072F, 047D, 047E and 074F. This document does not show the shaping behaviour of these characters in the font before publication. These have similar behaviour to existing Syriac characters. In a subsequent document we will prepare more information on shaping behaviour, usage of these in different fonts etc.

##### Discussion:

- a. Dr. Ken Whistler: US did consider this proposal. We had questions on the characters including their shaping behaviour etc. US will not be opposed to including these in FPDAM-2.

**Disposition:** Accept these for inclusion in FPDAM-2. Names and glyphs are on page 5 of document N2422. Code positions are in front page. Fonts have already been provided.

**Action item:** Ireland to provide a table for Syriac shaping for these additional characters.

Relevant 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.

## 7.7 Feedback on Tamil Symbols

Input document:

**N2421** Feedback on Tamil Symbols in PDAM2-10646-1 from the INFITT WG on Unicode; Uma; 2002-03-14

Dr. Umamaheswaran: Document N2421 contains the feedback from Tamil experts in INFITT working group on Unicode. Two items: correct the spelling of RUPAL to RUPAI for 0BF9, and change annotation for 0BFA from Akkam to Enn.

**Disposition:** Accept requested changes and include in FPDAM-2.

Relevant 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.

## 7.8 Uralic Phonetic Alphabet

Input documents:

**N2419** Uralic Phonetic Alphabet characters for the UCS ; Member Body contribution from Finland, Ireland, and Norway; 2002-03-11

**N2442** Justification for placing the Uralic Phonetic Alphabet in the BMP; Michael Everson, Klaas Ruppel, Trond Trosterud; 2002-05-21

Mr. Klaas Ruppel: Document N2419 is the result of several years of work. The request is for a set of 133 Uralic Phonetic Alphabet characters in the BMP. The proposed list is a compromise set resulting from discussion with user community. The original list was much larger. There are several annexes -- with A. names, B. glyphs, C proposed locations; Annex D contains the repertoire used in the UPA - the Uralic Phonetic Alphabet. It covers more than the Finno-Ugric language transcription set to help with implementation. Annex E has samples of UPA characters in use. Several dictionaries using the UPA, and the original work dated 1901 with the proposed transcription scheme, is available at this meeting as exhibits for delegates to browse. The proposal summary form is attached.

Mr. Erkki Kolehmainen: Annex D contains information -- it is a subset of the full repertoire of using UPA.

Mr. Michael Everson: After document N2419 was reviewed -- the UTC sent some feedback to the authors. Super and sub script Cyrillic and Greek characters are proposed in N2419 -- these were originally proposed to be for Cyrillic and Greek blocks. The suggestion was to move it from these blocks into a separate blocks along with other UPA characters. Document N2442 contains this new rearrangement. There was also discussion as to some of these characters should be in the SMP much like the mathematical characters. It is considered not convenient at all for the implementation of UPA and we maintain that these should be in the BMP. The order of characters in N2442 supersedes the proposal in N2419.

**Discussion:**

- a. Dr. Ken Whistler: I keep coming up with the number 134 instead of 133. Need some clarification. US national position is that the repertoire is mature for encoding. US preference is to propose the location be in the SMP rather than in the BMP. Otherwise we agree to encoding these and in the current amendment.
- b. Dr. Mark Davis: In the code chart on page 6, 02EC and 02EF look almost identical. They seem to be font variants. The difference is so minor. It would be difficult to distinguish between these.

- c. Mr. Michael Everson: These are not identical. There are differences in the stroke widths etc. We looked at possible unification issues related to these. In typesetting it would be different. They are different semantically and can make a difference in typesetting etc.
- d. Mr. Klaas Ruppel: These are to be distinguished. In a text we may get IPA and UPA together and we need to distinguish between these.
- e. Dr. Asmus Freytag: UTC did review these characters -- and did not ask for unification of these characters.
- f. Dr. Sarmad Hussain: I see a number of characters on page 9 and page 10 in document N2419 looking identical to what we have in the standard already. For example A, C, D etc.
- g. Mr. Michael Everson: No -- these are different - they are small caps.
- h. Dr. Asmus Freytag: I can take an action item to render them with smaller caps.
- i. Mr. Yasuhiro Anan: In document N2442 - 2419 page 36 wave dash. 2053 on page 13 is a wave dash -- why is it not unified with existing wave dash. What is the difference from tilde?
- j. Mr. Michael Everson: These are intended for general punctuation use in Latin scripts. It is not double wide - the preference was not to unify these.
- k. Dr. Asmus Freytag: Even though they look alike, the wide character semantics do have an impact we cannot ignore. Wide character in the data stream kicks in a whole process of font selection etc. We have very little unification and we have reduced the overlaps with the wide equivalents. It is appropriate to disunify with the double wide wave dash in the 3000 block. It is a dash -- not a tilde character. The glyphic range for the ASCII Tilde and the wave dash are different. The ASCII Tilde is often High. Implementation difficulties with unification of brackets caused us to disunify the wide ones from others.
- l. Dr. Kent Karlsson: Latin Capital Letter Gamma etc. -- are these Latin or Greek? The Uralist tradition identifies these as Greek. The combination of Latin / Greek etc. in the naming was done for avoiding name duplications and sometimes the glyphs are slightly different. The Latin Gamma is different from Greek Gamma in appearance. Some letters are called Greek letters. Why are these called as such?
- m. Mr. Michael Everson: These are Greek characters -- borrowed by UPA.
- n. Mr. Klaas Ruppel: Annex A of N2442 contains 133 characters -- in response to Dr. Ken Whistler.
- o. Mr. James Seng: 3013 / 2053 -- cannot be unified because the glyphs are slightly different. If one has to unify, 223C - Tilde operator is a potential candidate.
- p. Mr. Erkki Kolehmainen: Document N2442 gives some rationale as to why the encoding should not be split between BMP and SMP. Potential of misusing these characters for producing fancy text would be highly unlikely. One would use these typically for UPA.
- q. Mr. Michael Everson: We found the missing character in the names list -- the 134th one.
- r. Dr. Ken Whistler: It is understood that the misuse of these characters would be difficult. The concern rather is mostly based on potential misinterpretation of the standard. We already had a question as to whether some of these characters were already encoded. It is setting a perceived precedence of coding superscripted and subscripted characters in the standard. This is the reasoning behind the US preference on this.
- s. Mr. Erkki Kolehmainen: Someone who makes a proposal -- would be getting the wrong impression of what the standard has precedence, and can cause problems.
- t. Dr. Ken Whistler: It is correct. In the implementation of the Unicode, discussions end up in misinterpreting of the standard based on what is there. Every time we add more Latin variants to the BMP it raises the bar on such misinterpretation.
- u. Mr. Michael Everson: There are already a number of such styles in the BMP for IPA already. Our view is that these belong in the BMP. Such concerns are best addressed in having introductory paragraphs on these UPA and IPA etc. in the Unicode book. We can assist in coming up with the appropriate wordings.
- v. Dr. Mark Davis: Implementations of SMP are coming up very rapidly in various systems. The support of SMP should be less of a concern. BMP is also has a space problem. These UPA characters are possibly not as frequently used. These may be useful for a small user community -- the frequency of use consideration suggests that the place is in the SMP.
- w. Mr. Michael Everson: Have been in the roadmap for a long time.
- x. Mr. Klaas Ruppel: The implementation is already ready to go -- in our institute there are several projects awaiting these to be encoded fast.
- y. Ms. Cathy Wissink: The OS-s are increasingly better at operating the SMP. In essence whether the characters are in the BMP or SMP will be immaterial. The Annex D information says it may

not be final.. There is an inventive process -- over the 100 years. Is it a closed set? That will be a consideration for whether to locate it in the BMP.

- z. Mr. Klaas Ruppel: Annex D is a list of existing characters using the UPA. We do not expect to find any more -- we cannot predict the future. We do not expect to find any more. We cannot promise that this will be a closed set.
- aa. Mr. Michael Everson: There has been no inventions in UPA over the last 50 years.
- bb. Mr. Erkki Kolehmainen: There will be hardly any difference between SMP and BMP in future OS. If so, when some additional symbols are brought up like map symbols etc. then they could be in the SMP.
- cc. Dr. Umamaheswaran: One cannot guarantee that a set of characters in any script will be closed.
- dd. Dr. Kent Karlsson: There is another Phonetic extension -- 100 or 150 characters -- that may bring more as IPA extensions.
- ee. Mr. Mike Ksar: We should not be talking about SMP and BMP etc in this committee.
- ff. Dr. Umamaheswaran: We have to be careful with these -- the roadmaps, the principles and guidelines etc are used for that purpose.
- gg. Dr. Mark Davis: Difference between the SMP / BMP etc. would be the memory usage etc. for storage of data. The frequency of use of characters would be one criteria especially since the space in the BMP is small. How many users will be actually typing these in for example?
- hh. Mr. Klaas Ruppel: I can answer in terms of potential number of pages published using the UPA. There are about 2 million pages. It will be used by Uralists worldwide. It is disturbing that there may be other characters -- that is hypothetical -- we have concrete proposal.
- ii. Dr. Mark Davis: 2 million pages may be large -- compared to documents like Map Books . Guide books etc. it is still quite small. How many people would use these in their daily lives will be a better indicator.
- jj. Mr. Michael Everson: It is in the order of Runic, Ogham etc. -- these are in the BMP. It is easy to say that large corporations are coming up with OS-s with BMP and SMP in practice. However, there are lots of others who cannot develop support for SMP with tools that are hard to develop. These are required in Europe -- many people are awaiting the encoding. My view is that there are a number of countries who are not convinced about putting these in the SMP.

The discussion continued in an ad hoc. The outcome of the discussions was:

Dr. Ken Whistler: US believes that SMP is still the better place to put them. We will not insist on it.

Mr. Erkki Kolehmainen: We are in agreement that the proposal is for 134 characters.

Dr. Kent Karlsson: I agree with the decision.

**Disposition:** Accepted for inclusion in the BMP as part of Amd 2 of Part 1. Document N2442 has the chart 1D00 through 1D7F -- Phonetic Extensions. 0357 - COMBINING RIGHT HALF RING ABOVE was missing from the names list.

Relevant 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.

## 7.9 Urdu contribution

**Input document:**

**N2413 Urdu - SC2 N3589 cover and 3 pdf files + N2413-4 the Proposal Summary Form; Pakistan; 2002-04-28**

Dr. Sarmad Hussain: We have analyzed what is needed for Urdu for national standardization in Pakistan. We compared them with the UCS. US was adding some characters as part of the ballot response. We did not include those. In document N2413 part 4 we have proposed 16 additional characters. Parts 1 to 3 are background documents.

- Misra is used in poetic sense to indicate the line in a couplet.
- Safah to indicate page number

- Nuqtatin as dash-colon
- Jazm - perhaps semantically similar to Sukun in Arabic. Indicates a coda consonant in Urdu syllable. Looks like upside down u or v.
- Small High Tah - indicates a phrase break. Written in Koran for Urdu readers,
- Ligature Bismillah Abraham Arrahim -- required by all legal documents in Pakistan. It always shows up as an Art form -- closer to a symbol and not in written form.
- Digits 0 to 9  
We are proposing all 10 digits for the same reason as for Persian digits as a block -- even though many of them exist in other scripts.

**Discussion:**

- a. Dr. Ken Whistler: US committee took a position on this proposal. Misra, Safah, Jazm, Small High Tah -- it might be OK to add these characters depending on what kind of information we get during the meeting.
- b. Nuqtatan -- should be clarified as -- simply not a combination of two marks. The justification provided was not sufficiently clear. Bismillah Ligature -- we are in favour. The digits - we are NOT in favour of encoding these. The intention as we understand these -- is that these are already coded in the standard. The intent of these were for all Arabic script users. The shapes of these were not specific to any particular practice. In this case we know of differences for 3 digits .. not the others. We should consider using font switching for these. We do have a collection of questions from the UTC / L2 meeting. Would like to get answers to these perhaps off line.
- c. Mr. Michael Everson: Is the Safah a combining character? It may be a combining character -- we were not clear on it
- d. Dr. Ken Whistler: Except for the issue of names, there are comparable entities like year sign etc. that come before a specified number of digits and extend / interact with others.
- e. Mr. Michael Everson: Jazm - is similar to Sukun. Similar to a circle that is not quite completed. Could it be considered to be a glyph form of Sukun?
- f. Dr. Sarmad Hussain: I am not an expert on Arabic. I do not know what the functionality of Sukun is in Arabic.
- g. Mr. Michael Everson: Absence of sound. Could you consider Jazm as a glyph variant of Sukun?
- h. About the ligature -- I am not in opposition. However when Maldivian came to us we did not accept their similar ligature. We want to ensure that these are not the same.
- i. Mr. Michel Suignard: On the Nuqtqtqin -- can we encode them as two separate entities -- one already exists. We do have many hyphens in the standard already.
- j. Mr. Mike Ksar: Is the usage always colon-hyphen or sometimes hyphen only, colon only etc.

An ad Hoc group with Messrs. Sarmad Hussain, Mike Ksar, Ken Whistler, Mark Davis and others participating met and discussed the open questions on the proposal.

Dr. Ken Whistler: N2413-4 was the relevant document. We worked through the issues and concluded that:

- The following characters were agreed upon. Others need more expert feedback.
  - ARABIC SIGN MISRA -- 060F
  - ARABIC SIGN SAFHA -- 0603
  - ARABIC SMALL HIGH TAH -- Combining Mark (Annex B entry) - 0659
  - BISMILLAH LIGATURE - FDFD.
- Glyphs per document N2413-4. To be provided to Dr. Asmus Freytag, the contributing editor, by Dr. Sarmad Hussain.

Mr. Michael Everson: Should the transliteration be AL Rahman or AR Rahman etc.? We would check and comment on this.

**Disposition:** Accepted the output from the ad hoc for inclusion if FPDAM-2 in the BMP.

Relevant 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.

## 7.10 Khmer script

Input documents:

**N2406** Response to WG2 Document N2385, 2001-10-11; Cambodia; 2001-11-04  
**N2412** Response to N2380 on Cambodian - On the suitability of the COENG encoding model for Khmer; Everson; 2002-03-31  
**N2458** On the unsuitability of the "COENG encoding model" for Khmer – Response to N2412; Cambodia; 2002-05-03  
**N2459R** Cambodian stance regarding Khmer code table in Unicode 3.2; Cambodia; 2002-05-03  
**N2470** Proposal to add missing Khmer characters; CHEA Sok Huor, LAO Kim Leang, HARADA Shiro, Norbert KLEIN; 2002-02-13  
**N2471** Proposal to Encode Khmer Lunar Dates; CHEA Sok Huor, LAO Kim Leang, HARADA Shiro, Norbert KLEIN; 2002-02-13  
**N2472** Proposal to add Krung voicing marks; Expert Contribution – Paul Nelson; 2002-02-13

An ad hoc group with participation of Messrs. Ken Whistler, Michel Suignard, Mark Davis, Michael Everson, members of the Cambodian delegation, Maurice Bauhahn, and James Seng met and discussed various documents on the Khmer script.

Mr. Michel Suignard: The ad hoc discussed only technical issues in various documents. The ad hoc did not discuss non-technical issues. Some of the ad hoc output is reported under disposition of comments to US comment T.8 in section 7.1 on page 14. Other items are:

- a. Additional information on six characters -- 17A3, 17A4, 17B4, 17B5, 17D3 and 17D8 -- will be provided by Cambodia and other experts. These are to be discouraged from use. The explanation will be in the Unicode standards. A note will be added to 10646 in Annex P, as discouraged for use.
- b. Glyphs for 17B4 and 17B5 are NOT intended to be used as it is in the standard. The glyphs were used to indicate some errors. The shapes of these must reflect the usage of these characters. We will find a different glyph -- for example, a dotted box with some abbreviation inside the box.

**Disposition:** Agreed to add to Annex P annotations on the six characters agreed to by the ad hoc group.

Mr. Sorasak Pan: Would like a response to document N2459R from Cambodia.

Mr. Michel Suignard: The ad hoc discussed only technical issues in various documents. The ad hoc did not discuss non-technical issues.

Mr. Mike Ksar: We will have resolutions on the technical issues. This is a technical committee and we cannot respond on other matters.

Relevant 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.

## 7.11 Proposal to add two Greek letters for Bactrian

Input document:

N2411 Proposal to add two Greek letters for Bactrian to the UCS; Nicholas Sims-Williams and Michael Everson; 2002-01-30

Mr. Michael Everson: Bactrian was used in used in Northern Afghanistan. The proposal in document N2411 shows samples of use of these characters. Bactrian SHO and RHO -- are missing. Other alphabets of Greek are used directly.

Dr. Ken Whistler: US is in favour of adding these characters. UTC has reviewed and concur with the proposal.

Mr. Mike Ksar: Are these in 8859-7? No.

**Disposition:** Accept the proposed two Bactrian characters Include in Amd 2 to part 1-- see also Ireland ballot comments. These are included in disposition of comments to Irish comments - see relevant resolution in section 7.1 on page 14.

## 7.12 New ordering rules for Hangul

Input document:

N2405 New ordering rules for Hangul, including rules for historic characters, and a DPRK delta; Kent Karlsson; 2001-10-30

This document is for information only. Not discussed at the meeting.

## 7.13 Proposal to add Negative Circled Digit

Input document:

N2441 Proposal to add NEGATIVE CIRCLED DIGIT ZERO; Eric Muller; 2002-05-04

The proposal was accepted. It was also part of the US ballot comments. See disposition of comments to US ballot comment on PDAM-2 to Part 1, and the relevant resolution in section 7.1 on page 14.

## 7.14 Coptic Supplement

Input document:

N2444 Coptic Supplement in the BMP; Everson & Mansour; 2002-05-08

Mr. Michael Everson: Coptic experts are not happy with the unification of Coptic supplement with Greek. They are unable to use Greek and Coptic in the same line in plain text. Now they have to shift fonts. Page 2 of document N2444 shows examples in Latin scripts. Samples of other Greek-derived scripts are also shown. Coptic is one of these. Difficult to read the Coptic in Greek font. Samples are shown where both Coptic and Greek are written together and separately showing the difficulty in plain text for the Coptic. Page 8 shows some missing Coptic characters More work is needed. Last column 03E0 shows characters already encoded in the standard and are called Coptic characters. Request to WG2 is to agree that there is a need to disunify Coptic from Greek so that more work can be done to progress the proposal.

### Discussion:

- a. Dr. Mark Davis: This is a good document to look at. Number of arguments in this document are flawed. I do not want to take these as principles that may be taken with other scripts of this nature. I do not have any objection to the overall thrust.
- b. Dr. Ken Whistler: This could be part of the Liaison from UTC. UTC has accepted in principle the disunification. Requests more information on why this should be different from Roman style etc.
- c. Mr. Michael Everson: This document answers one of the questions from the UTC. However we can go ahead to refine this proposal.

**Disposition:** WG2 agreed to proceed with disunification and await a refined proposal.

Action item: Proposers to submit a refined proposal for future WG2 consideration.

Relevant 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.

## 7.15 Additional compatibility characters from TC46

### Input documents:

N2446	Additional compatibility characters - TC46 ; Randall Barry; 2002-05-10
N2460	TC 46 Unmapped Characters; UTC/L2; 2002-05-14
N2462	Status of Mapping between Characters of ISO 8957 – Table 2 and ISO/IEC 10646-1 (UCS); Expert Contribution – Joan Aliprand; 2002-05-14
N2463	Status of Mapping between Characters of ISO 10574 and ISO/IEC 10646-1 (UCS); Expert Contribution – Joan Aliprand; 2002-05-14
N2464	Status of Mapping between Characters of ISO 5426-2 and ISO/IEC 10646-1 (UCS); Expert Contribution – Joan Aliprand; 2002-05-14
N2465	Contractions Encoded in ISO 5426-2: a Question of Use; Expert Contribution – Joan Aliprand; 2002-05-14

Mr. Randall Barry: I have seen earlier versions of the various documents listed above through the US L2 committee. These are showing additional mappings that are not shown in earlier TC46 documents.

### Discussion:

- a. Mr. Mike Ksar: My understanding is that TC46 wanted some characters as compatibility ones. From Ms. Joan Aliprand's document -- I get the impression that these characters are not candidates for encoding and need further study.
- b. Mr. Randall Barry: All the characters from TC46 are all in TC46 standards -- submitted in 1991 but published in 1996. In the intervening years character encoding model was developed, 10646 got finalized etc. Also we do not know which of the TC46 standards have been implemented. We are stuck with what to do with maintenance of these. TC46 holds these till all the characters in these standards are fully mapped to 10646 and then hand over them to JTC1 / SC2. TC46 believes that these should be treated as compatibility characters. We found some were mappable. The number dropped from initial 143 to 67 -- seven others were also cut down. I would like to present these and explain why they are important to the library community.
- c. Mr. Mike Ksar: I suggest an ad hoc on these items. Messrs. Randall Barry, Klaas Ruppel, Kent Karlsson, Ken Whistler, Michael Everson (as rep from SC2 to TC46 SC4) were identified as participants.

A report on the ad hoc discussion, was given by Mr. Randall Barry:

- No characters are added.
- On document 2426-2 - further study needed.
- Hebrew - mapping will be proposed by TC46.
- US and Ireland will be making further proposals.
- The total number of potential characters that do not have mapping is reduced from 103 to 54.

**Action item:** Mr. Michael Everson will be preparing the written report on the ad hoc discussions.

## 7.16 Additional double diacritics

### Input document:

N2457	Additional Double Diacritics; US – Unicode; 2002-05-10
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Dr. Mark Davis: Document N2457 contains the proposal - the important part is on page 3. The US committee and the UTC had discussed the issue of double diacritics over several meetings. There are three currently encoded ones at 0360, 0361 and 0362. For additional needs in dictionaries etc. we debated overloading the CGJ character. Because these are a small set decided that it will be better to just encode them separately. Examples of use in dictionary are attached. US proposes that three more characters be added.

### Discussion:

- a. Mr. Michael Everson: I like to see such a proposal. FE block are half form diacritics. Should it go with regular diacritic marks. There is room.
- b. Dr. Mark Davis: There is room in current block for half forms -- not sure if there will be others.
- c. Mr. Michael Everson: Even with UPA there will still be room.
- d. Dr. Asmus Freytag: Looks like FE block would be better candidate for unusual diacritics. Another technology will be needed for dealing with such unusual diacritics.
- e. Mr. Michael Everson: I rather see them in the regular combining mark position.
- f. Mr. James Seng: There is room before 0360 for current Double Diacritics. If there is room before these I prefer putting them there.
- g. Dr. Ken Whistler: 035D, 035E and 035F are currently empty.



- h. Mr. James Seng - prefer to put these there.
- i. Dr. Ken Whistler: 0333 has the same name as new DOUBLE LOW LINE. Rename DOUBLE LOW LINE to DOUBLE MACRON BELOW.
- j. Mr. Randall Barry: I am confused with two lines under one character.
- k. Dr. Ken Whistler: It is combining double low line. Current one is double long diacritic.

**Disposition:** Accepted COMBINING DOUBLE Breve, Macron and Macron Below, with glyphs as in Page 3 of document N2457, at positions 035D, 035E and 035F for inclusion in FPDAM-2 to Part 1. Also, additional entries in Annex B - list of combining marks.

Relevant 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.

## 7.17 Nepal status

**Input document:**

**N2466** Status in Nepal on n2055 (UK comment on encoding request for Nepali n1999-Nepal); Takayuki K. Sato -CICC Japan; 2002-05-15

Mr. Takayuki Sato: There was a proposal from Nepal to encode their script (document N1999). There was a counter proposal from UK in document N2055.. Nepal decided to extend Devanagari instead of having a Nepal unique encoding. In order to satisfy Nepali by extending Devanagari they requested 8 characters -- Nepal will be preparing a new proposal. Meanwhile WG2 has no action to take.

## 7.18 Proposal to Add Ideographic Taboo Variation Indicator

**Input document:**

**N2475** Proposal to Add IDEOGRAPHIC TABOO VARIATION INDICATOR to ISO/IEC 10646; Unicode – John Jenkins; 2002-05-17

Dr. Asmus Freytag (?): Document N2475 talks about the practice of using a mark to indicate that an ideograph is used for personal use of high-ranking individuals .. and marked separately.

**Discussion:**

- a. Mr. James Seng: How is it different from Kanji radical variant selector?
- b. Dr. Asmus Freytag: The Taboo variant can be applied to any Han character -- unlike the variant selector which is always with a fixed list.
- c. Dr. Ken Whistler: Base + VS specified a predefined variant. This looks like another character -- VISIBLE -- 303E is an example. Ideographic Variant Indicator - says that I look like this Han but not identical. The character that follows it is a taboo variant of that Han character. You see this in many older dynasty documents. In most instances it is by dropping the last stroke.
- d. Mr. James Seng: Normal way of printing a taboo would be by dropping the last stroke. Why is it in the Kanxi radical.
- e. Dr. Ken Whistler: There is already a proposal for yet another IDS system in the works. It is inappropriate to use that space where that new system comes through. The Kanxi radical set is a fixed set. We are using the hole. The correct space would have been next to 303E -- but there is no space there.
- f. Mr. Takayuki Sato: Does this apply to any CJK ideograph? Or selected ones.
- g. Dr. Ken Whistler: Intended use is to represent a taboo variant. It could be used with any ideographic character.
- h. Dr. Mark Davis: It can be used to represent with any character if that appears in the historical text.
- i. Mr. James Seng: There are variation selectors in plane 14. Why can't we use those?
- j. Dr. Ken Whistler: This is a VISIBLE symbol just like 303E. A symbol with dots around it. Cannot go in plane 14.
- k. Mr. Erkki Kolehmainen: One can render the combination if you have the right mechanism.

- l. Dr. Asmus Freytag: Some of the proposals we get do have this ambiguity. The proposal says that it is a visible symbol. The proposers also claim that with special rendering the taboo character could be printed correctly.
- m. Mr. Zhang Zhoucai: The taboo variant indicator is needed for historic document. It is just a symbol. It does not mean that the actual character will not be encoded. There are more than 1000 such characters and encoding of these will be inevitable. This taboo indicator is one solution to process such Han variants. In future there will be different proposals for indicating variant indicators.
- n. Dr. Umamaheswaran: The IVC is functionally the same -- what is the difference?
- o. Dr. Ken Whistler: It is a particular type of IVC -- a subset of variants -- indicating the Taboo type.
- p. Mr. James Seng: Looks like these are similar to the variation selector.
- q. Dr. Mark Davis: It is different from processing and rendering point of view -- from Variation Selector use
- r. Mr. Zhang Zhoucai: Even with the Taboo Variant character one should not assume that some of these Taboo Hans may be coded separately.
- s. Dr. Ken Whistler: Use of variation selector would be the method for indicating variations between Han characters .. encoding is also possibility. US does not have any position on whether they should or should not be encoded.
- t. Mr. Zhang Zhoucai: I think the real taboo Han character is needed we should not stop encoding possibility. I have no objection to the Taboo Variant Indicator character.
- u. Mr. Randall Barry: A combining mark double underscore is used by authors in library -- to say it looks like the following character but not identical. One could consider it as a combining mark -- so that combination of this could be rendered by a cartouche etc.
- v. Dr. Ken Whistler: There are lot of Taboo forms -- not all of them take off the last stroke.
- w. Mr. Zhang Zhoucai: The taboo indicator is to help taboo processing -- but not to replace the potential encoding in the future of any of these Taboo variant ideographs.
- x. Dr. Ken Whistler: Are there any of these in Extension C. We do not every variant of Hans to be encoded -- otherwise unification goes out the window. IRG has to take a look at each Han variant proposed. Our suggestion for this meeting is not proceed with this proposal.

**Action item:** National bodies to study the proposal and feedback.

## 7.19 Limbu script

### Input documents:

- N2410 Revised proposal to encode the Limbu script in the UCS; Boyd Michailovsky and Michael Everson; 2002-02-05
- N2428 Comments from Limbu experts on N2339 – three parts: N2428-1, N2428-2 and N2428-3; Sato – Expert Contribution; 2002-03-25

See PDAM-2 to 10646-1: 2000 disposition of comments in document N2489 - discussed under section 7.1 on page 14 to US T.1 and Ireland T.1, T.2 ballot comments in documents N2434 and N2437, and the Limbu ad hoc recommendations.

## 8 10646-2: 2001

### 8.1 10646-2 - Disposition of PDAM-1 Ballot Comments

#### Input documents:

- N2435 Summary of Voting/Table of Replies - 10646-2/Amd 1 - SC02N3597; SC2 Secretariat; 2002-03-28
- N2437 Late Irish vote - 10646-2/Amd 1; SC2 Secretariat; 2002-03-29
- N2439 Late German vote - 10646-2/Amd 1; SC2 Secretariat; 2002-04-04
- N2479 Proposed Disposition of Comments 10646-2 – Amd1; Project Editor – Suignard; 2002-05-08

#### Output documents:

- N2490 Disposition of Comments – 10646-2 AMD 1; Project Editor – Suignard; 2002-05-22
- N2492 Charts – 10646-2 AMD1; Freytag; 2002-05-22

Mr. Michel Suignard: All votes are Approvals, some with comments, with two abstentions. The original ballot comment text and the proposed dispositions are recorded together in document N2479. The delayed response from Ireland is also included. (The final disposition of comments is contained in document N2490 along with the revised charts in document N2492.)

*Canada - comments*

Comment 1 - accepted. New number is 3003.

Editorial - 3 comments - accepted in principle.

Comment iv -- Accepted by moving the block by 1 column to begin at E0100 and end at E01EF.

**Action item:** Roadmap for Plane 14 is to be adjusted accordingly, showing VSx from E0100--E01EF.

*Germany - comments*

Comment 1: Foreword - (Same as in PDAM-2 of Part 1) - Partially accepted.

Comment 2: May comment on Numbers -- Noted.

Comment 3. Osmaniya - other sources referenced to be checked. Accepted in principle.

The sources pointed to by Germany were checked.

Mr. Michael Everson: Both referenced sources are secondary information containing scans. The order of characters proposed in WG2 is provided by the grandson of the inventor of the script. Latest document is N2361R.

Mr. Michel Suignard: The referenced document seems to be older and the latest WG2 documents seem to be more recent. The material in N2361R is more authoritative and more recent than the sources referenced by Germany.

*Ireland - comments:*

T.1 -- Align the block name with character name etc. to Variation Selector Supplement.

Accepted.

Editorial comments

E.1 -- E.4: Typos - Accepted.

E5 and E6 - accepted in principle.

Updated fonts have been provided by Mr. Michael Everson to Dr. Asmus Freytag for Osmaniya and Variation Selectors.

*Korea, Democratic People's Republic of - Comments*

T.1 Missing mapping Accepted

T.2 Compatibility mapping table; related to comment T.4 below.

T.3 -- one line is missing in CJKB\_SR.txt

Accepted in principle.

26C2A is there -- but 26C29 was missing, will be added.

T.4 CJK Compatibility mappings

Per Korean script ad hoc group recommendations, 37 of the initial 160 compatibility ideographs were mapped to Plane 2 ideographs. Remainder were added to the BMP per disposition of comments to PDAM-2 on Part 1.

Editorial comments - All accepted.

*Korea, Republic of - Comments*

Editorial comments

E.1 Change K- to K4 in source reference.

**Action item:** IRG is instructed to provide new CJK source data file for ROK sources -- changing K-xxxx(sp) to K4-xxxx (with no trailing space).

**Disposition:** Suignard will incorporate the revised data file from IRG into FPDAM-2.

E2 Source ref for CJK unified ideographs -- CJKB\_SR.txt - missing entry

Checked. same as DPRK. Accepted.,

*Sweden - Comments*

SE 1 - 3.x to 4 accepted,

SE-2 - two columns to one column switch; Editorial - accepted.

SE-3 - semi-colon delimited file format; Partially accepted. (see disposition of Swedish comments in Amd 2 of Part 1, document N2489.)

SE4 - Some glyphs have dotted lines on it.

These are part of the ideograms that the users have on their daily usage.

Dr. Asmus Freytag: I suggest no comments / annotations in 10646. Unicode can put some annotations on these characters in their names list file.

SE 5 - Withdrawn by Sweden

#### USA - Comments

E.1 through E.5 -- all are editorials. Accepted.

#### Discussion:

- a. Mr. Takayuki Sato: When will Unicode 4.0 be published? Can we reference a document that may be published later than Amendment publication.
- b. Mr. Mike Ksar: End of next year is target for Unicode 4.0. ITTF publication takes its own time. The final texts will most likely be sent to ITTF by June 2002.
- c. Dr. Ken Whistler: Unicode 4.0 will have exactly the same characters as in Amd 2 to Part 1 and Amd 1 to Part 2. Note also that Unicode 4.0 will also reference the ISO Amendments that are in progress.
- d. Dr. Mark Davis: The data tables in Unicode 4.0 in Beta form will be available earlier than that.

Relevant resolutions:

#### **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)

#### **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.

## 8.2 Han Variation Selectors

Input document:

**N2429** Proposal: Use full plane-13 for the Han variation selector; Experts Contribution - Takayuki K. Sato and Tatsuo L. Kobayashi -Japan; 2002-04-01

Note the date of origin of this document. No discussion.

## 8.3 Addition of one Hanja code

Input document:

**N2427** Proposal to add 1 Hanja code of D P R of Korea into ISO/IEC 10646-2:2001; Committee for the Standardization of the D P R of Korea (CSK); 2002-03-18

Part 2 - request for a single character mapping. Included in ballot response from DPRK on PDAM-1 to Part 2.

Accepted.

## 8.4 Monogram, digram and tetragram characters

Input document:

**N2416** Proposal to add monogram, digram and tetragram characters to the UCS; Richard S. Cook, Michael Everson, Michael Nylan; 2002-02-11

Mr. Michael Everson: Document N2416 is a proposal to complete the set of --grams for annotations, divinity markings etc. It proposes 87 additional characters.

#### Discussion:

- a. Dr. Ken Whistler: US position is that this is a mature well documented proposal and would like to see it added to FPDAM-2 ballot to Part 1. Are the TAI XUANG JING proposed locations most suitable? Suggestion is not to use the Chinese names at all on the block name -- to use DIVINITY SYMBOLS for example. Block name is not so critical. If we decide to go ahead -- to

review the block names for YiJing (Hexagrams in Part 1 Amd 2) and the new TaiXuanJing be made consistent.

**Disposition:**

Accept the 87 mono, di and tetra gram characters, at code positions in document 2416; TAI XUAN JING SYMBOLS Block U+1D300 to U+1D356; Accept for FPDAM1 to Part 2.

Relevant 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.

## 8.5 Concerns with variation selector in 10646-2 pDAM 1

Input document:

**N2468R** Concerns on the VARIATION SELECTORS in ISO/IEC 10646-2, PDAM-1; Takayuki K. Sato - CICC Japan; 2002-05-20

Mr. Takayuki Sato: Some questions related to application of Variation Selectors are listed in document N2468. We have no problem with VS as a concept. We need some clarifications on use of these in the context of CJK ideographs.

**Discussion:**

- b. Dr. Mark Davis: I agree we have to be clearer about the implication of use of VS for CJK. I would suggest Japan work with Unicode Technical Committee on text towards clarifications.
- c. Mr. Takayuki Sato Even if the clarification is not for the current amendment it is fine. There are no CJK variants for now. There are already several documents being written on CJK implementation I do not want misleading information on VSs as applied to CJK. Clarification is needed to distinguish the Glyph Variations (ex: Mongolian) and the second is preferred shape etc. (like Math). Clause xxx -- a note in Amd 1 to Part 2 already has wordings.
- d. Dr. Mark Davis: Looks like the current text is adequate.
- e. Mr. Michel Suignard: It is perfectly clear to add when we add more sequences. It is adequate for now.

**Disposition:** No action for the current amendment.

## 8.6 Request for changes in Aegean scripts

Input document:

**N2455** Request for changes in Aegean Scripts; Deborah Anderson and Rick McGowan; 2002-05-09.

Mr. Michael Everson: Ms. Deborah Anderson got some feedback from others during the ballot period. They had a number of editorial requests. The suggestion was to remove the annotations in the parentheses for some of the ideographs. They were meant to avoid confusion with the context of use. Ireland would agree to the proposed changes. Other change requests are for some glyphs. See document N2455.

Dr. Ken Whistler: Implication on Amd 1 to Part 2 -- is to remove the annotations for a to h -- U+1000E, 18, 1B, 25, 2D, 42, 49, 52; and change to the glyphs for 10009, 14, 0E, 99, D7 and 13D.

**Disposition:** Accept requested changes in document N2455.

Relevant 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.

## 8.7 Additional Deseret Letters

### Input document:

N2473 Proposal to Add Two Deseret Alphabet Letters to ISO/IEC 10646; Unicode – John Jenkins; 2002-05-17  
N2474 Proposal to modify the encoding of the Deseret Alphabet; Ken Beesley; 2002-05-17

Dr. Ken Whistler: Document N2473 is the proposal summary form asking for four Deseret characters with glyphs, code positions etc. on page 1. These were left out of the first proposal for Deseret awaiting further clarification. Based on the evidence provided in document N2474 and discussions in the UTC we are comfortable in asking that these be encoded into 4 positions in the existing Deseret block as part of the FPDAM for Part 2. It fills the four holes and that will make the collection fixed.

Mr. Michael Everson: Document N2474 does not give the glyphs; document N2473 gives glyphs but the code positions are not given. (Check inside document N2474).

**Disposition:** Accept.

### Relevant 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.

## 9 Architecture issues

### 9.1 Additional guidelines on principles and procedures

#### Input document:

N2467 Proposal: Additional guideline in the WG2 Principles and Procedures; Takayuki K. Sato -CICC Japan; 2002-05-13

Mr. Takayuki Sato: We should add to our Principles and Procedures document changes needed for dealing with CJK errors. Clarification is needed to avoid confusion.

**Action item:** Messrs. Umamaheswaran, Takayuki Sato, Tatsuo Kobayashi, and a Unicode representative to consider the proposal and suggest additions to the principles and procedures document.

### 9.2 Proposed Synchronization between 10646 and Unicode - UTF32

#### Input document:

N2485 Proposed important synchronization of ISO/IEC 10646 and Unicode for UTF-32, China and Singapore, 2002-05-xx.

#### Output document:

N2497 Proposal from Mark Davis of notes / text; Mark Davis; 2002-05-xx.

Mr. Zhang Zhoucai: Document N2485 is a joint proposal from China and Singapore. UTF 32 has been defined in 10646. Normative reference to UTF32 is needed from 10646.

#### Discussion:

- a. Dr. Ken Whistler: It is not a good idea to make a reference to UTF-32 -- since that annex is being incorporated into Unicode 4.0. This practical matter of referencing something that is slated to disappear has to be kept in mind. The concept is useful -- unlike UTF-8 and UTF-16 in 10646, UTF-32 is essentially just UCS-4. Rather than defining a separate annex we could add a paragraph and notes under current UCS-4 definition to state what UTF-32 is. Then point out to other references for the BE, LE etc.
- b. Mr. Mike Ksar: We have to be careful on how we include UTF-32 definition in 10646. A better timing may be when we go for the next edition -- by combining the parts.
- c. Mr. Takayuki Sato: Japan NB comment had related to references in Unicode 4.0 -- synchronization was the basis for rejecting that comment. We could use synchronization also in such a reference to UTF-32.
- d. Mr. Zhang Zhoucai: My concern is the difference between Unicode and 10646 regarding UTF-32, It is important that this be done now.

- e. Mr. Yasuhiro Anan: What is the significant difference between UTF-32 and UCS-4?
- f. Mr. Mike Ksar: There is a difference. UCS-4 coding space goes beyond UTF-32. We have agreed in this committee not to encode beyond plane 16.
- g. Dr. Mark Davis: There is no labels like UTF-32BE, LE etc. corresponding to UCS-4. For UTF-16 we have notes about BE, LE etc.
- h. Mr. Michael Suignard: It is true that even with the restrictions of removing PU groups etc from existing definition of UCS-4 to make UTF-32 an alias of UCS-4, there are still many other places where the restrictions do not apply. Rather than a separate annex on the topic, we will suggest some paragraphs where UCS-4 is defined .
- i. Dr. Ken Whistler: US national body volunteers to draft some text that can be reviewed this afternoon.

Document N2497 contains response / proposed text from US, China and Singapore -- for inclusion in 10646 in response to documents N2485 and N2488 (see section 9.3 below).

**Disposition:** Accept notes proposed in document N2497 for inclusion in FPDAM-2 to Part 1, regarding clarifications in clause 5 and clause 13.2. See relevant resolution in section 9.3 below.

### 9.3 Question of Terms -- Canonical form and UTF 16

**Input document:**

N2488 Questionable Terms: Canonical Form and UTF-16; Zhang Zhoucai; 2002-05-21

**Output document:**

N2497 Proposal from Mark Davis of notes / text; Mark Davis; 2002-05-xx.

Mr. Zhang Zhoucai: The term Canonical Form causes some confusion for us. It needs some clarification. UTF-16 has two kinds -- without surrogates it is 16 bit fixed and with surrogates it becomes 2 16 bits etc. It is confusing.

**Discussion:**

- a. Dr. Asmus Freytag: Unicode does not state that UTF-8 is a canonical form. There is some confusion in terms usage of canonical form between 10646 and Unicode. We have to consider the three forms UCS-4 (aka UTF-32), UTF-16 and UTF-8 and explain these -- the way the term "canonical" is intended to be defined. Explanatory text could be added to clarify to users like in China.
- b. Mr. Michael Suignard: UTF-16 definition always implies inclusion of Surrogates. There is no ambiguity.
- c. Mr. Zhang Zhoucai: I understand when you are talking about it. However it is not clear in the text. The term Canonical - we cannot find equivalent term easily.
- d. Mr. Mike Ksar: The definition of UTF-16 has been there since the first edition. If people are confused between UCS-2 and UTF-16 then there is something wrong. If you can propose some text towards eliminating any confusion we can entertain that.
- e. Dr. Mark Davis: We can come up with explanatory text -- for example, below where Canonical appears first -- clause 4.3.

China was invited to propose suitable explanatory text for Canonical.

Document N2497 contained proposed text in response to both section 9.2 above and this item, prepared by China, Singapore and US at the meeting.

Relevant 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.

## 10 Publication issues

### 10.1 Error correction on unified ideographs

**Input documents:**

N2423 Proposal "Error correction on unified ideographs in UCS"; Japan - Sato; 2002-03-25

N2448 Error Corrections; IRG; 2002-05-09

Mr. Takayuki Sato: Error correction policy was proposed by Mr. Tatsuo Kobayashi in document N2423. That document was accepted. There was one error correction request presented in Singapore and it was not accepted. Different characters were unified by mistake. Two characters are actually the same and should be unified but are given different code positions.

**Discussion:**

- a. Dr. Asmus Freytag: The author's reasons to resolve disputes is coherent.
- b. Dr. Umamaheswaran: This is additional information from document N2382.

**Action item:** Include N2423 -- in discussion regarding CJK Error corrections -- new text to be added to Principles and Procedures documents.

Document N2448 is an IRG contribution regarding Errors in mapping. IRG agrees that stability in mapping data for CJK unified ideographs is required -- however three are errors that need to be corrected.

**Discussion:**

- a. Mr. Michel Suignard: Mapping changes for CJK are not simply corrections. However, a change to the mapping is having the net result of changing the meaning of a code point. Impact on mapping of legacy set must be considered.
- b. Mr. Zhang Zhoucai: I agreed partially with the situation. Other situation is when the source is misidentified. There are also very frequently used character mappings.
- c. Mr. Michel Suignard: The first one is to change the G-source information -- there is no number associated with it. It is less controversial. If it has an H-source with a number, by changing the mapping, we are creating another character.
- d. Mr. Takayuki Sato: The unification mistake is a different animal. The kind of mistakes reported here are identifying the source. Can we correct these? Document N2448 applies the error correction policy of N2423. We have to discuss each character.
- e. Mr. Zhang Zhoucai: Those with specific H-values can be problematic. We agree that in general these cannot be changed. However the Hong Kong source is pretty recent and should have minimum impact / risk. IRG has evaluated the risks and found these to be the minimum.
- f. Mr. Takayuki Sato: We could considered as a Defect in the standard.
- g. Mr. Zhang Zhoucai: IRG has studied specific cases following WG2 P&P -- and proposed the changes that will not have significant impact.
- h. Mr. Michel Suignard: If you do these changes - you will invalidate existing implementations. I am pretty sure there will be objections from some NBs. We have to study the impact seriously. I have no issue with sources with no numbers. They are not defining coded character sets. Those with the numbers are the problematic ones.
- i. Mr. Mike Ksar: Can we postpone to the next meeting?
- j. Mr. Zhang Zhoucai: I would like to get agreement before the end of the meeting.
- k. Dr. Ken Whistler: The first two items in N2448 -- we should accept. The Glyph correction should also be acceptable. The H-source mapping changes affects the HKCS mappings in implementation. Will need further discussion. The T-source - two changes - debatable. U+5B90 and U+7921. We need input from TCA on the U7921 to T- 2-662B.
- l. Mr. Tatsuo Kobayashi: The HK mappings are very recent - in part 2. HK would like to change these. Earlier we change the better for the users.
- m. Mr. Michel Suignard: There are existing implementations -- data and software are impacted. We need to get opinions from national bodies having potential impact.

**Disposition:** Accept the two corrections to G sources in N2448. U+21E45, 236AD, 2384F, 24FC4, 25D0E, 276EB, 27CF1, 2890F. Roll these corrections into current amendments.

**Action Item:** All NBs look at the impact of requested changes to mapping tables in N2448 and feedback for consideration at the next meeting. Convener to place this item on the agenda for the next meeting.



Relevant 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.

## 10.2 Font policy

**Input documents:**

**N2424**      **Reconsidering request: "Font supply guide for UCS development" (M41.13); Japan – Sato; 2002-03-25**

**N2443**      **Clarification to WG2 N3568R, M41.13 resolution in Singapore; Singapore; 2002-05-06**

**N2445**      **Font Policy; Freytag; ???**

**N2447**      **IRG #19 Resolutions; IRG; 2002-05-09 (Resolution M19.4)**

Dr. Asmus Freytag: Briefly went over the resolution M41.13 - the font policy WG2 has adopted. IRG has a number of issues raised about it and they have taken the resolution based on these issues. Document N2424 contains feedback from Japan summarizing the issues on WG2's font policy. IRG resolution M19.4 in document N2447 on use of ttf -- IRG resolves that M41.13 should not be applied to CJK Unified ideographs and its extensions.

Referencing document N2424 -- the first item - the shape of the character plays somewhat of a different role than other scripts in the CJK work of IRG. It makes the distinction that IRG is a reviewing body instead of being submitter (assumed in our policy). The review of CJK ideographs is an expensive process due to the sheer size and the fidelity requirements.

Item 6 in N2443 - is a misunderstanding of the wordings in the policy. It is misinterpreted to be -- editor has the freedom to change the refinements to the glyphs. Point c of the resolution M41.3 must be interpreted as refinements agreed upon / approved by WG2. It can be done only if the font is not made available. For CJK unified ideographs the refinements can be done only in conjunction with the IRG. This clarification will help in resolving the confusion.

Unicode simply cannot process non-outline fonts For synchronization we need to work with the IRG. We have been working with font providers which matches the shapes in the bitmaps from IRG. I thought this process of using a TrueType font matching the bitmap glyphs from IRG in the extension B work -- was working very well. The intent has always been that IRG will always be involved. We should ensure the IRG is completely in the process of font refinements also.

### **Discussion:**

- a. Mr. James Seng: the resolution wording did not reflect the explanation given by Asmus.
- b. Dr. Asmus Freytag: the item c - is being misread as Submitter must provide the font. The editor must be provided the font - in order to get the publication work done. For example, if the font for the tetragrams is not available, we cannot hold the entire amendment up. The policy as it is written may need some clarification.
- c. Mr. James Seng: I am bringing up to your attention -- the existing misunderstanding. The clarification could be taken back to the IRG. I would like to get a clarification that CJK related font refinements will be done with IRG involvement. The other concern was that the font will be used in other publication such as the Unicode.
- d. Dr. Asmus Freytag: The synchronization between the standards will be needed.
- e. Mr. Zhang Zhoucai: Font difference between 10646 and Unicode -- past history -- is the main concern from IRG. Further refinement of the font is another concern.
- f. Dr. Asmus Freytag: Synchronization can go further than what it has been so far - by making the font differences go away. IRG participation is required to make it happen.
- g. Mr. Zhang Zhoucai: It is not so simple. Personally the resolution should be revised in wording.

- h. Mr. Mike Ksar: We have a suggestion to clarify the wording in the resolution M41.13 - font policy. I would suggest the contributing editor and IRG rapporteur, the project editor and any other interested experts work together and come up with acceptable rewording of the font policy

**Action item:** Dr. Asmus Freytag will prepare document N2445 on Font Policy clarification, based on ad hoc discussions with the project editor and IRG rapporteur and other interested parties..

### 10.3 Pictorial copy of roadmaps for WG2 usage

**Input document:**

N2409 Pictorial copy of roadmaps for WG2 usage; Uma; 2001-11-20  
N2461 Snapshot of Roadmaps for meeting 42; Uma; 2002-05-14

**Disposition:** Accept the snapshot in document N2461.

**Action item:** Dr. Umamaheswaran to update the WG2 document and forward to SC2 for distribution to NBs.

Relevant 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.

### 10.4 Proposal to combine 10646-1 and -2

**Input document:**

N2408 Proposal to combine 10646-1 and -2; Uma; 2001-11-20

Dr. Umamaheswaran presented the document N2408. The problem of having two separate tracks for the two parts of the standard can be eliminated by merging the two parts of the standard into a single document. The synchronization problem between the two parts and the amendments track can be eliminated. Part of the effort is to keep the five column information that we have currently - possibly on the same CD. If we decide to proceed with this, we will request SC2 for a subdivision proposal with a defined scope, and request the project editor to get a working draft for consideration at the December meeting. Possible FCD in 6 months and FDIS by end of the year. It will include all the three amendments - some refinements will be needed to the Working Draft after December FPDAM ballot resolutions.

**Discussion:**

- a. Mr. Michael Everson: Would there be time for synchronizing V4 and the next edition.
- b. Dr. Umamaheswaran: If we go with the suggested schedule we could synchronize with V4.0 -- will be close.
- c. Mr. Zhang Zhoucai: From China point of view - we agree that it is desirable. IRG has different perspective. The amount of work and concern is regarding the five column part -- considered to be too complex.
- d. Dr. Mark Davis: One point that was not emphasized - but is in the document is the relationship between the two parts. Changes to Part 2 may necessitate changes to Part 1.
- e. Mr. Michael Everson: Consolidation should be approached in a minimalistic way. We could consolidate the text first - the code tables can be consolidated. There seems to be some concerns about the single column CJK format.
- f. Mr. Yasuhiro Anan: I would agree with positions of IRG also that the five or six columns will be a good thing for helping with unification. The Font that is used will work only for the standard. Not for the five or six columns layout.
- g. Mr. Mike Ksar: We will not lose the current five column information. We cannot add DPRK in the current structure. Remember that if we could put the CJKV five column layout on a different track of development we get the additional luxury of being able to get the DPRK or ROK or other glyphs also. Once these are NOT on paper we can make life for IRG members much easier. The only question would be what to do for Part 1 unified CJKV? We did a single column layout for Part 2. It is possible to do it. It encourages the font vendors to provide better products.
- h. Mr. Takayuki Sato: It takes some time and effort to change the five column layout
- i. Mr. Zhang Zhoucai: You don't have to convince me -- as an expert I like to combine the Unicode and 10646 charts into one. Representing the IRG -- No.. As China Yes.

- j. Dr. Ken Whistler: We are hung up only on how the CJK charts of Part 1 should be dealt with. The textual parts of Part 1 and Part 2 could be merged into one part. The charts for non CJK are not controversial either. I would suggest caution in progressing the combined part -- leaving sufficient time for proper review etc.
- k. Mr. Takayuki Sato: I will support the objective. There is also translation into other languages.
- l. Mr. Michel Suignard: We are talking about 10 pages of text in Part 2. Combining it into Part 1 is minimal exercise. Part 1 is currently can take some reorganization and clean up. The normative and non-normative information are spread around.
- m. Dr. Ken Whistler: The reorganization / restructuring will be the one that has to be carefully reviewed by national bodies. It may mean putting on hold any additions to the standard for a couple of years.
- n. Mr. James Seng: The unification of Parts 1 and 2 is something we will support. However, we don't want the work of IRG on extension C be delayed by taking the focus on to CJKV single column work.
- o. Mr. Mike Ksar: The number of months between meetings need not be fixed around 10 months etc. If WG2 has work to do we will meet more frequently.
- p. Mr. Erkki Kolehmainen: I am concerned about your statement that the meetings may be more frequent. My goal has been to reduce the number of meetings But if we have work to do we can decide to meet more frequently.
- q. Dr. Mark Davis: We do have consensus that the two parts could be merged. The ability as to when - is left to the editor. There is no agreement on CJKV single column.
- r. Mr. Michel Suignard: It is not difficult for me to run with additional amendments -- though it is more work. Repertoire additions are easier to deal with compared with architectural changes. The charts themselves could be Annexes. The only impact will be to change the page numbers without any changes to the contents. The entire text will be in front of it. It could be done by December meeting.
- s. Mr. Michael Everson More characters are being proposed and we should not delay consideration for new scripts.

**Disposition:** Accept the proposal and the project editor will prepare a draft for consideration in December meeting.

Relevant 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.

## 11 IRG status and reports

### 11.1 IRG Resolutions #18, #19

Input document:

N2418 IRG meeting 18 Resolutions; IRG; 2001-12-06

N2447 IRG #19 Resolutions; IRG; 2002-05-09

N2476 Variants and CJK Unified Ideographs in ISO/IEC 10646-1 and -2; Unicode – John Jenkins; 2002-05-08

Mr. Zhang Zhoucai: We had two meetings of IRG since the last WG2 meeting. See resolution documents N2418 and N2417 above.

Regarding M19.2 - Need instruction from WG2 to produce a sub-repertoire for Extension C. Repertoire for extension C will be cleaned up and will be ready for submission to WG2 by the November 2002 IRG

meeting. Two resolutions on Font policy -- M19.3 and M19.4. We had discussion on this earlier. Single column issue was also discussed. We are also studying on the variants set. More than 45 people are attending IRG meetings -- Publishers, vendors etc are attending.

On Extension C -- the unified consolidated extension C - around 26000 characters. Plane 2 will overflow with existing Extension B in it. Please consider opening up another Ideograph plane.

Future meeting dates are in see resolution M19.1. These are to be accepted by WG2.

IRG 20 - Hanoi, Vietnam 2002-11-18/22

IRG 21 - China 2003-04-07/11

IRG 22 - possibly in Taipei - around the WG2 meeting in USA in 2003.

**Discussion:**

- a. Mr. Yasuhiro Anan: There was a proposal to IRG from Japan. Extension C has 27000 characters.. If a vendor wants to carry only a subset of the possible ideograph set -- what are the useful subsets? Example - Big dictionary versus small dictionary. When we pick up for example 10000 chars, we need to know which minimum set is internationally interchangeable?
- b. Dr. Ken Whistler: A minimum character set for Japanese will not be the same as for Chinese, for example. I would like to know the subset with a particular style will be different for each language using the CJK Hans. Otherwise font vendors will end up in presenting a Chinese character for example in a style suitable for Japan. The concept of minimum sets should be carefully considered.
- c. Mr. Mike Ksar: A mechanism to create subsets already exists in the standard today -- one can define collections for specific user groups / applications etc. based on language etc.
- d. Dr. Mark Davis: I think they want authorization from WG2 to go ahead with it.
- e. Mr. Takayuki Sato: Same discussion we had in Japan .. the national subsets are already defined in national standards. We should not entertain that in WG2. Collections may not be available. The proposal is -- it is nice to have a single common subset of Han characters for International Use. For country purpose the national standards should be used.
- f. Mr. Yasuhiro Anan: From implementers' point of view - consumer requirement for example with PDAs etc. may not have the luxury of being able to carry multiple subsets. Consumer devices cannot carry the same set as the PDAs -- they need not carry human names for example. For now, I am not talking about the fonts or styles. We are looking at what sub repertoire of characters can be carried in different devices.
- g. Dr. Umamaheswaran: It looks like the requirement seems to be for defining more than one subrepertoire.
- h. Dr. Mark Davis: We are concerned that the work of IRG be directed towards other issues like Simplified to Traditional mappings etc. WG2 could instruct IRG to look into the mapping. When it comes to liaison reports, US and Unicode - will relay on WG2 to ask IRG to deal with the simplified to traditional mappings. I was referencing to that in advance. From priority point of view we suggest the sub repertoire issue be at a different priority level.
- i. Mr. Mike Ksar: I am not sure if IRG charter covers the mapping issue you mentioned. I would like to see concrete proposals / scope for IRG work before I will give IRG instructions.
- j. Mr. Zhang Zhoucai: Relationship to simplified to traditional maps could be considered as Related Work to the main tasks of IRG. For Variants study it is appropriate for WG2 to tell IRG to encourage IRG to study the topic.
- k. Mr. Erkki Kolehmainen: In Europe we have done Multi Lingual European subsets for Pan European application etc. It is not an easy task. I would hesitate to give a blanket instruction to IRG without seeing specific proposals to look at.
- l. Mr. Takayuki Sato: As to the priority -- it is not an IRG issue. When we do give instructions to IRG we can set the expected priority to IRG vis a vis other existing activities. Japan has input to IRG for a potential subset for international use.
- m. Mr. James Seng: The proposal is only to investigate the feasibility - if there is a need, what is its scope etc. The end result may be that there is no need for a subset.
- n. Mr. Mike Ksar: We could give IRG instructions requested per M19.2 in document N2447. As to a new plane requirement - we can decide on the plane issue when the Extension C is finalized.

**Disposition:** Approve the meetings. Approve work related to M19.2 -- If the recommendation is to go ahead we would need a complete project proposal..

Relevant 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.

Mr. Michel Suignard: We discussed yesterday about K\_ xxxx to K4-xxxx. There is also an error reported. Super CJK database needs fixing also.

Relevant 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.

## **11.2 Generation of mapping tables between ROK and DPRK national standards**

Input document:

**N2407 Request to Korean ad hoc group to generate mapping tables between ROK and DPRK national standards; Unicode; 2001-11-15**

Dr. Umamaheswaran : Document N2407 is a US and UTC contribution, drafted by myself. The request was to be able to check the accuracy of the DPRK to UCS mappings. This topic may be Moot. Document N2395 has taken care of the 160 compatibility characters.

**Disposition:** No action needed.

## **12 Defect reports**

### **12.1 Gujarati**

Input document:

**N2417 Gujarati Sign Avagraha - input for PDAM 2 - part 1; Uma; 2002-03-14**

Dr. Umamaheswaran: Document N2417 shows that a glyph for Gujarati Sign Avagraha is to be corrected to look more like the Devanagari Sign Avagraha in 093D.

Accepted. Roll corrigendum into Amd.2 of part 1.

Relevant 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.

### **12.2 Mathematical script - SMALL L**

Input document:

**N2449 Defect report on MATHEMATICAL SCRIPT SMALL L; Ireland -- Everson; 2002-05-15.**

Mr. Michael Everson: The Mathematical Liter Symbol is unified with another similar looking Liter symbol. We feel that the unification of Liter is NOT correct. In mathematical use the Loop on script small L of U+2113 is not there. The mathematical script L is proposed to be added to 1D4C1. MathML needs it and we should consider it.

**Discussion:**

- a. Dr. Asmus Freytag: The mathematical community's position is that U+2113 is considered as the Symbol L. Their input is that it cannot lose the loop. It has the loop because it came from Liter and Leaf symbols .. so it cannot lose the loop. The unification was based on the name for 2114, which is called SCRIPT SMALL L instead of a Liter Symbol. Ireland requests that these be disunified.

**Disposition:** Accept the disunification from U+2113 of MATHEMATICAL SCRIPT SMALL L and assign it to U+1D4C1. Include it in FPDAM-1 to Part 2.

Relevant 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.

### 12.3 Removal of two variant sequences

**Input document:**

**N2456**      **Removal of two Variant Sequences; US-Unicode; 2002-05-10.**

Dr. Mark Davis: Late in the process of editorial work related to Unicode 3.2, it was determined that 2278+VS1 and 2279+VS1 were in error and should not have been added. At the last minute we were informed that these had problems. The VVs are applicable only to base characters. The first character of these are decomposable and could be rearranged and hence it becomes a problem. As it turns out that these variants were already encoded in the standard at 20D2.

**Discussion:**

- a. Dr. Umamaheswaran: WG2 has to be aware of the question of whether the Variation Sequence is considered to be the same as an encoded character or not. I agree that these characters do violate the rules for a variant selector -- the question is one of stability in the standard.
- b. Dr. Ken Whistler: Quoted from the standard that the Variants are Not the same as an encoded character.

Disposition: The defect is to be removed. Accept and Add to FPDAM-2 of Part 1.

Relevant 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.

## 13 Liaison reports

### 13.1 Unicode Consortium

**Input document:**

**N2433**      **Unicode Liaison Report; Asmus Freytag; 2002-04-30**

Dr. Mark Davis: Most of the items from the liaison report have been discussed already. We would like IRG to look at the simplified and traditional Chinese characters. We have heard about Version 4.0 from Dr. Ken Whistler. We have started the process of adding information to Annex P regarding the usage of characters. There are more characters like what we decided at this meeting about Unicode-deprecated Khmer characters. These will be identified in a later contribution. Other agenda items have covered many of the scripts proposed.

A technical corrigendum 3 - arising out of an error due to a canonical mapping - was issued for Unicode 3.2. It posed particular difficulty with IETF. When errors are corrected there are cascading effects on other standardization groups -- we have to be careful about these in correcting errors in mapping tables etc.

## 13.2 IETF

**Input document:**  
(RFC UTF-8 revision)

RFC for UTF-8 is undergoing revision. The RFC is not reflecting the restrictions and warnings from UCS to IETF.

There are differences in the definition between Unicode and 10646 regarding the coding space and hence the 5 and 6 byte forms of UTF-8. These differences will continue as long as UCS does not restrict the coding space to 10FFFF.

## 13.3 CEN/TC304

**Input document:**  
N2440 TC304 Liaison Report; Erkki I. Kolehmainen; 2002-04-30

Mr. Erkki Kolehmainen: Most important item for WG2 is the Modern European Scripts - MES - related resolution. CEN/TC304 secretariat is handled by Sweden - for some specific items. Cultural Diversity Steering Group (set up by CEN ISSS) has to complete its report on what the role of standardization should be, what are the areas and how to participate. Myself and Mr. Mike Ksar are members of the CDSG. The report is expected sometime this fall. The commission will decide on the future work of CEN/TC304 and its role etc.

Mr. Mike Ksar: CEN TC304 has become dormant -- some of the work items it has will be handled by Sweden as the secretariat for the CEN Technical Standards Board.

## 13.4 W3C

**Input document:**  
N2477 W3C-I18N Working Group Liaison Report; W3C-I18N WG – Martin Duerst; 2002-05-17

For your information - character model document is being reviewed.

## 13.5 SC22

Mr. Mike Ksar: I had volunteered and was accepted as liaison officer from SC2 to SC22. At the last SC22 plenary I presented on 10646. Will be attending their next plenary in Finland in summer. Experts from the Unicode Consortium, convener of SC22/WG20, conveners of other WGs of SC22 - who are the clients of the work of SC22/WG20 were present. There was a ballot on disbanding SC22/WG20 in SC22 and it did not pass -- was a tie. The work on collation / sorting (ISO/IEC 14651 / UTR 10) will stay with them.

## 14 Other business

### 14.1 Web Site Review

Delegates are encouraged to help cleanup the WG2 web site. There are still some dead wood at the site and needs cleaning up. I would like to encourage feedback / suggestions etc and send to convener. We do appreciate the effort of Mr. Keld Simonsen and dkuug.

**Action item:** WG2 experts are to send feedback regarding WG2 site to the convener.

### 14.2 Future Meetings

- Meeting 43 – week of 9 December 2002 – in Japan along with SC2 plenary - (Monday, the 9th, to Thursday, the 12th AM). SC2 will be Thursday PM and Friday. It will be held in Tokyo at the ITSCJ centre.  
Ms. Toshiko Kimura, SC2 secretariat, had indicated that the meeting would start the week of December 2nd. A request was sent to change the starting date to December 9th.
- Meeting 44 – 20 October 2003 – US West Coast  
US national body has extended the invitation. The meeting will be hosted by US / Unicode.

The 10 month period between the meetings will not affect the synchronization with Unicode V4.0. Having less frequent meetings may be beneficial for some delegates from funding point of view.

Discussed possible tie-in with the IUC meetings - many of the WG2 delegates did not attend the Dublin IUC, which was held the week before the WG2 meeting. There may not be so much value in trying to synch the IUC with WG2 meeting.

Meeting with SC2 in 2003 is a possibility in US. The other option is to have an SC2 meeting in year October 2004 - somewhere in Europe. Suggestion to SC2 would be to have the plenary after December 2002 in October 2004.

- Meeting 45 - in Europe - Possibly in October 2004 - will discuss it in December 2002 meeting.

Relevant 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).

### 14.3 CLAUI Future

Input document:

**N2494 Report and Recommendations of the CLAUI TD coordination meeting, 11-12 December 2001**  
2002-04-25

**SC35**

Mr. Mike Ksar: CLAUI is a technical direction in JTC1 set up to look after any technical coordination items between SC22/WG20, SC2 and SC35. It has met a few times. The meetings could have been held by email -- no face to face was needed. The meeting to be hosted by SC22/WG20 was cancelled and a later meeting was held in December 2001. A meeting is planned to be held in October 2002 prior to JTC1.

WG2 should ask SC2 to communicate to JTC1 that the CLAUI TD should not be a standing committee. Meetings should be called only to address specific identified issues that need coordination between the three groups. Normal liaison relationships can be used to progress items of mutual interest to different groups.

Dr. Umamaheswaran: Th the topic of CLAUI is important for JTC1 to keep as an objective for JTC1 standards to follow. The people involved in these are split in opinions -- one group thinks that this is a standing committee. The others think that it is not. My suggestion would be to ask SC2 to take our views to JTC1.

Relevant 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.



## 15 Closing

### 15.1 Approval of Resolutions of Meeting 42

Output document:  
N2454 Dublin Meeting 42 Resolutions; Ksar; 2002-05-23

Draft resolutions prepared by the Drafting Committee were reviewed and adopted with changes. The final resolutions are in document N2454.

DPRK and Sweden were not present.

Some comments that were made:

Name change to BISMILLAH LIGATURE -- to track ARABIC LIGATURE BISMILLAH  
ARRAHMAN ARRAHIM

Check ending position of block for Tai Xuang Jing Symbols .. should be 1D35F instead of 1D356.

Members of national bodies can carry forward the resolution taken by WG2 on CLAU1-Future to  
SC2 / JTC1.

### 15.2 Appreciation

Relevant resolutions:

**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.

**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.

### 15.3 Adjournment

Meeting adjourned at 12:00h on Thursday, 2002-05-23.

## 16 Action Items

All action items recorded in the minutes of the following meetings have been either completed or dropped. Only new action items from the last meeting and outstanding action items from earlier meetings are listed in the tables that follow.

- a. meeting 25, 1994-04-18/22, Antalya, Turkey (document N1033)
- b. meeting 26, 1994-10-10/14, San Francisco, CA, USA (document N1117)
- c. meeting 27, 1995-04-03/07, Geneva, Switzerland (document N1203)
- d. meeting 28, 1995-06-22/26, Helsinki, Finland (document N 1253)
- e. meeting 29, 1995-11-06/10, Tokyo, Japan (document N1303)
- f. meeting 30, 1996-04-22/26, Copenhagen, Denmark (document N1353)
- g. meeting 31, 1996-08-12/16, Québec City, Canada (document N1453)
- h. meeting 32, 1997-01-20/24, Singapore (document N1503)
- i. meeting 33, 1997-06-30/07-04, Heraklion, Crete, Greece (document N1603)
- j. meeting 34, 1998-03-16/20, Redmond, WA, USA (document N1703)
- k. meeting 35, 1998-09-21/25, London, UK (document N1903)
- l. meeting 36, 1999-03-09/15, Fukuoka, Japan (document N2003)
- m. meeting 37, 1999-09-17/21, Copenhagen, Denmark (document N2103), and,
- n. meeting 38, 2000-07-18/21, Beijing, China (document N2203)

### 16.1 Outstanding action items from meeting 39, 2000-10-08/11, Vouliagmeni, Athens, Greece

Item	Assigned to / action (Reference resolutions in document N2254, and minutes in document N2253, with the corrections to the minutes noted in section 3 of document N2353, for Meeting 39)	Status
AI-39-6	Irish national body (Mr. Michael Everson)	
c	Is invited to prepare a contribution on guidelines on the use of DIGITS versus NAMES of DIGITS in character names in ISO/IEC 10646. M40, M41 and M42 - in progress.	In progress.

### 16.2 Outstanding action items from meeting 40, 2001-04-02/05, Mountain View, CA, USA

Item	Assigned to / action (Reference resolutions in document N2354, and unconfirmed minutes in document N2353 with the corrections noted in section 3 of document N2403, for Meeting 40)	Status
<b>AI-40-9</b>	<b>The US national body (Messrs. Michel Suignard, Joe Becker)</b>	
<b>c</b>	US (Mr. Edwin Hart) and Japan (Mr. Takayuki Sato) are invited to prepare the working document for revising the TR15285 based on the ad hoc report in document N2359. M41 and M42 - In progress.	
<b>AI-40-11</b>	<b>Japanese national body (Mr. Takayuki Sato)</b>	
<b>c</b>	US (Mr. Edwin Hart) and Japan (Mr. Takayuki Sato) are invited to prepare the working document for revising the TR15285 based on the ad hoc report in document N2359. M41 and M42 - In progress.	
<b>AI-40-12</b>	<b>Swedish national body (Dr. Kent Karlsson)</b>	
<b>a</b>	Is invited to submit a contribution on the question of "whether IDS are graphic characters?" and related concerns raised during the discussion on disposition of comment SE2 from Sweden on PDAM-1. M41 and M42 - In progress.	

### 16.3 Outstanding action items from meeting 41, 2001-10-15/18, Singapore

Item	Assigned to / action (Reference resolutions in document N2404R, and unconfirmed minutes in document N2403 - this document you are reading - for Meeting 41)	Status
<b>AI-41-5</b>	<b>Ad hoc group on principles and procedures (lead - Dr. V.S. UMaaheswaran)</b>	
<b>a</b>	To check for any suitable enhancement needed regarding resolution M41.13 (Policy regarding fonts for submissions to 10646). M42 - In progress.	
<b>c</b>	To address how to reference ISO/IEC 10646 in other publications and include in principles and procedures document. M42 - In progress.	
<b>d</b>	To look at the Principles and Procedures document and see if the guidelines have to be enhanced re: glyph related guidelines / defect reports etc. based on document N2382 (along with Mr. Tatsuo Kobayashi, Japan). M42 - In progress.	
<b>AI-41-6</b>	<b>IRG Rapporteur (Mr. Zhang Zhoucai)</b>	
<b>c</b>	To examine the guidelines document N2382 (from Japan - Mr. Tatsuo Kobayashi) and provide feedback to WG 2. M42 - In progress.	
<b>AI-41-9</b>	<b>Chinese national body (Mr. Zhang Zhoucai)</b>	
<b>a</b>	Is invited to confirm with the Chinese Dai experts, working with the contributing editor Dr. Asmus Freytag, on the acceptability of Irish proposal for the Dai scripts in document N2372. M42 - In progress.	
<b>AI-41-12</b>	<b>Japanese national body (Mr. Takayuki Sato, Mr. Tatsuo Kobayashi)</b>	
<b>a</b>	Is invited to look at the Principles and Procedures document and see if the guidelines have to be enhanced re: glyph related guidelines / defect reports etc. based on document N2382 (along with Dr. Umamaheswaran). M42 - In progress.	

### 16.4 New action items from meeting 42, 2002-05-20/23, Dublin, Ireland

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
<b>AI-42-1</b>	<b>Meeting Secretary - Dr. V.S. UMaaheswaran</b>	
<b>a</b>	To finalize the document N2454 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N2454R.
<b>b</b>	To finalize the document N2453 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N2453.
<b>AI-42-2</b>	<b>Convener - Mr. Mike Ksar</b>	
<b>a</b>	to place document N2448 - Error Corrections from the IRG on the next meeting's agenda, to address any national body feedback.	

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
AI-42-3	Editor of ISO/IEC 10646-1 Mr. Michel Suignard with assistance from contributing editors	
	<i>To prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:</i>	
a	<p><b>M42.1 (Eject symbol):</b> 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.</p> <p><b>M42.2 (Additional Indic characters):</b> 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.</p> <p><b>M42.3 (Syriac characters):</b> WG2 resolves to encode the six additional Syriac characters the BMP for use in Sogdian and Persian languages proposed in document N2422 as follows:</p> <p style="padding-left: 40px;">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</p> <p>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.</p> <p><b>M42.4 (Tamil symbols feedback):</b> 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.</p> <p><b>M42.5 (Uralic Phonetic Alphabet Extensions):</b> 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.</p> <p><b>M42.6 (Urdu characters):</b> 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:</p> <p style="padding-left: 40px;">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 ARRACHMAN ARRACHIM</p> <p>and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.</p> <p><b>M42.7 (Khmer characters):</b> Based on the recommendations from the ad hoc group on Khmer script at meeting 42, WG2 resolves to:</p> <p style="padding-left: 40px;">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)</p> <p>and instructs its project editor to include these in FPDAM-2 to ISO/IEC 10646-1: 2000.</p>	

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
	<p><b>M42.8 (Double diacritics):</b> 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.</p> <p><b>M42.9 (Clarification notes on UCS4 with UTF-32 and on the term "Canonical"):</b> 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.</p> <p><b>M42.10 (Gujarati Sign Avagraha):</b>  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.</p> <p><b>M42.11 (Removal of 2 Variation Sequences):</b> 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.</p> <p><b>M42.12 (ROK CJK Source reference):</b>  WG2 instructs the IRG to provide new CJK source data file by:  c. updating ROK sources, replacing K-xxxx(sp) to K4-xxxx (no space), to the project editor by 2002-06-15, and  d. 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.</p> <p><b>M42.13 (Compatibility Hanja characters):</b>  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.</p> <p><b>M42.14 (FPDAM-2 to Part 1):</b>  WG 2 accepts the disposition of PDAM-2 ballot comments in document N2489 including the following significant changes:  m. 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)  n. 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  o. Removal of 06DD END OF AYAH from the list of combining characters in Annex B  p. Addition of 24FF NEGATIVE CIRCLED DIGIT ZERO (based on details in document N2441)  q. 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.  r. Removal of 267E DO NOT LITTER SIGN, 267F RECYCLABLE PACKAGING, 31D0--31D4 (five Vulgar Fraction characters), 2618 CIRCLED UPWARDS INDICATION, 2700 LEFTWARDS SCISSORS.</p>	

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
	<p>s. Changing names to 2614 UMBRELLA WITH RAIN DROPS and 2615 HOT BEVERAGE</p> <p>t. Moving and renaming of 23CF to 26A0 WARNING SIGN, and 23D0 to 26A1 HIGH VOLTAGE SIGN</p> <p>u. Renaming block name Supplemental Arrows-C to Miscellaneous Symbols and Arrows</p> <p>v. 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 LIMILTED LIABILITY SIGN, 31C4 to 3250 PARTNERSHIP SIGN and 31C5 to 213B FACSIMILE SIGN.</p> <p>w. Addition of a new collection MODERN EUROPEAN SCRIPTS</p> <p>x. 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).</p> <p><b>M42.15 ( Progression of Amendment 2 to 10646-1</b>  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.</p>	
b	<p><b>M42.25 (Single part standard):</b> 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:</p> <p>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)</p> <p>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.</p> <p>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.</p> <p>The project schedule will be determined at the December 2002 meeting of WG2 after a review of the working draft.</p>	
AI-42-4	<p><b>Editor of ISO/IEC 10646-2: Mr. Michel Suignard with assistance from contributing editors</b></p>	
	<p><i>To prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:</i></p>	
a	<p><b>M42.16 (Monogram, digram and tetragram characters):</b> 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.</p> <p><b>M42.17 (Changes to Aegean script):</b> WG2 accepts the following changes to the Aegean script encoded in PDAM-1 to 10646-2 detailed in document N2455:</p> <p>c. Remove the annotations to character names for 1000E, 10018, 10001B, 10025, 1002D, 10042, 10049 and 10052</p> <p>d. Change the glyphs for 10009, 10014, 1000E, 10099, 100D7 and 1013D to those shown in document N2455.</p> <p>WG2 further instructs its project editor to include these characters in FPDAM-1 to ISO/IEC 10646-2.</p> <p><b>M42.18 (Four Deseret characters):</b> G2 accepts the request for adding four</p>	

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
	<p>Deseret characters in documents N2473 and N2474, and allocates them as follows:</p> <p>10426 DESERET CAPITAL LETTER OI with the third glyph on page 1 of document N2473</p> <p>10427 DESERET CAPITAL LETTER EW with the first glyph on page 1 of document N2473</p> <p>1044E DESERET SMALL LETTER OI with the fourth glyph on page 1 of document N2473</p> <p>1044F DESERET SMALL LETTER EW with the second glyph on page 1 of document N2473</p> <p>WG2 further instructs its project editor to include these characters in FPDAM-1 to ISO/IEC 10646-2.</p> <p><b>M42.19 (Disunify Mathematical Script Small L):</b> G2 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:</p> <p>1D4C1 MATHEMATICAL SCRIPT SMALL L (with the glyph shown in document N2449)</p> <p>and instructs its project editor to include it in FPDAM-1 to ISO/IEC 10646-2.</p> <p><b>M42.20 (CJK Error Corrections):</b> WG2 resolves to correct the following as recommended by IRG in document N2448:</p> <p>d. 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</p> <p>e. Drop the G-source references for the following characters: U+24B3E, U+24C67, U+29B3B, U+2579B, U+266A9, U+24454, U+239F7</p> <p>f. 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.</p> <p>and instructs its project editor to include these corrections in FPDAM-1 to ISO/IEC 10646-2.</p> <p>The IRG is instructed to update the Super_CJK database accordingly.</p> <p><b>M42.21 (Amendment 1 to 10646-2):</b> WG 2 accepts the disposition of PDAM-1 ballot comments in document N2490, which includes the following notable changes from the PDAM-1 text:</p> <p>d. 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.</p> <p>e. 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)</p> <p>No DPRK compatibility ideographs in SIP (see resolution M42.13 above).</p> <p><b>M42.22 (Progression of Amendment 1 to 10646-2):</b> 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.</p>	
AI-42-5	<b>Ad hoc group on principles and procedures (lead - Dr. V.S. UMAhaheswaran)</b>	
a	to send document N2461 to the SC 2 secretariat per resolution <b>M42.24 (Roadmaps):</b> 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.	

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
b	Include document N2423 - Proposal for "Error correction on unified ideographs in UCS"; in discussion regarding CJK Error corrections and prepare appropriate new text to be added to Principles and Procedures documents.	
c	Messrs. Umamaheswaran, Takayuki Sato, Tatsuo Kobayashi, and a Unicode representative to consider the proposal in document N2467 - Proposal: "Additional guideline in the WG2 Principles and Procedures" and suggest additions to the principles and procedures document.	
<b>AI-42-6 IRG Rapporteur (Mr. Zhang Zhoucai)</b>		
a	to act on resolution <b>M42.26 (Basic international CJK sub-sets)</b> :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.	
b	<p>to update the Super_CJK database per resolution <b>M42.20 (CJK Error Corrections)</b>: WG2 resolves to correct the following as recommended by IRG in document N2448:</p> <p>g. 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</p> <p>h. Drop the G-source references for the following characters:  U+24B3E, U+24C67, U+29B3B, U+2579B, U+266A9, U+24454, U+239F7</p> <p>i. 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.</p> <p>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.</p>	
<b>AI-42-7 The US national body (Mr. Michel Suignard / Dr. Asmus Freytag)</b>		
a	to verify the accuracy of the glyph for Oriya Letter VA in document N2425 for inclusion in FPDAM-1 charts.	
b	With reference to documents N2424 - Reconsidering request: "Font supply guide for UCS development" (M41.13); Japan – Sato; 2002-03-25; N2443 - Clarification to WG2 N3568R, M41.13 resolution in Singapore; Singapore; 2002-05-06; N2447 - IRG #19 Resolutions; IRG; 2002-05-09 (Resolution M19.4), Dr. Asmus Freytag to prepare document N2445 on Font Policy clarification, based on ad hoc discussions with the project editor and IRG rapporteur and other interested parties.	
<b>AI-42-8 The Irish national body (Mr. Michael Everson)</b>		
a	to provide a table for Syriac shaping for the additional accepted characters from document N2422.	
b	to act on the resolution <b>M42.3 (Coptic disunification)</b> : 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.	
c	to prepare a written report summarizing the ad hoc discussions during the Dublin meeting, on "Additional compatibility characters from TC46".	
<b>AI-42-9 Japanese national body (Mr. Takayuki Sato, Mr. Tatsuo Kobayashi)</b>		
a	to take feedback to Nepal, based on the ad hoc discussion on Limbu script at meeting 42 in Dublin (see discussion on disposition of Japanese comments to PDAM-2 of Part 1).	
<b>AI-42-10 All national bodies and liaison organizations</b>		
a	to review and feedback on the proposal to add IDEOGRAPHIC TABOO VARIATION INDICATOR in document N2475.	

Item	Assigned to / action (Reference resolutions in document N2454R, and unconfirmed minutes in document N2453 - this document you are reading - for Meeting 42)	Status
b	To take note of <b>M42.28 (Future Meetings)</b> : 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).	
c	to review and feedback to the convene on improving the WG2 web site.	
d	to review and feedback on the impact of requested changes to mapping tables in document N2448 - Error Corrections from the IRG.	

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