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## ISO/IEC JTC 1/SC 2

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[^0]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 Meeting Minutes, WG 2 Meeting \# 34, <br> Redmond, WA, USA; 1998-03-16--20 |
| SOURCE: | V.S. Umamaheswaran, Recording Secretary; 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 <br> appropriate noted action items, and to send any comments or corrections to the convener <br> as soon as possible but no later than 1998-08-31. |
| ACTION ID: | ACT |
| DUE DATE: | 1998-08-31 <br> DISTRIBUTION:$\quad$SC 2/WG 2 members and Liaison organizations |
| MEDIUM: | Paper |
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ISO
International Organization for Standardization
Organisation Internationale de Normalisation

## ISO/IEC JTC 1/SC 2/WG 2 <br> Universal Multiple-Octet Coded Character Set (UCS)

ISO/IEC JTC 1/SC 2/WG 2 N1703
Date: 1998-07-02

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Title: Unconfirmed Minutes of WG 2 Meeting \# 34, Redmond, WA, USA; 1998-03-16--20
Source: V.S. UMAmaheswaran, Meeting Secretary, Mike Ksar, Convener
Action: WG 2 members and Liaison organizations
Distribution: ISO/IEC JTC 1/SC 2/WG 2 members and Liaison organizations
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## 1 Opening and roll call

Input Documents:
1656 1st Call and Venue for SC 2/WG 2 Meeting \# 34 - Seattle; Ksar; 97-11-26
1683 2nd Call for WG 2 Meeting \# 34, with initial agenda; Mike Ksar; 1998-01-26

### 1.1 Opening

Meeting no. 34 of ISO/IEC JTC 1/SC 2/WG 2 was held at the Pebble Beach Cafe meeting room, building \#31, Microsoft Corporation campus, One Microsoft Way, Redmond, WA 98052-6399, USA. The convener, Mr. Mike Ksar opened the meeting at approximately 09:30h. He welcomed the delegates to the meeting and introduced Mr. Michel Suignard, representing the hosts - the US member body and Microsoft Corporation.

Mr. Michel Suignard explained the logistics, refreshment arrangements for the delegates, and access restrictions to the building. Two social events have been planned - one on Wednesday evening at Mr. Michel Suignard's house, and another one on Sunday - a boat tour for the delegates on Lake Washington -- these events are hosted by Microsoft and the Unicode Consortium. On Wednesday the 18th - the conference room is to be vacated by $15: 30 \mathrm{~h}$. A couple of ad hoc meetings - one on Burmese and Khmer and another on BiDi - are also being arranged for Wednesday afternoon to finish by 18:00h.

Mr. Mike Ksar thanked the US member body and the Microsoft Corporation for providing the meeting facilities. Delegates were reminded that new documents should be given to the convener for giving document numbers and further copying. Several new documents have been tabled since the last mailing. Many of these documents may need to be postponed for consideration till the next meeting.

### 1.2 Roll Call

Input Document:
1601 WG 2 Mailing List - post meeting 33 in Crete; Ksar; 1997-07-03
Mr. Mike Ksar requested the attending delegates to introduce themselves, and mark up the distribution list (premeeting version of document N1701) with any changes, checking the information for themselves and for others from their countries / liaison organizations. The following Thirty Three (33) delegates representing Thirteen (13) member bodies, and Ten (10) liaison organizations attended the meeting.

| NAME | COUNTRY / LIAISON ORGANIZATION | AFFILIATION |
| :---: | :---: | :---: |
| Alain LaBonté | Canada; GSE; JTC 1/WG 5 | Treasury Board Secretariat, Government of Québec |
| V.S. UMAmaheswaran | Canada; Meeting Secretary | IBM Canada |
| Fu Yonghe | China | Chinese Language Institute |
| Chen Zhuang | China | Chinese Electronics Standardization Institute |
| Shma Layi | China | Southwest Minority Nationality College |
| Ji Mu Yan | China | Nationality Affairs Committee of Inner Mongolia |
| Nasun Urt | China | Mongolian language Institute of Inner Mongolian University |
| Zhang Zhoucai | China, IRG Rapporteur | CCID |
| Mike Ksar | Convener | Hewlett-Packard Company |
| Keld Jørn Simonsen | Denmark; CEN/TC 304; IETF | Danish UNIX-system User Group |
| Erkki Kolehmainen | Finland | Finnish Data Communication Association |
| Evangelos Melagrakis | Greece; TC 46/SC 2, Convener - WG 3 | ELOT |
| Michael Everson | Ireland | Everson Gunn Teoranta |
| Satoshi Yamamoto | Japan | Hitachi Ltd. |
| Shun Ishizaki | Japan | Keio University |
| Takayuki K. Sato | Japan; SC 22/WG 20 | IPSJ/ITSCJ |
| Johan van Wingen | Netherlands; SC 22 | Independent |
| Michael Kung | Observer | Microsoft Corp. |
| Elzbieta Broma-Wrzesien | Poland | Telekomunikacja Polska, S.A. |
| Toshiko Kimura | SC 2 Secretariat | IPSJ/ITSCJ |
| S.T. Nandasara | Sri Lanka | University of Colombo |
| Karl Ivar Larsson | Sweden | Consultant |
| Monica Ståhl | Sweden | IBM Sweden |
| Emily Yu-Chi Hsu | Taipei Computer Association | Institute for Information Industry |
| Asmus Freytag | The Unicode Consortium | Asmus Inc. |
| Bruce Paterson | UK; Editor | Independent |
| Lisa Moore | USA | IBM |
| Nelson Ng | USA | Oracle Corp. |
| Ken Whistler | USA | Sybase Inc. |
| Don Carroll | USA | Hewlett-Packard Company |
| Arnold Winkler | USA | Unisys Corp. |
| Michel Suignard | USA | Microsoft Corp. |
| Edwin Hart | USA, SHARE Inc. | Johns Hopkins University |

Dr. Julie Allen, of Unicode Consortium, assisted in the role of support staff. Prof. Kim, Korea, sent his regrets through Mr. Bruce Paterson.

Messrs. Umamaheswaran, Bruce Paterson, Michel Suignard, and Mike Ksar were identified to participate in drafting the meeting resolutions. Mr. Michael Everson also offered his assistance.

## 2 Approval of the agenda

Input Document:
1683 2nd Call for WG 2 Meeting \# 34, with initial agenda; Mike Ksar; 1998-01-26
Mr. Mike Ksar identified the changes from N1683 in N1683R (which was distributed later at the meeting). Additional agenda items were added and new documents were posted to the different agenda items. Some of the additions to the agenda were: BMP repertoire -- 3 characters for East Asian languages, Laos currency sign - KIP sign, Thaana script, Khmer script, Burmese script, BiDi Mirror characters, Syriac script and Syriac symbols, Yi script, Bangjeom characters, and Math symbols; Plane 1 scripts -- several new scripts, Western Music symbols; 10646 Part 2; Non Repertoire Issues -- Collection Identifiers, update to proposal summary form, availability of 10646 standard on the web. The following table of contents of this meeting minutes reflects the agenda items as the meeting progressed.

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## 3 Approval of minutes of meeting 33

Input Document:
1603 Draft Minutes of WG 2 Meeting \# 33 - Crete; Ksar/Uma; 1997-10-24
Dr. V.S. Umamaheswaran introduced document N1603 containing the minutes of WG 2 meeting 33.
The minutes were adopted with the following changes (some of the changes were pointed to the convener and the recording secretary prior to the meeting, a few during the meeting, and the rest were found by the recording secretary).
a) Section 1.1, second paragraph, Line 8: Change "Phaisto's" to "Phaistos"
b) Section 2, first paragraph, first sentence: At the request of Mr. Johan van Wingen, change "Document N1597 from Mr. Johan van Wingen and document N1525 from Mr. Hugh McGregor Ross on Tibetan extensions will be withdrawn due to some ... ... documents.", to read as:
"Document N1597 from Mr. Johan van Wingen and document N1525 from Mr. Hugh McGregor Ross on Tibetan extensions will be withdrawn."
c) Change title of section 4 - from 'Review action items ...' to 'Review of action items ... '.
d) Section 4, Table of action items from meeting 32, Singapore, Status column, entries for AI-32-7a, AI-32-7b and AI-32-8a, should be marked as--"M33: Completed; See...'.
e) Section 5.4, 4th paragraph, 2nd line: replace 'duplicated parts replicated' with 'duplicated sections in them'.
f) Section 5.5, under subsection titled "Ad Hoc Group on Electronic Document Distribution:", item u change "fomatted file " to "formatted file"

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g) Section 6.3, discussion, item b - change "ireland's" to "Ireland's"
h) Section 6.3. Relevant Resolutions, Resolution M33.7 - Add the following at the end of the resolution text in the box:
"Harmonize use of the name - UNIFIED CANADIAN ABORIGINAL SYLLABICS.
Correct the shapes for code positions 14FF and 1512."
i) Section 6.5, Change 'DTR $15285 \ldots$... to 'PDTR $15285 \ldots$... in the title of the section.
j) Section 7.1, first paragraph, second line, change 'Hebrew point Mete' to 'Hebrew point Meteg'.
k) Section 7.2, Discussion item e: Mr. Michael Everson claims that he had suggested to use the term 'IPA Latin Extensions' instead of 'IPA Extensions' that is recorded in the Disposition of this item. This claim could not be ascertained to have been accepted at the meeting by other WG 2 experts.
I) Section 8.8, subsection titled "Ad Hoc on Yi Radicals" - change "Dispostion" to "Disposition".
m) Section 8.15 - change "Dispostion" to "Disposition".
n) Section 9.1, Discussion item a should read as "Mr. Mike Ksar: The target date that was submitted to SC 2 - will we be able to meet this? We do not have a new target date."
o) Section 9.2, First line - change 'The Hangul numerals' to 'The Hanghzou numerals'.
p) AI-33-2 a - change 'the future of ISO/IEC' ... to 'the future editor of ISO/IEC' ...
q) Al-33-9 a - change 'Character Glyph Mode' to 'Character Glyph Model'.
r) Section 15.6, table containing action items from meeting 33 - renumber AI-32-4, AI-32-10, Al-32-11 and AI-32-12, to AI-33-4, AI-33-10, Al-33-11 and AI-33-12 respectively, under the Item column.
s) Al-33-11 -- correct '(Mr. Miao Yong Gang)' to '(Mr. Mao Yong Gang)'.
t) Al-33-11b (renumbered from Al-32-11b): first line: change 'intereste parties' to 'interested parties'

## 4 Review action items from previous meeting

Input Document:
1603 Draft Minutes of WG 2 Meeting \# 33-Crete; Ksar/Uma; 1997-10-24
Section 15 of document N1603 containing the cumulative list of action items was reviewed by Dr. Umamaheswaran. The following tables show the result of the review. Several action items were completed, some are still in progress and others were dropped. All action items that are in progress or outstanding have been carried forward for review at the next meeting - and included in section 15 (on page 54) of this document.
(M33-15.2) Outstanding action items from WG 2 meeting 29, Tokyo, Japan

| Item | Assigned to / action (Reference Meeting 29 Resolutions document N1304 <br> and Unconfirmed Meeting 29 minutes in document N1303 -and corrections <br> to these minutes in section 3 of document N1353.) | Status |
| ---: | :--- | :---: |
| Al-29-10 | China |  |
| a | To take comments in document N1246 and comments from this meeting (M29) <br> as feedback to the appropriate experts on Uyghur, Kazakh and Kirgihiz. <br> M30, M31, M32 and M33 In progress. |  |

(M33-15.3) Outstanding action items from WG 2 meeting 30, Copenhagen, Denmark

| Item | Assigned to / action (Reference Meeting 30 Resolutions document N1354 <br> and Unconfirmed Meeting 30 minutes in document N1353 and corrections <br> to these minutes in section 3 of document N1453.) | Status |
| :--- | :--- | :---: |
| Al-30-12 | Ad Hoc Group on Principles and Procedures (Mr. Sven Thygesen - lead) <br> a <br> To work with Mr. Hugh Ross and document the guidelines / criteria that were <br> used in the creation of the first edition of the standard, for deciding when a pre- <br> composed character was considered for inclusion directly versus when it would <br> be left as Level 3 composition encoding. <br> M31: Outstanding; M32 and M33: In progress. | M34: Dropped. |
| Al-30-16 | Latvia, Ireland and Finland <br> a to provide additional supporting documents to address the various concerns <br> expressed on proposal for Livonian characters in document N1322 at this <br> meeting to permit WG 2 to better evaluate the proposal. <br> M31 and M32: Outstanding; M33: In progress. | M34: In progress; <br> target meeting 35. |

(M33-15.4) Outstanding action items from WG 2 meeting 31, Québec City, Canada

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| Item | Assigned to / action (Reference Meeting 31 Resolutions document N1454 <br> and Unconfirmed Meeting 31 minutes in document N1453 and corrections <br> to these minutes in section 3 of document N1503.) | Status |
| :--- | :--- | :--- |
| Al-31-3 | Editor - Mr. Bruce Paterson <br> To prepare the appropriate PDAM texts and entries in collections of characters <br> for future coding, with assistance from other identified parties, in accordance <br> with the following WG 2 resolutions: |  |
| hRESOLUTION M31.9 (Internal Supplementation / Horizontal <br> Supplementation): <br> WG 2 accepts documents N1427, N1428, N1429 and N1434 on Internal <br> Supplementation / Horizontal Supplementation from the IRG. WG 2 further <br> instructs its editor to prepare the PDAM text, with assistance from IRG editor, <br> and forward it to SC 2 secretariat for an SC 2 ballot. <br> M32 and M33: In progress. | M34: In progress; <br> target before <br> meeting 35. |  |
| AI-31-12 | Swedish national body - Mr. Olle Järnefors <br> a <br> to consider the discussion on the Runic script proposal at this meeting and <br> feedback to WG 2. <br> M32 and M33: In progress. | M34: Completed; <br> See PDAM-17 text <br> in document N1647. |

(M33-15.5) Outstanding action items from meeting 32, Singapore

| Item | Assigned to / action (Reference Meeting 32 Resolutions document N1504 and Unconfirmed Meeting 32 minutes in document N1503 -with the corrections noted in section 3 of document N1603.) | Status |
| :---: | :---: | :---: |
| Al-32-6 | US member body (Michel Suignard, John Jenkins) <br> Mr. John Jenkins, is invited to prepare the draft text on the Deseret script (in document N 1498 ) in a form suitable for inclusion in the future ISO/IEC 10646Part 2. <br> M33: in progress. | M34: In progress. |
| Al-32-10 | Ad hoc group on principles and procedures (lead - Mr. Sven Thygesen, assist of a US member body representative <br> To update the Principles and Procedures document and forward it to the convener, incorporating the principles in the roadmap document N1499, taking into consideration comments in document N1505 (from Mr. John Clews) M33: in progress. | M34: Completed; Document N 1502R has been prepared not yet reviewed. |
| Al-32-12 | IRG (Mr. Zhang Zhoucai, Rapporteur) <br> with assistance of the Taiwanese Computer Association to prepare PDAM text on KangXi radicals for consideration at the next WG 2 meeting, per resolution M32.10 below: <br> WG 2 accepts the request for the set of 214 KangXi radical characters in document N1182. WG 2 allocates them provisionally to code positions In the range 2F00 to 2FDF. WG 2 further invites the IRG to prepare the text for a PDAM assigning character names, their shapes in accordance with document N1182, and the block name 'KANGXI RADICALS', .. <br> M33: in progress. <br> with assistance of the Taiwanese Computer Association to prepare PDAM text on Hangzhou numerals for inclusion as a separate item in the PDAM for resolution M32.10 (see action item a above), for consideration at the next WG 2 meeting, per resolution M32.11 below: <br> WG 2 accepts the request for 3 Hangzhou numerals in document N1182. WG 2 provisionally allocates code positions and names in the CJK Symbols and Punctuation block, as follows: <br> 3038 - HANGZHOU NUMERAL TEN <br> 3039 - HANGZHOU NUMERAL TWENTY <br> 303A - HANGZHOU NUMERAL THIRTY | M34: Completed; See document N1629. <br> M34: Completed; See document N1629. |
|  | ogress. |  |


| Item | Assigned to / action (Reference Meeting 32 Resolutions document N1504 and Unconfirmed Meeting 32 minutes in document N1503 -with the corrections noted in section 3 of document N1603.) <br> to prepare text on Ideograph Radical Supplement for inclusion as a separate item in the PDAM per resolution M32.10 (see action item a above), for consideration at the next WG 2 meeting, per resolution M32.15 below: <br> WG 2 accepts the 31 Ideographic Radicals proposed in document N1492, and provisionally allocates them to code positions in the range 2FE0 to 2FFF. WG 2 further invites the IRG to assign a character name and a single graphic symbol to each. .. <br> M33: in progress. <br> the IRG editor is to prepare PDAM text on CJK Unified Ideograph Extension A Version 1.1, for consideration at the next WG 2 meeting, per resolution M32.14 below: <br> WG 2 provisionally allocates the set of 6585 characters of CJK Unified Ideograph Extension A Version 1.1 in documents N1423 and N1424 to code positions in the range 3400 to 4DBF, .. <br> M33: in progress. | Status <br> M34: In progress; Target meeting 35. <br> M34: In progress; Target before meeting 35. |
| :---: | :---: | :---: |
| $\begin{array}{r} \mathrm{Al}-32-13 \\ \mathrm{~d} \end{array}$ | All member bodies and liaison organizations per resolution M32.9 on the Mongolian script, are invited to review and comment on document N1515, prior to the next WG 2 meeting. M33: in progress. | M34: Review was completed. |

(M33-15.6) Outstanding action items from meeting 33, Heraklion, Crete, Greece

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Assigned to / action (Reference Meeting 33 Resolutions document N1604
and Unconfirmed Meeting 33 minutes in document N1603 - with the corrections noted in section 3 of this document N1703.)
Al-33-3 Editor - Mr. Bruce Paterson
to prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following WG 2 resolutions:
a M33.1 (DAM-5 - Korean Hangul):
WG 2 accepts the disposition of comments in document N1561, and the final
text in N1570 with the following correction:
collection " 71 HANGUL EXTENDED"
should be "71 HANGUL SYLLABLES", on page 2,
and instructs its editor to forward them by September 1997 to SC 2 secretariat for further processing.
(Korean member body - Professor Kyongsok Kim- is to furnish the final charts in a ready for publish format.)
b M33.2 (DAM-6 Tibetan):
WG 2 accepts the disposition of comments in document N1562, and the final text in N1571, and instructs its editor to forward them to SC 2 secretariat in July 1997 for further processing.
c M33.3 (DAM-7 - Additional 33 characters):
WG 2 accepts the disposition of comments in document N1563, and the final text in N1572 including the additional information on Hebrew character names in Annex P, and instructs its editor to forward them to SC 2 secretariat in July 1997 for further processing.
d M33.6 (FPDAM-10-Ethiopic script):
WG 2 accepts the disposition of ballot comments in document N1614, and instructs its editor, with the assistance of the Unicode Consortium (Dr. Glenn Adams), to prepare the final disposition of comments and text for DAM-10 on Ethiopic script and forward these to SC 2 secretariat for further processing by October 1997, with the target date of April 1998 for the AM-10 text.
e M33.7 (FPDAM-11 - Canadian Syllabics script):
WG 2 instructs its editor, with assistance from Ireland (Mr. Michael Everson), to prepare the disposition of comments on the ballot of PDAM-11, prepare the text for DAM-11, and forward these to SC 2 secretariat for further processing, by October 1997, with the target date of April 1998 for the AM-11 text taking into account the following agreements:

Harmonize use of the name - UNIFIED CANADIAN ABORIGINAL SYLLABICS.
Correct the shapes for code positions 14FF and 1512.
f M33.8 (FPDAM-12 - Cherokee script):
WG 2 instructs its editor, with assistance from Ireland (Mr. Michael Everson), to prepare the disposition of comments on the ballot of PDAM-12, prepare the text for DAM-12, and forward these to SC 2 secretariat for further processing, by October 1997, with the target date of April 1998 for the AM-12 text. taking into account the following agreement:

Move up the proposed code positions by one removing the empty position at position 13A0.
g M33.10 (DCOR - Collection Identifiers):
WG 2 instructs its editor to prepare a draft technical corrigendum (DCOR) to ISO/IEC 10646-1:1993, and forward it to SC 2 secretariat by October 1997 for further processing, with the target date of May 1998 for the final COR text, based on document N1556 taking into account comments received at WG 2 meeting 33.
h M33.14 (FPDAM-16 - Braille patterns):
WG 2 accepts 256 characters, their names and their shapes in the report of the ad hoc group on Braille patterns in document N 1612, with code positions in the range 2800 to 28 FF in the BMP. WG 2 further instructs its editor to create FPDAM text, with assistance from Ireland (Mr. Michael Everson), based on document N 1624, and forward these to SC 2 secretariat for further processing by September 1997, with target date of May 1998 for DAM-16 text and October 1998 for the final AM-16 text.

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Item Assigned to / action (Reference Meeting 33 Resolutions document N1604
and Unconfirmed Meeting 33 minutes in document N1603 - with the
corrections noted in section 3 of this document N1703.)
i M33.15 (Runic script):
    WG 2 accepts the repertoire of }81\mathrm{ characters for Runic script, their shapes and
    their names proposed in document N1542 for encoding in the range 16A0
    through 16FF in the BMP. The shapes are to be changed to look like those in
    document N1330, using fonts to be provided by Sweden by 15 October }1997
    WG 2 further instructs its editor to create a new sub division proposal,
    registration request and FPDAM text, with assistance from Sweden and Ireland
    (Mr. Michael Everson), and forward these to SC 2 secretariat for further
    processing.
j M33.16 (Ogham script):
WG 2 accepts the repertoire of 29 characters for Ogham script, their shapes and
their names proposed in document N1610 for encoding in the range 1680
through 169F in the BMP. WG 2 further instructs its editor to create a sub
division proposal, registration request and FPDAM text, with assistance from
Ireland (Mr. Michael Everson), and forward these to SC 2 secretariat for further
processing.
k M33.17 (Sinhala script):
WG 2 accepts 80 characters, their shapes, and their names in the report of the ad hoc group on Sinhala script in document N 1613, and assigns them to code positions in the range 0D80 to ODFF in the BMP. WG 2 further instructs its editor to create a new sub division item proposal, registration request and FPDAM text, with assistance from Unicode Consortium (Dr. Glenn Adams), based on document N 1613, and forward these to SC 2 secretariat for further processing.
I M33.18 (Yi script and Yi radicals):
WG 2 accepts:
1165 characters, their shapes and names in document \(N 1608\) for the Yi script, and their assignment to code positions in the range A000 to A48C in the BMP,
and
57 characters (Note: 18 more than in resolution M32.8), their shapes and names in document N 1611 for the Yi radicals, and their assignment to code positions in the range A490 to A4C8 in the BMP.
WG 2 further instructs its editor to create PDAM text, with assistance from Ireland (Mr. Michael Everson) and China (Mr. Mao Yong Gang), based on documents N 1608 and N 1611, and forward these to SC 2 secretariat for further processing.
m M33.26 (FPDAM on Symbols and Other collections):
WG 2 instructs its editor to prepare a sub division proposal, registration proposal and FPDAM text and forward them to SC 2 secretariat for simultaneous processing, containing the set of characters in document N 1626 (extracted from document N1564), and the characters accepted in resolutions M33.21, M33.22, M33.23, M33.24 and M33.25 listed below:
(Note that the General Variation Mark is held back in the symbols collection at this time - see AI-33-5-a).
M33.21 (Medieval English characters):
WG 2 accepts the four additional characters for Medieval English, the shapes and their names proposed in document N1547 for encoding in the BMP as follows:
\begin{tabular}{ll}
\(01 F 6\) & LATIN CAPITAL LETTER HWAIR \\
\(01 F 7\) & LATIN CAPITAL LETTER WYNN \\
021 C & LATIN CAPITAL LETTER YOGH \\
021 D & LATIN SMALL LETTER YOGH
\end{tabular}
M33.22 (Armenian Hyphen):
WG 2 accepts one additional character for Armenian - its name, its shape and its code position in the BMP, in accordance with the report of the ad hoc group on Armenian in document N 1616, as follows:
058A ARMENIAN HYPHEN
M33.23 (Euro sign):
WG 2 accepts the character EURO SIGN, and its shape to be encoded in
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Item Assigned to / action (Reference Meeting 33 Resolutions document N1604
and Unconfirmed Meeting 33 minutes in document N1603 - with the
corrections noted in section 3 of this document N1703.)
position 20AC in the BMP, in accordance with document N 1566.
M33.24 (4 Latin characters):
WG 2 accepts the following four Latin characters (requested by Romania), their
names and shapes to be encoded in the BMP as follows:
0218 LATIN CAPITAL LETTER S WITH COMMA BELOW
0219 LATIN SMALL LETTER S WITH COMMA BELOW
021A LATIN CAPITAL LETTER T WITH COMMA BELOW
021B LATIN SMALL LETTER T WITH COMMA BELOW
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in accordance with document N1361.
M33.25 (9 additional Arabic characters):
WG 2 accepts the 9 additional Arabic characters (chiefly from ISO 11822), their names and shapes and their proposed code positions in the BMP as proposed in document N 1573.
n M33.27 (PDAM on Keyboard symbols):
WG 2 instructs its editor to prepare a work item proposal, registration proposal and PDAM text and forward them to SC 2 secretariat for simultaneous processing, containing the set of keyboard symbols in document N 1625 (extracted from document N 1564 ) and the character accepted in resolution M33.20 below.
M33.20 (Keyboard Decimal Separator symbol):
With reference to document N1548, WG 2 accepts the proposed symbol for 'decimal point marker' requested by SC 18/WG 9 for encoding in ISO/IEC 10646-1 with the provisional name BLACK NARROW UPPER LEFT TRIANGLE, at code position 2396 in the BMP, and with the shape as shown in document N 1625
o to update document N1529, Editorial Corrigenda - 3rd Cumulative List - Issue 2 based on discussions at meeting 33, with assistance of the Unicode Consortium (Dr. Glenn Adams).
Al-33-4 Co-editors of TR 15285 (Messrs. Edwin Hart, Alan Griffee)
a per resolution, M33.9 (PDTR 15285-Character Glyph Model), to prepare the disposition of comments on the ballot of PDTR 15285, prepare the text for DTR 15285, and forward these to SC 2 secretariat for further processing, taking into account the comments received on the proposed disposition of comments in document N1586 and the proposed DTR text in document N1587 at WG 2 meeting 33, in July 1997, with the target date of May 1998 for the final TR text.

## AI-33-5 IRG (Mr. Zhang Zhoucai, Rapporteur)

a to clarify the semantic of the GENERAL VARIATION MARK working with other interested experts, per resolution M33.28 (General Variation Mark): WG 2 resolves that the GENERAL VARIATION MARK in document N 1564 will be further processed, once further clarification regarding its semantic and use is received from IRG.
b to prepare the appropriate texts per resolution M33.29 (IRG - NPs) In accordance with IRG\#9 resolutions 4 and 7 in document $N$ 1591, WG 2 instructs IRG to prepare new sub division proposals for the following projects: CJK Ideographs for Plane 2
Ideograph Structure Characters and Ideograph Component Supplement and submit them to WG 2 for consideration at its next meeting.
c to take note of the resolution M33.30 (IRG Administrative): Unanimous WG 2 approves the following resolutions from IRG\#9:
\#6. Extension of the term of Mr. Zhang Zhoucai as rapporteur till meeting IRG\#10

M34: See document N1680 on Ideograph Description Sequence; Item on CJK Ideograph for Plane 2 is in progress; target meeting 35. M34: Noted.

| Item | Assigned to / action (Reference Meeting 33 Resolutions document N1604 and Unconfirmed Meeting 33 minutes in document N1603 - with the corrections noted in section 3 of this document N1703.) <br> \#7. IRG Meeting 10 to be held in Ho-Chi Minh City, Vietnam, 1997-12-15--19. | Status |
| :---: | :---: | :---: |
| Al-33-6 <br> a <br> b <br> c | Ad hoc group on principles and procedures (lead - Mr. Sven Thygesen) to update the standing document on Principle and Procedures per following: M33.11 (Block Assignment Guideline): <br> WG 2 accepts the request to add Block Assignment Guideline (see document N1583 - item 72.18) with the qualification that the high frequency occurrence criterion be used when no other overriding criterion exists. WG 2 further instructs the ad hoc group on principles and procedures to update the standing document on Principles and Procedures accordingly. <br> M33.12 (Empty 00 position in a block): <br> WG 2 emphasizes that proposals for code allocations should not leave position 00 unassigned in each block unless there are compelling documented reasons for doing so. WG 2 further instructs the ad hoc group on principles and procedures to update the standing document on Principles and Procedures accordingly. <br> add the graphical view of the road map of the BMP in document N1520, after it is updated by Mr. Michael Everson ensuring that it is in synchronism with the road map text. | M34: In progress. <br> M34: In progress. <br> M34: In progress. |
| Al-33 | Swedish member body (Mr. Karl Ivar Larsson) to assist the editor Mr. Bruce Paterson in the preparation of the appropriate text per resolution M33.15 (Runic script) - see action item AI-33-3-i on the editor. | M34: Completed; <br> See FPDAM-17 <br> document N1647. |
| Al-33. | Korean member body (Professor Kyongsok Kim) <br> to provide the editor the publication quality final code tables for Amendment No. 5, per resolution M33.1 (DAM 5 - Korean Hangul) - see action item AI-33-3-a on the editor. <br> is invited to submit a proposal summary form to cover requests for Gugyeol characters (original requests in documents N936) with a possible updates to these documents and submit to WG 2 for consideration at meeting 34 . | M34: Completed; See documents N1671 and N1672 (SC 2 documents N2985 and N2986). M34: In progress. |
| Al-33-9 <br> a | Danish member body (Mr. Keld Simonsen) <br> Mr. Keld Simonsen is invited to propose a new work item proposal related to Character Glyph Mode, to address the Danish ballot response comments which were considered to be outside the scope of DTR 15285 on CGM. <br> Mr. Keld Simonsen, as the liaison officer to IETF, to invite IETF representative to attend the next WG 2 meeting. | M34: Completed; <br> See document SC 2 N2934. <br> M34: Completed. |
| Al-33-10 <br> a <br> b | The Unicode Consortium (Dr. Glenn Adams) <br> to assist the editor in preparation of the disposition of comments and DAM-10 text on Ethiopic script, per resolution M33.6 (FPDAM-10 - Ethiopic script) - see action item AI-33-3-d on the editor. <br> to assist the editor in the preparation of FPDAM text on Sinhala script, per resolution M33.17 (Sinhala script) - see action item AI-33-3-k on the editor. <br> to assist the editor in updating document N1529, Editorial Corrigenda - 3rd Cumulative List - Issue 2 based on discussions at meeting 33 - see action item AI-33-3-0 on the editor. | M34: Completed; <br> See documents N1630 and SC 2 N3016. <br> M34: Completed; <br> See FPDAM-21 <br> document SC 2 <br> N3017. <br> M34: Completed; <br> See document <br> N1696. |
| Al-33 | Chinese member body (Mr. Mao Yong Gang) <br> to assist the editor in the preparation of PDAM on Yi-script and Yi-radicals, per resolution M33.18 (Yi script and Yi radicals) - see action item AI-33-3-I on the editor. <br> to ensure that all interested parties on Mongolian script are informed well ahead of time of the ad hoc meeting schedule on Mongolian (planned for August 1997 in Ulaanbatar). | M34: In progress. <br> M34: Completed; <br> See document N1691 for output |

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| Item | Assigned to / action (Reference Meeting 33 Resolutions document N1604 and Unconfirmed Meeting 33 minutes in document N1603 - with the corrections noted in section 3 of this document N1703.) | Status <br> of meeting. |
| :---: | :---: | :---: |
| Al-33- | Irish member body (Mr. Michael Everson) <br> to assist the editor in the preparation of the DAM-11 text on Canadian Syllabics script, per resolution M33.7 (FPDAM-11 - Canadian Syllabics script) - see action item AI-33-3-e on the editor. <br> to assist the editor with the preparation of DAM-12 text, per resolution M33.8 (FPDAM-12 - Cherokee script) - see action item AI-33-3-f on the editor. <br> to assist the editor in preparing the FPDAM text on Braille patterns, per resolution M33.14 (FPDAM-16 - Braille patterns) - see action item Al-33-3-h on the editor. <br> to assist the editor in the preparation of FPDAM text on Runic script, per resolution M33.15 (Runic script) - see action item AI-33-3-i on the editor. <br> to assist the editor in the preparation of FPDAM on Ogham script, per resolution M33.16 (Ogham script) - see action item Al-33-3-j on the editor. <br> to assist the editor in the preparation of PDAM on Yi-script and Yi-radicals, per resolution M33.18 (Yi script and Yi radicals) - see action item AI-33-3-I on the editor. <br> is invited to update his graphical view of the road map, document N1520, ensuring that it is in synchronism with the road map text in the principles and procedures document and assist Mr. Sven Thygesen in incorporating it into the guidelines in principles and procedures, currently document N1502. <br> to bring to attention of TCA for review and feedback on document N1593Proposal to add Latin characters by Latinized Taiwanese languages. | M34: Completed; See documents N1631 and N1644. M34: Completed; See documents N1632 and N1645. M34: Completed; See FPDAM-16 document N1646. M34: Completed; See FPDAM-17 document N1647. M34: Completed; See FPDAM-20 document N1648. M34: In progress. <br> M34: In progress. <br> M34: Completed. |
| AI-33-13 | All member bodies and liaison organizations <br> to take note of resolution M33.5 (Electronic documents within WG 2):, WG 2 confirms that it will continue to use paper copies for document distribution. However, it encourages its members to additionally provide the convener with electronic copies for possible postings to the WG 2 web site. WG 2 adopts the set of guidelines in document N 1615 for this purpose. | M34: Noted. |
|  | to take note of resolution M33.19 (Policy on PU zone): <br> WG 2 emphasizes that no technical contributions regarding usage of Private Use zones in the standard will be entertained by WG 2. | M34: Noted. |
|  | to take note of the meeting dates in resolution M33.32 (Future meetings): <br> WG 2 confirms the following future meeting schedule: <br> IRG Meeting 10 to be held in Ho-Chi Minh City, Vietnam, 1997-12-15--19. <br> Meeting 34: 16--20 March 1998, Seattle, WA, USA; Host: Microsoft Corp., USA. <br> Meeting 35: 21--25 September 1998, UK - Host: BSI <br> Meeting 36: 15--19 March 1999, Beijing, China <br> Meeting 37: September 1999 -- Open for Invitation. | M34: Noted. |
|  | to review and feedback on document N1529, Editorial Corrigenda - 3rd Cumulative List - Issue 2. <br> to review and feedback on document N1523-Proposal for encoding the Burmese script. <br> to review and feedback on document N1524-Proposal for encoding the Khmer script. <br> to review and feedback on document N1519-Proposal for encoding the Thaana script. <br> to review and feedback on documents N935, N936, and N1599 on adding two Bangjeom chars (Old Hangul tone marks). <br> to take note that insinuations and innuendoes of personal nature will not be acceptable in technical contributions made to WG 2. <br> to review and feedback on the contributions N1559-Proposal for encoding the Cham script, and N1578 - Cham encoding discussion, towards arriving at a more mature proposal on the Cham script. <br> to review and feedback on the proposals on Archaic Scripts -- | M34: Noted. <br> M34: Noted. <br> M34: Noted. <br> M34: Noted. <br> M34: Noted. <br> M34: Noted. <br> M34: Noted. <br> M34: Noted. |
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Item Assigned to / action (Reference Meeting 33 Resolutions document N1604
and Unconfirmed Meeting 33 minutes in document N1603 - with the
corrections noted in section 3 of this document N1703.)
N1575 on Aegean Scripts - Phaistos Disk, Linear B and Cypriot;
N1579 - Phoenician script; N1580- - Etruscan script; and
N1581 - Gothic script.
Member bodies are invited to explore resources within each country on archaic
scripts that are of primarily scholarly interest to provide meaningful feedback on
such contributions. Member bodies may have to seek different kinds of
expertise to deal with these Archaic scripts -- suggested sources may be
locations such as Universities and other Linguistic research groups.
I to review and feedback on the proposals on newer non-traditional scripts:
N1574 on Pollard Syllabary, and N1576 - Shavian.
(See suggestion to member bodies in item AI-33-13-k above).
m}\mathrm{ to review and feedback on document N1590-Repertoire proposal for 10
additional Cyrillic characters for Kildin Sami.
n to review and feedback on document N1593-Proposal to add Latin characters
by Latinized Taiwanese languages.
o to review and feedback on document N1619-Proposal to add 2 Latin characters M34: Noted. from Finland.
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## 5 JTC 1 and ITTF matters

### 5.1 CAW recommendations

Input document:
1690 JTC 1 CAW Recommendations; SC 2 Secretariat; 1998-01-22
Mr. Mike Ksar: Document N1690 is for information to WG 2 members. The Cultural Adaptability Workshop was hosted by Canada, chaired by Professor Kohji Shibano, SC 2 chair, held in Ottawa, January 20-22 1998. The recommendations will be forwarded to JTC 1. A new Technical Direction has been proposed to JTC 1. It will include the projects of SC 2, SC 18/WG 9(old) / JTC 1/WG 5, and SC 22/WG 20. JTC 1 is expected to make a decision at its next meeting in Sendai, Japan, May 25-29, 1998. The CAW meeting started off shakily and towards the end it went well. From WG 2 point of view, the recommendations to have the new Technical Direction makes sense.

Mr. Mike Ksar may be attending the next JTC 1 meeting (at Sendai) - it is important to get some presence of WG 2 interest. Mr. Erkki Kolehmainen maybe attending from Finland. Mr. Satoshi Yamamoto from Japan is planning to attend. Other WG 2 delegates from different national bodies may also attend.

### 5.2 Recent publications announcements by ITTF

## Amendment 6, 7, 8 and 9

Amendment 6-Tibetan script, amendment 7-33 additional characters including some Hebrew characters, amendment 8 - CJK unification guidelines, and amendment 9 -Unique Identifiers -- have all been published by ITTF. Others are still under ballot / in progress.

Mr. Mike Ksar: Amendment 6 on Tibetan -- It was discovered last week that the text that was submitted for publication to ITTF -- has erroneous names for some of the characters in the section corresponding to Annex $E$. The names list that is in the main body is correct. These errors have been picked up in the Annex E document of Mr. Keld Simonsen also. The editor, Mr. Bruce Paterson plans to do an editorial corrigendum to Amendment 6 to fix this problem.

## Action Item:

Editor to fix the Annex E material in Amendment 6 via an editorial corrigendum to Amendment 6.

### 5.3 Ballot results - TR 15285

Input document:
1694 Disposition of Comments on Summary of Voting on Character-Glyph Model, 15285; Ed Hart \& Alan Griffee; 1998-02-27
Mr. Hart has a proposed disposition of comments on the TR 15285-CGM. See discussion under section 6.2.1 on page 19.

### 5.4 Next Edition of 10646-1 - Responsibilities, format \& schedule

### 5.4.1 Content of Next Edition

Output document:
1721 - Content under consideration for future Edition of Part 1.
Mr. Mike Ksar: National bodies who are committed to provide the Camera Ready Copies of proposals, such as the Vertical Extension A, must complete on time to avoid delays in publishing the next edition. Our target for freezing the next edition is March 1999 - per resolution in Crete. Next meeting (September 1998) is the target for finalizing the content - and delivery dates for all the contributions from different NBs must be finalized and carried through. We need to monitor the progress of each one of the items that is a candidate for inclusion in the next edition.

## Discussion:

a) Mr. Michael Everson: Do we have a fixed schedule for the next edition?. There are several items such as Khmer, Burmese etc. in progress. We would like to see these in the next edition - much progress has been made to advance these.
b) Dr. Asmus Freytag: It will be useful to probably identify a list of the repertoires that could be included in the next edition. For the item to be frozen - should the DAM vote be finished or FPDAM with concrete disposition of comments be sufficient? If an item has not gone into FPDAM ballot by the next meeting then it would be difficult to include in the next edition. There are six months between the September and March meetings, and the parties concerned should work towards the conclusion of the various technical issues in time.
We have used the amendment process to publish those we have consensus on. Also we need not be burdened with the complete collection of new material all at once. We could go into a single ballot on similar things -- like what we did for the bucket emptying process. It may be better to get ballots on pieces than the whole. We can always add any missing small pieces at a later date.
c) Mr. Erkki Kolehmainen: If the current edition is to be replaced - then the window has to be examined. National bodies could ballot on individual collections - and it would be easier to do so by using the FPDAM process.
d) Mr. Keld Simonsen: After 5 years, we either confirm or revise. The next edition is to go through the ballot process. We can collect all the approved items to include in the next edition rather than creating separate FPDAM ballots. We could also issue FPDAMs and hold these for 2nd edition rather than processing DAMs.
e) Dr. Asmus Freytag: We are clear on what the requirements are. We may have by the next meeting a tentative publication schedule. The content could be more determinable if the target publication schedule is known. Some of the editorial work by national bodies can have a better target.

A list of scripts and individual characters was drawn up during the meeting. The results are documented in document N1721. Some of the scripts that appear in N1721 are as follows:

Besides amendments 1 to 9, which are already published or ready to be published by ITTF, the following amendments (in different stages of processing) are candidates for inclusion in the next edition:

Amendment 10-Ethiopic; Amendment 11-Canadian Syllabics; Amendment 12-Cherokee Amendment 13 - Internal and Horizontal Ideographic Supplementation; Amendment 14 - Yi PDAM; Amendment 15 - Radicals and Numerals; Amendment 16 - Braille; Amendment 17 - CJK Vertical Extension A; Amendment 18 - Symbols and other collections; Amendment 19 - Runic; Amendment 20-Ogham; Amendment 21 - Sinhala; and, Amendment 22 - Keyboard Symbols

A number of scripts and individual characters are in the proposal stage. If they reach FPDAM stage at this meeting- they are candidates for inclusion in the next edition:

Syriac- scholarly, in modern use; Phoenician - scholarly; Thaana (Maldivian); Burmese; Khmer; Avestan - scholarly; Mongolian; Extended Tibetan. (Of these, Mongolian, Burmese and Khmer -have some urgency. If there are technical proposals that are sound enough these should be progressed as FPDAMs.) Dehong Dai (N966); Xi Xwong Dai (N967); Cham - Minority in Vietnam; Buginese (N1657) - Minority; Glagolitic - in some modern Church use; and, Coptic - Ecclesiastic (Church use).

Individual Character Additions:
3 East Asian Characters; 2 Finnish Romani; 1 Kip Sign; 20 Livonian; Latinized Taiwanese; 20 Bopomofo + 33 Modifiers; 10 Cyrillic Sami; Additional Math Symbols - N1716; 8 Additional Canadian Syllabic Characters - N1655; 2 Ecological Symbols - N1661; 2 Additional Enclosing Symbols - N1668; General Variation mark, and, Bangjeom.

Mr. Mike Ksar: The ballots must be closed by March 1999. The technical content must be frozen - for inclusion in the next edition. We have two more meetings - September 1998, March 1999 - to freeze the contents. We will need some text for reorganizing between different parts. Other parts of 10646-should also be focused on from schedules point of view. See proposal for Plane 14 for Part -2 Draft (Document N 1717), and N 1697 - proposal to augment Part 2. SC 2 will need dates for CD, FCD, DIS etc.
(See also discussion under section 8.1 on page 29.)

## Action Item:

SC 2 program of work does not have any dates for the revision of 10646-1. The convener and editor are to come up with a schedule for the revision of 10646-1: 1993.

### 5.4.2 Format of the next edition

Mr. Mike Ksar: In the current edition there are four columns for I-zone. We have decided to add another column (V column) to the I-zone. We had sample printouts to show this is viable without losing legibility. After a meeting with ITTF in September, the message from ITTF is that it is up to WG 2 to select the format for publishing the next edition. It does not have to be identical to the first edition. With the effort of SC 2 / WG 2 and the Unicode consortium, for being better synchronized, we could use the same data base for printing the standard as well as Unicode next edition. ITTF has a need to publish hard copy. It is up to them to decide whether to publish in hard copy form only or other forms as well. One possibility is to put on a CD (not only on the Web). If it is on the CD the size of the publication should be less of a concern. The printing can be done from the CD. One of the earlier decisions was that we will not split the standard to multiple parts -- for various reasons - such as each part / volume need separate ballots etc. I would like to open up the discussion to explore the sharing of the data base. Discussion:
a) Mr. Keld Simonsen: What about publishing of the standard on the Web? We should think what may be involved in the web and paper publications. We should think of what formats etc. for such web and paper use. Some of the tools, techniques of linking etc. used in the web documents will also need

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consideration. JTC 1 has the need to put everything in electronic form. The CRC requirement from ITTF seems to be going against it.
b) Mr. Michael Everson: There are two issues -- we have a draft of the current 10646 - it is available almost in HTML format. As to the paper size etc. we have already seen a sample of the five column I zone.
c) Dr. Asmus Freytag: The example of 5 -column probably was not intended to be changed from previous decision. On the table, the table is open for possible format changes etc. My preference, for example, is not to use the DECIMAL number in the code charts etc. I would like to emphasize what Mr. Mike Ksar has said - there is a growing number of characters in 10646 - and we need to strengthen the synchronization between the 10646 and Unicode. It is important that whatever production models are used by either, the same information source / data base should be used. I have investigated this aspect and programs can be written to achieve this. ITTF is requesting us to deliver a Camera Ready Copy, irrespective of whether we are doing a web version or CD-ROM version. It looks like there is a small number of people interested in the publication aspects. An ad hoc may be more suitable form to discuss the details.
d) Mr. Mike Ksar: An ad hoc group can be set up with the editor being present. SC 2 has a waiver regarding electronic versions - since the SC 2 standards are not amenable for easy electronic publication. PDF form is what is requested of contributors - and this is still not happening. We do not know what will happen with the ideograph characters.

## Action Item:

The convener is to set up an ad hoc group of interested experts - along with the editor - to consider and recommend the format for the next edition of 10646-1.

### 5.4.3 Web Edition of 10646-1: 1993

a) Mr. Mike Ksar: ITTF was going to the publication of the current standard on the web. Our request is to put also all the amendments into the standard. It will be unwise for ITTF to publish the standard without the amendments -- especially the Hangul amendment.
b) Mr. Keld Simonsen: The requirement for Electronic copy came out of a liaison request from IETF to SC 2. We could have done the Web publication in SC 2. SC 2 site has the final text versions of SC 2 documents.
c) Mr. Mike Ksar: ISO CS is publishing the FINAL standard and the amendments. We should not put these out only as SC 2 documents.

## Action Item:

The convener to monitor the progress of the IETF electronic publication of 10646 on the web, to ensure that all the approved amendments are included. The convener is to bring this matter to the attention of SC 2 also.

### 5.4.4 N1730 - Proposed Printing Sample of 2nd Edition

Input document:
1730 Proposed printing sample for next edition of 10646; WG 2 - Asmus Freytag; 1998-03-19
Dr. Asmus Freytag: Document N1730 shows a sample of the printout created from a tool which takes information from a common data base such as Annex E, and create the layout. Still some more work needs to be done in being able to capture the parenthetical comments on the names. The suggestion is to remove the decimal numbers from the tables of character names.

## Discussion:

a) Mr. Mike Ksar: The request to IRG was - in addition to producing the hard copy, to get the electronic version and to get the fonts for the ideographic characters. One of the issues was the font size. How do you expect the editors to synchronize the two parts from consistency point of view? The tools should consider generating HTML output also. This is the first attempt at synchronizing between the Unicode and 10646 publications.
b) Mr. Michael Everson: The removal of decimal numbers is welcome. Also suggest the small hexadecimal code positions within cells in the table are redundant. Some of the glyphs in the Unicode Book and 10646 are different.
c) Mr. Bruce Paterson: The entry of Group and Plane in each of the table of glyphs is missing in the new proposal. It is important to retain these.
d) Mr. Karl-Ivar Larsson: There is also the combined A4 and North American Letter printable area requirement being discussed in the JTC 1 ad hoc.
e) Mr. Keld Simonsen: One can make copies of ISO Standard for personal use. I have been using the decimal numbers, and would not like to see losing them.
f) Mr. Edwin Hart: I prefer to see the small entries inside the table. There are some differences in the glyphs. The Unicode Standard has to deal with how the Planes 1 and 2 are to be encoded / marked in view of UTF-16. It is a great idea to produce both standards from the same source.
g) Mr. Michel Suignard: As to the squareness this is not a big issue. The decimal numbers are causing more confusion than without. Not being able to do some layouts is no excuse.
h) Mr. Alain LaBonté: I agree with Mr. Michel Suignard - in the confusion that can be caused by the dual numbers.
i) Mr. Takayuki Sato: If the change in the format changes the FONTS, there will be incredibly large number of comments on whether the character is the same or not etc.
j) Mr. Mike Ksar: One of the biggest concern is related to the fonts. I want to pass these by Mr. Keith Brannon, IETF - from their publishing styles, rules etc. It is extremely important that the fonts are made available for publishing of the standards by the proposal submitters.
k) Dr. Asmus Freytag: We can add the ' $\mathrm{G}=$ ', ' $\mathrm{P}=$ ' etc. in the middle of the page using floating header. One has to resolve some of the conflicting requirements expressed in this group before any changes are made to the tool that produces the layouts. If there is an agreement, we could use these tools to produce PDAMs etc. in a consistent manner -- this can be a good tool for the editors. A single plain text input plus the associated fonts is all that will be needed. The fonts used for the first edition were bit maps and are not directly useable. The fonts used for the Unicode book V2.0 was used. Glyph Shapes are editorial - we can refine them and is dependent on the set of fonts that are used. Can we live with the space being a square cell etc.?

## Disposition:

Mr. Mike Ksar: Two issues -- Decimal versus Hex -- there is one dissension in this meeting; and the other one is the Fonts quality issue. We have to work on these outside this meeting. Fonts provided should be made available with permission from the suppliers for printing the next edition of the standard.

## 6 SC 2 matters

### 6.1 Recent submittals to ITTF

Input document:
1707 WG 2 Program of Work - copy of SC 2 N3013R; SC 2 Secretariat; 1998-03-02
1731 WG 2 report to SC 2 plenary in Redmond; Ksar; 1998-03-16
Output document:
1731R
WG 2 report to SC 2 plenary in Redmond - updated by N1731R as a result of WG 2 meeting 34; Ksar; 1998-03-21

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Mr. Mike Ksar: Refer to section 4 of document N1707-SC 2 Program of Work. Some of the deadlines for different projects of WG 2 are blank and should be filled in. The convener had prepared the revised program of work document based on discussions at this meeting and from earlier SC 2 document.

With the assistance of the editors, a new document N1731R was arrived at and was accepted by WG 2 for forwarding to SC 2.

## Relevant resolution:

## RESOLUTION M34.20 (WG 2 Program of Work): <br> UNANIMOUS

WG 2 accepts the revised program of work in document N1731R and instructs its convener to forward it to SC 2.

### 6.2 Ballot results

### 6.2.1 TR 15285: Character Glyph Model

Input document:
1694 Disposition of Comments on Summary of Voting on Character-Glyph Model, 15285; Ed Hart \& Alan Griffee; 1998-02-27 Mr. Edwin Hart introduced the disposition of comments on DTR 15285 ballot responses. There will be some editorial changes to document DTR 15285, and will be distributed on the web site. Standard 434: 1997 was referenced in TR 15285. He asked for volunteers to review the current document for problems. He agreed that WG 2 did not want to distribute the current document as a WG 2 document. He explained that he is in the process of obtaining fonts to replace the bit-mapped characters, and the target date for delivery of the final text to ITTF for publication is end of May.
Discussion:
a) Mr. Takayuki Sato: Does this TR apply to all SC 2 standards?
b) Mr. Edwin Hart: It is only a set of guidelines, and individual standards are free to call for its use or not. There are some statements indicating that current 10646 differs from the model in some areas. An informative reference could be made from the other standards.
c) Mr. Bruce Paterson: It is up to the individual standards to call for use of SC 2 standards in the individual standards.
d) Dr. Asmus Freytag: I will support an informative reference to the TR from 10646 -- not any more than that.
e) Mr. Mike Ksar: When we come up with new editions of our standard we can consider adding the informative reference.
f) Mr. Keld Simonsen: An NP on an enhanced CGM has been forwarded to SC 2 and being processed in WG 3. It may be related to this TR or a new TR may result out of that. It references several other character sets also.

## Disposition:

a) WG 2 approves the disposition of comments in WG 2 document N1694.
b) WG 2 will forward to SC 2 a recommendation for SC 2 to approve the disposition of comments.
c) The editors of TR 15285 are instructed to produce the final text for publication by 31 May 1998, and to send an electronic copy to WG 2 for its WWW site, and a paper copy for distribution.
d) WG 2 instructs its editors to add TR 15285 as a reference to the next edition of Part 1 and to Part 2 of ISO/IEC 10646.

## Relevant resolution:

RESOLUTION M34.1 (DTR 15285 Character Glyph Model): UNANIMOUS
WG 2 accepts the disposition of comments in document N1694, and instructs its project editors to prepare the final text for TR 15285, and to forward these documents to SC 2 secretariat by 1998-05 for publication. WG 2 further instructs its project editors for ISO/IEC 10646 Part 1 and Part 2 to add TR 15285 as a reference to the next edition of ISO/IEC 10646-1 and to the WD of ISO/IEC 10646-2.

### 6.2.2 FPDAM-16 - Braille patterns

Input document:
1695 - Disposition of comments on FPDAM-16 - Braille patterns, FPDAM-19 on Runic and FPDAM-20 on Ogham
Mr. Bruce Paterson: A minor editorial fix was done to accommodate UK comment.

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The three proposals - Braille, Runic and Ogham scripts - were prepared with help of Mr. Michael Everson, and the editor wishes to acknowledge this contribution. Mr. Michael Everson indicated that he will assist in preparing the DAM text also to cut down on mailing delays.

## Relevant resolution:

RESOLUTION M34.4 (FPDAM-16 Braille patterns): UNANIMOUS
WG 2 accepts the disposition of comments in document N1695, and instructs its project editor with
assistance from Ireland (Michael Everson) to prepare the final text of DAM-16 (revised document N1646), and forward these documents to SC 2 secretariat in April 1998 for further processing.

### 6.2.3 FPDAM-19 on Runic and FPDAM-20 on Ogham

Input document:
1695 - Disposition of comments on FPDAM-16 - Braille patterns, FPDAM-19 on Runic and FPDAM-20 on Ogham

## Mr. Bruce Paterson:

a) Greece abstains and commented questioning the placement of Runic in the BMP. The response is Runic is a small set and it is in use also outside the scholarly group.
b) Japan voted negative and asked for source of the document. The Irish national body's contribution was pointed out. Japan agreed (during this meeting) that it is sufficient response to satisfy their negative ballot.

## Relevant resolution:

## RESOLUTION M34.6 (FPDAM-19 Runic script):

UNANIMOUS
WG 2 accepts the disposition of comments in document N1695, and instructs its project editor with assistance from Ireland (Michael Everson) to prepare the final text of DAM-19 (based on document N1647), and forward these documents to SC 2 secretariat in April 1998 for further processing.

### 6.2.3 FPDAM-20 on Ogham

Input document:
1695 - Disposition of comments on FPDAM-16 - Braille patterns, FPDAM-19 on Runic and FPDAM-20 on Ogham
No discussion.

## Relevant resolution:

RESOLUTION M34.7 (FPDAM-20 Ogham): UNANIMOUS
WG 2 accepts the disposition of comments in document N1695, and instructs its project editor with assistance from Ireland (Michael Everson) to prepare the final text of DAM-20 (based on document N1648), and forward these documents to SC 2 secretariat in April 1998 for further processing.

### 6.3 Sub-Repertoire Identification

Input documents:
1705 Use of Collection Identifiers for Identifying Sub-Repertoires of 10646; US \& Canada - Uma; 1998-03-08
1706 Re-visiting definitions of 'collection' in COR 2 of 10646; US \& Canada - Uma; 1998-03-08
Output document:
1726 Report of ad hoc on Collection Identifiers for 10646 parts 1 and 2; Uma, Paterson, Suignard, Ksar; 1998-03-18
Dr. V.S. Umamaheswaran introduced the document N1705, which was prepared in response to an action item on WG 2 from SC 2 Crete plenary. The Technical Amendment approach to add new collection identifiers in the standard, was to give a measure of control on the subrepertoires that could be identified as collections in the standard. Document N1706 is a related document. He explained the relationship between documents N1705 and N1706 -- and the reasoning behind the proposal.
Discussion:
a) Mr. Mike Ksar: This is the result of an action item on WG 2.
b) Dr. Asmus Freytag: We may have to fix document N1706-definitions of collection identifiers -- as a prerequisite to accepting N1705. It is important that the subrepertoires / collections be somehow verified and the submission should have some level of validity / use.

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c) Mr. Erkki Kolehmainen: We may have to create an ad hoc to consider both documents N1705 and N1706 together and resolve any issues.

## Identification of Collections in and from different parts

There was also a question on how collections that are entirely within one part or the other, and those that span both parts of 10646, should be documented in the two parts.

## Discussion:

a) Mr. Bruce Paterson: Collection numbers cannot be assigned in part 1 for scripts in part 2; as it stands. Annex A of part 1 is only for collections from the BMP. A separate range of numbers can be used for the part 1 collections. Annex A already has references to collections outside the BMP. I would like to see a concrete proposal which outlines how we can deal with collection identifiers from parts other than the BMP.
b) Mr. Ken Whistler: The collection identifiers need not be issued for every script that is included in Part 2.
c) Dr. Umamaheswaran: Annex A contains the block names also. The question of block names causes a potential problem.
d) Mr. Ken Whistler: We could keep the Block names of Part 2 only in part 2.
e) Dr. Asmus Freytag: The block names in Annex A was not in the first edition. The block names list was an after thought. It could be separated out into a part-specific informative annex. Collection numbers have to be simple numbers, not 1-xxx etc. Also the ability to identify entire 10646 should be there.
f) Mr. Mike Ksar: There is an open question on how to deal with Collection IDs. The collection id is an internal administrative issue. How to be able register ids for collections consisting of collections from Part 2 , and be in synch with different parts?

An ad hoc group consisting of Messrs. Umamaheswaran, Michel Suignard, Bruce Paterson and Mike Ksar discussed the different aspects of the problem. Document N1726 contains the recommendations of the ad hoc group. Discussions were also held with Messrs. Johan van Wingen and Erkki Kolehmainen to address some of their concerns.

## Disposition:

WG 2 accepts the recommendations in document N1726. Include these in the Principles and Procedures document. Forward the recommendations as instructions to the editors of Parts 1 and Part 2. Document N1705 with input from document N1726 -- will be forwarded to SC 2 as recommendation from WG 2 to SC 2 and to SC 2/WG 3.

## Action Item:

Dr. Umamaheswaran is to create a guideline document for submission of requests for Collection Id, for inclusion in the Procedures and Guidelines document.

## Relevant resolution: <br> RESOLUTION M34.15 (Sub-Repertoire Identification):

$$
12 \text { - YES; Netherlands - ABSTAINS }
$$

WG 2 accepts the proposals on use of collection identifiers for identifying sub-repertoires of 10646, in document N1705, and the Report of Ad Hoc on Collection Identifiers for Part 1 and Part 2 in document N1726. WG 2 further accepts to forward these documents to SC 2 and to WG 3 in response to SC 2 resolution M07.28.

## Relevant resolution: <br> RESOLUTION M34.18 (Collection Identifiers in Parts 1 and 2):

## 12 - YES; Netherlands ABSTAINS

WG 2 accepts the recommendations of the ad hoc on collection identifiers in document N1726, and instructs the ad hoc on Principles and Procedures to include these in the Principles and Procedures document (N1502R). WG 2 further instructs its project editors to take note of these recommendations for adoption in Parts 1 and Part 2.

NOTE: It was mentioned during the meeting that a new question on 'Properties Associated with Characters' will be proposed to be added to the Principles and Procedures document for information gathering purposes. However, this did not happen during the meeting.

## $7 \quad$ Non-repertoire issues

### 7.1 Editorial corrigenda - standing document

Input Document:
1696 Editorial Corrigenda - 3rd Cumulative List - Issue 3 - Replaces N 1529; Bruce Paterson; 1998-03-01
See discussion under item 10 - Defect Reports Status on page 52.

### 7.2 Draft Technical Corrigendum \# 2

Input Documents:
1635 Draft Technical Corrigendum No 2 (DCOR 2); Paterson; 1997-10-07
1664 Draft Technical Corrigendum No. 2 to ISO/IEC 10646; Paterson; 97-12
1692 Draft Report on SC2 letter ballot on Draft Technical Corrigendum No. 2; Paterson; 1998-02-10
1706 Re-visiting definitions of 'collection' in COR. 2 of 10646; US \& Canada - Uma; 1998-03-08
Output Document:
1692R Draft Report on SC2 letter ballot on Draft Technical Corrigendum No. 2; Paterson; 1998-02-10
Mr. Bruce Paterson: The DTCOR-2 ballot closed on 24 December 97. A few small comments were received on the ballot -- SC 2 N3024 (? WG 2 N ?) contains table of replies.
a) Korea had a negative ballot - To mark the Hangul Syllables block as 'dense collection'. Satisfies Korean negative ballot.
b) Finland: Proposed an extension to the NOTE under DENSE COLLECTION - "or a new range is added".
c) Israel: Ever since First Edition was published, HEBREW was shown as three separate contiguous blocks -- Hebrew Extended-A, Basic Hebrew and Hebrew Extended-B. The request from Israel is to change the Block Names and not Collection Identifier or Names. The proposed disposition is to replace the current set of block names with a single entry HEBREW through another Defect Report.
d) Turkey - pointing to a figure 4 is incorrect in the first edition figure 3. In Amendment 5 , figure 3 was split, into figure 3 and figure 4 - and moved all the rest of the figure numbers. Amendment 5 is still in printing with the secretariat.

Dr. Umamaheswaran introduced the document N1706 - a contribution from US and Canada, identifying a problem related to the definition of 'dense collection definition'. A dense collection has the potential of changing over time.

The original requirement was to have the possibility of a collection that does not change over time. Couple of options were proposed in the contribution.

## Discussion:

a) Dr. Asmus Freytag: There is some value in knowing that the current collections are DENSE or Not. Keeping the current definition of dense collection can pose a maintenance problem. Another question was to ask if BMP 300 includes the S-zone elements? There is a need for Fixed Collection - for example: the MES, the Edition 1 (pre amendment 5 ) etc.
b) Mr. Mike Ksar: What is Finland's opinion on the new proposal?
c) Mr. Erkki Kolehmainen: If the current definition of DENSE collection was meant to be variable, the Finnish comment / correction was made to fix the definition. However, the usability of dense collection, as explained in the contribution in document N 1706 -- seems to be questionable.
d) Mr. Michael Everson: IPA Extensions -- we did not catch the block change to IPA Latin Extensions. In Crete - the disposition did not catch the intent that the word 'Latin' for the collection id. The first edition had IPA Extension for both the block names and the collection names. A way to fix this may be to add a note to help the reader to also include the 'IPA Latin Extension'.
e) Dr. Asmus Freytag: It may not be as simple as putting a note. The way the standard is organized - if one is looking for a means to get the complete list of characters for a given script, the collection ids / block names alone is not sufficient. The standard should not be extended.
f) Mr. Ken Whistler: We have to be careful in not converting automatically every dense collection currently entered to be Fixed. Not all the dense collections should be Fixed Collections. Concerning the request from Israel, a note under A. 2 in N1664 - to clarify that Block Names are not the same as the Collection names and are changeable over time, could accommodate the request to change the Hebrew block names.
g) Mr. Bruce Paterson: What we really need in the standard is to see the FIXED collection. The dense collection is only a stepping stone towards Fixed -- we can change the wordings to accommodate the comments.

Mr. Bruce Paterson: A revised disposition of comments to DTCOR-2, accommodating the points raised in the above discussion can be found in document N1692R. In the response to Finland's ballot comments - we discussed this item earlier - and discovered that we did not quite capture the notion of fixed collection in the DTCOR-2. It is proposed to change the term - DENSE COLLECTION to FIXED COLLECTION. The definition is extended to indicate the intention of no changes to the repertoire of fixed collection -- there are no holes in it and it will not change. WG 2 can decide for each script whether the collection is to be FIXED or flexible. Some cases -- such as BMP up to amendment no. 7 - these should be FIXED - collection number 301. There is also the notion of 'notfixed' like 300 which will grow. These changes have been discussed with the interested experts. The Korean collection is also FIXED.

## Disposition:

Accept the revised disposition of comments. Replace Dense Collection with Fixed Collection. Add a note in A. 2 - explaining the differences between Blocks and Collections. Collection IDs and Names - are normative and fixed, whereas the Block Names are a little more flexible.

## Action Item:

Ireland is invited to create a 'Defect Report' on changing IPA Extension to IPA Latin Extension.

## Relevant resolution:

## RESOLUTION M34.2 (DTCOR-2 Blocks and Collections): <br> UNANIMOUS

WG 2 accepts the disposition of comments in document N1692R, and instructs its project editor to prepare the final text of TCOR 2 to ISO/IEC 10646-1: 1993, and forward these documents to SC 2 secretariat by 199805 for publication.

### 7.310646 Editorships

Mr. Mike Ksar: At the SC 2 Crete meeting, we had an issue on who should be the editor for Part 2. To resolve the issue with the least disruption, and at the same time recognizing the contributions being made by many key people - here is a proposal:

To create a new position -- an official well-defined position -- called "Contributing-Editor". The contributing editor is not the Project Editor. For each part, so far with 10646, we had several individuals assisting the editor to get the work done. The new position will officially recognize such contributing individuals. This

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will keep the RESPONSIBILITY to submit to SC 2, to ITTF etc. with the Project Editors. There can be several contributing editors to assist the work of the Project Editor in preparing camera ready copies of documents to be sent to SC 2 or ITTF. The WG 2 should forward the following resolution:
"WG 2 recommends to SC 2, to recommend to JTC 1, to establish a new position, CONTRIBUTING EDITOR, to help the project editor in completion of the projects, in recognition of their valuable contribution."
Mr. Bruce Paterson - continues to be Part 1 Project Editor
Messrs. Ed Hart, Alan Griffee - continue as Project editors for TR 15285.
Mr. Michel Suignard - Nominated as new Project Editor for Part 2 to replace the Acting Editor.
Add the following names as contributing editors:
Michael Everson, Contributing Editor to both Parts 1 and 2
IRG Project Editor-in-Chief - Contributing Editor to both Parts 1 and 2
Keld Simonsen - Contributing Editor to Part 1.

## Discussion:

a) Mr. Keld Simonsen: Will the names of the project editors be in a resolution? We may not have to go to JTC 1 to get the recognition of the Contributing Editors in SC 2.
b) Mr. Erkki Kolehmainen: The term Contributing Editor -- should be assigned to individual tasks, but on the basis of some continuing involvement. It should be an Exceptional Contribution recognition.
c) Mr. Mike Ksar: The contributing editor assists the project editor in preparing submissions to SC 2 for ballot etc.
d) Mr. Takayuki Sato: Should the contributing editor be for specific projects / parts? Major contributors be recognized. The Contributing Editors - should have the obligations to continue to the end of their assigned tasks.
e) Romania - had a contribution to SC 2 - primarily aimed at the WG 3 projects - we should have two editors, one to take care of English version and another the French version. The text written in English should be in such a way that the text is translatable to French. Document SC 2 N 3018 (Contribution from National Body of Romania concerning Project Editor of 10646-2) was referenced.

## Relevant resolution:

RESOLUTION M34.22 (Appointment of Officers and Liaison Status):
12 - YES; Denmark ABSTAINS
WG 2 requests SC 2 to reconfirm the following officers:
Bruce Paterson as Project Editor of ISO/IEC 10646-1
Ed Hart and Alan Griffee as Project Editors for TR 15285
Zhang Zhoucai as IRG Rapporteur.
WG 2 requests SC 2 to confirm the following new officers:
Michel Suignard as Project Editor of ISO/IEC 10646-2
Michael Everson as Contributing Editor (see resolution M34.21) for both ISO/IEC 10646-1
and 10646-2
Chen Zhuang as Contributing Editor (see resolution M34.21) for both ISO/IEC 10646-1
and 10646-2
Keld Simonsen as Contributing Editor (see resolution M34.21) to ISO/IEC 10646-1
Mike Ksar as an additional co-operation officer to CEN/TC 304
WG 2 appoints
Arnold Winkler as liaison officer to SC 22/WG 20.
WG 2 requests SC 2 to re-confirm C-Liaison status with Hong Kong Information Technology Federation (HKITF).

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## Relevant resolution:

$$
\begin{aligned}
& \text { RESOLUTION M34.21 (Contributing Editor): } \\
& \text { WG } 2 \text { recommends that SC } 2 \text { recommends to JTC } 1 \text { that a new official position - CONTRIBUTING EDITOR - } \\
& \text { be established, who will assist the project editor in preparing camera ready copies of project texts, to } \\
& \text { recognize their valuable contributions. Responsibility for submission of documents to SC } 2 \text { or ITTF will } \\
& \text { remain with the Project Editor(s). }
\end{aligned}
$$

### 7.4 Language Tagging - Plane 14 Proposal

Input Documents:
$1670 \quad$ Plane 14 Characters for Language Tags; Unicode, Ken Whistler; 1997-12-12
1717 Proposed text for CD of 10646-2; Suignard; 1998-03-12
Mr. Ken Whistler introduced document N1670. also refer to document N1717-a short version of the proposal is in that document. The purpose of the 'tag characters' is to indicate the language of the text characters, without a complicated format that may not be transmittable. There have been vigorous discussions (last June) on different approaches to the problem. Existing mark up mechanisms -- such as SGML, HTML or Metadata - were considered to be too complex by some situations -- in this case it was with reference to an Internet protocol. The protocol has need for an efficient means of being able to pick up the tag. There should also be a safe way of tagging / transmitting -- use of PUAs etc. is not standard enough for interchange. An alternative -- a modified UTF-8 was proposed -- by reusing the modified bit patterns to identify the language. This proposal would have resulted in non-standard forms of UTF-8 which could cause difficulties with those using UTF-8. There was another proposal where one could have a character each for each one of the language -- this would have dragged the standards body into the business of identifying all the languages in the world. The compromise -- with the participation of the Unicode, IETF experts etc. -- is the proposal for Plain 14 tag alphabet characters. Instead of using regular 10646 characters to spell out the tag values and the potential confusion with regular text, the separate range of characters avoids the confusion. 'Tag Start', 'Tag Char J', 'Tag Char A' -- for example, could represent Japanese.

The particular syntax is in document N1670. The values to be used for the Language Identifiers, are left to the IETF protocols. RFC 1776 contains more details on how to use these tags. The Plane 14 proposal is also posted as an Internet Draft for comment by the IETF community -- for over a month now. Expires in six months. We have to proceed pro-actively and make it an RFC using the IETF RFC process. It would be wise for WG 2 to pursue the RFC process.

## Discussion:

a) Mr. Keld Simonsen: If this document available as Internet draft, there is no further action needed from WG 2. I do have several technical comments on this proposal -- one of the problems is that there is a lot of interchange in non-10646 character sets also. One should also pursue solutions for equivalent or alternate mechanisms that could be applied to all character sets.
b) Mr. Erkki Kolehmainen: It seems that we were asked to facilitate the use of 10646 in the Internet, not necessarily to solve all the other problems. WG 2 should not be trying to solve the rest of the problems outside the scope of 10646.
c) Dr. Umamaheswaran: The scope of the original MLSF protocol should be kept in mind. The requirement was for In -line tagging along with 10646 and not for other character sets. How can we strengthen the liaison activity with IETF to be able to prevent proposals such as MLSF containing possible misuse of UTF-8 etc. (which triggered the Plane 14 proposal), which are of concern to this WG?
d) Mr. Takayuki Sato: The scope of this proposal should be examined carefully. There are some characters from ASCII which are Variant in the national sets. May be we should use only ISO 646 IRV as the reference, and not the national variants (including ASCII).
e) Mr. Ken Whistler: Should additional kinds of tagging be needed, it is better to use the ISO 646 IRV, in order to avoid future comeback and request for additional characters if we initially restrict.
f) Mr. Keld Simonsen: Additional restrictions / criteria - such as tagging to represent whether the numeric formats contain comma or a decimal point etc. could also be dealt with. There are some problems with the Variant Characters also -- we should advise the IETF protocol users to restrict the alphabet to common invariant set.
g) Dr. Asmus Freytag: The people in need of this solution, have alternative proposals. Unless we come up with an active, definite, stable counter proposal - it will be considered as a negative against WG 2.

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The risk is IETF will go their own way. We do not have the luxury of delaying on this for too long. The original Internet paper was introduced so late to be able to have any meaningful discussion.
h) Mr. Erkki Kolehmainen: We have to accept the role of a facilitator to be of any value to the Internet community. If IETF asked us to provide something, we should respond pro-actively.
i) Ms. Lisa Moore: This proposal was jointly worked out with experts in IETF and Unicode. If any changes are to be made we may have to go back to the contributing parties.
j) Mr. Mike Ksar: This proposal - in conjunction with 10646 - is to facilitate the use of 10646. It may be too early to proceed with FCD based on some of the feedback. There is sufficient urgency that we have to act on this item. The least we should go for is to accept it as a CD, and the best is for FCD.
k) Mr. Takayuki Sato: Are you proposing to progress to PDAM of Part 2, without any content in Planes 1 and 2. If it is so, the agreed upon scope of Part 2 has to be finalized.
I) Mr. Mike Ksar: By the end of this meeting - we should be take a more active role in progressing this as FCD.

## Disposition:

Accept the proposal for inclusion in Part 2 draft.

## Action Item:

Document N1670 - should be sent as a liaison to IETF from SC 2/WG 2. We are concerned because the initial MLSF proposal was in conflict with UTF-8. See relevant RESOLUTION M34.20 on page 19.

### 7.5 Updated Annex E-Character Name List

Input document:
1675 Annex E - Character Name List - Updated per Technical Corrigendum 1 (F) and through Amendment 9 of ISO/IEC 10646; Keld Simonsen; 1997-12-07

See discussion regarding Tibetan names list in document N1675 and Amendment 6 final text under section 5.2 on page 15. Annex E information for Tibetan has to be checked against the Amendment 6 character names.

## Action Item:

Mr. Keld Simonsen to verify that the Tibetan character names in the Annex E list are in accordance with the names in the main body of AM-6.

### 7.6 Roadmap Review

Input documents:
1520 Roadmap to the BMP of ISO 10646; Everson, Ireland ; 1997-03-01
1558 Roadmap to Plane 1 of ISO 10646; Everson; 1997-03-01
Mr. Michael Everson reported on an ad hoc meeting of interested experts. The roadmap should reflect the Half Block boundaries. New editor for the principles and procedures document -- will work with Mr. Michael Everson to incorporate the changes.
Mr. Mike Ksar: An updated roadmap document needs to be provided. Dr. Umamaheswaran was requested to update the principles and procedures document with the roadmap input.

## Action Item:

Dr. Umamaheswaran and Mr. Michael Everson to work together to update the principles and procedures document with the latest agreed upon pictorial view of the roadmap.

### 7.7 Italy withdrawing from WG 2

Input document:
1601
WG2 Mailing List - post meeting 33 in Crete; Ksar; 1997-07-03
Mr. Mike Ksar: Italy has requested to be taken off the list of WG 2. Italy wants to continue to be on SC 2 list. By not receiving the WG 2 documents, countries like Italy who do not have the background information from WG 2, may be making less-informed decisions on some of the WG 2 created ballots. We may have to add additional information to amendments etc. to let the member bodies make some informed decision.

The names list document N1601 was changed to include upper and lower case and in the process a number of errors have been identified and will be fixed. Request to experts on the distribution list is to remove their names if they are getting copies also through the member bodies.

## Discussion:

a) Mr. Keld Simonsen: One method of reducing the cost of distribution of documents is to follow what SC 2 has started doing. Documents containing a lot of glyphs can be created and distributed -- as we have seen from Mr. Michael Everson. We can ask individual contributors to give Electronic version to the convener. If we ask each submitter why an electronic copy cannot be provided - that will encourage the electronic submission.
b) Mr. Mike Ksar: It is not easy to implement. Without personal secretarial support, the convener has to do the conversion -- which is not sometimes even possible due to various sizes of paper etc. I would not enforce this on everyone. I support and encourage contributions to be made in the electronic form -- we are moving in that direction but we are not there as yet.

### 7.8 10646-2

Input documents:
1697 Updated Scope for 10646 part 2; US - Michel Suignard; 1998-03-02
1717 Proposed text for CD of 10646-2; Suignard; 1998-03-12
Mr. Michel Suignard introduced the two documents N1697 and N1717. Document N1697 adds Plane 14 to the scope of Part 2. Plane 14 - statement in document N1697-indicates that Plane 14 is for non-graphic characters only. Document N1717 contains the starting document for Part 2.

## Discussion:

a) Mr. Michael Everson: I would like to see a code table for the Plane 14 characters.
b) Mr. Bruce Paterson: I would like to see a list of sections -- for example, will Part 2 contain an Annex on collection identifiers.
c) Dr. Umamaheswaran: How would one consider collections that go across parts? Will it be all in one part -- for example, Annex A of Part 1 or not.
d) Mr. Michel Suignard: Part 1 - contains architectural statements, one could view the collection identifiers as an architectural item.
e) Dr. Asmus Freytag: Part 1 contains architectural items - we should look at describing the planes of Part 2 such as intended use of Plane 14 in Part 1.
f) Mr. Arnold Winkler: If we do a CD I would like to see as much information as possible included.
g) Mr. Mike Ksar: Part 1 needs a summary of Part 2. Part 2 may not need supporting text for Part 1. Document N1721 has a list of potential Part 2 candidates (see discussions under section 5.4.1 on page 15 and section 8.1 on page 29). We could also use the Roadmap as a guideline. In the normative part we could include Byzantine and as many other scripts as are accepted for inclusion in Part 2 by the end of this meeting.

## Action Item:

Mr. Michel Suignard to update the working draft in document N1717-accommodating the various comments. Also to provide some text for inclusion in Part 1 addressing the architectural statements that need to be included in Part 1.
Relevant resolution:
RESOLUTION M34.13 (Revised Scope of 10646-2):

RESOLUTION M34.13 (Revised Scope of 10646-2):
11 - YES; Japan, Netherlands - ABSTAIN
WG 2 accepts the revised scope in document N1697 and requests its convener to forward it to SC 2 for confirmation.

Relevant resolution:
RESOLUTION M34.14 (Characters for inclusion in WD of Part 2):
11 - YES; Japan, Netherlands - ABSTAIN
WG 2 accepts the following:
Plane 14 Characters for Language Tags according to document N1670.
ETRUSCAN script in the range Plane 10200 to 022F, in accordance with document N1580.
GOTHIC script in the range Plane 10230 to 024 F , in accordance with document N1581, with the last three characters in that document deleted from the repertoire.
WESTERN MUSICAL SYMBOLS in the range Plane 1 D100 to D1FF, starting at D103, in accordance with document N1693.
and instructs its project editor to include the above accepted characters in the working draft of 10646-2.

### 7.9 Formal Criteria on Dis-unification

Input document:
1724 Formal Criteria on Disunification; US/Unicode - Asmus Freytag; 1998-03-05
Dr. Asmus Freytag introduced document N1724. If you introduce a character in 10646, which up to the point of introduction was unified with some character in the standard, how do we decide whether to accept the proposed character or not? For example, the Romanian. Script characters which look like another one, or the 'sentence ending period' versus 'period'. There was a 'decimal separator' character that was proposed to avoid a code/character independent means of specifying the locale information. However, the existing practice proved it to be not a viable solution. Other means such as locales were made available instead. Other examples are also given. Over-unification of punctuation has been found to be tricky - especially in the multilingual situation. Common enough difficulties in operations such as search, appearance and layout problems can be resolved with dis-unification. A cost-benefits based analysis of dis-unification is proposed in the document -- the costs are in terms of additional properties, equivalences. or impact on existing implementations. A set of questions are proposed to help with the analysis.

## Discussion:

a) Mr. Johan van Wingen: I wish this document was available before several of the PDAMs that are under currently in progress. I will be happy to include some of the Netherlands input on the subject to Dr. Asmus Freytag.
b) Mr. Michael Everson: I am glad to see this paper. I am particularly pleased to see the examples -- I have several candidate characters that are of the same type as in the examples shown. Now I can have a set of questions to answer before I come up with new proposals which will involve disunification.
c) Mr. Ken Whistler: To point out the current relevance of document N1724, I would like to connect it back to Mongolian discussion we had at this meeting. The kinds of issues that we are running into are exactly due to considerations and questions such as those listed in document N1724.
d) Mr. Mike Ksar: Feedback is requested from WG 2 -- NBs, LOs. The proposed criteria will be updated on the basis of inputs. Intent is to include something like this in the Principles and Procedures document. The Chinese delegation is encouraged to consult with the authors of document N1724 and see if the criteria can be used for resolving some of the comments on Mongolian.

## Action Items:

NBs, LOs to feedback on document N1724. Revised text to be proposed for inclusion in Principles and Procedures document (Dr. Asmus Freytag and Dr. Umamaheswaran). The Chinese delegation is to take note of document N1724 in the context of Mongolian discussions.

### 7.10 Formal Criteria for Coding Pre-Composed Characters

Input document:
1725
Formal criteria for coding precomposed characters; Expert contribution - Asmus Freytag, Ken Whistler; 1998-03-17
Mr. Ken Whistler introduced document N1725. The related question to the dis-unification etc. is 'when can we add a pre-composed character?'. Several characters can be created using composition techniques. The criteria that one could consider are outlined in the document. For example the benefit is to assist in 1 to 1 mapping to an existing alphabet. The disadvantage is the Multiple spelling problem. Notes are provided for consideration. Feedback is solicited from experts - NBs and LOs.

## Discussion:

a) Mr. Johan van Wingen: the term 'pre-composed' is a Unicode term and not an SC 2 term. With reference to the kerning marks -- we do not know what we mean by combining. Combining could also be putting ij together or ij as a single letter. The dual representation causes problems in sorting etc.
b) Mr. Ken Whistler: The document points out that there are implementations which internally use decomposed sequences. Every time a fully composed characters are added it causes decomposition costs for them.
c) Mr. Keld Simonsen: The observation of Sorting Collating etc. - all the new ones sort on fully composed characters -- going to decomposition and then to sort etc. is uneconomical. On the other hand it causes problems for the sorting etc. which use fully decomposed characters.
d) Dr. Asmus Freytag: These principles could be extended to digraphs proposals also. Given 10646 's design - any composed text element can be represented using the combining techniques. This proposal is focusing on new proposals. A general implementation may be able to handle combining sequences already, and one may not need another pre-combined character.
e) Dr. Umamaheswaran: Legacy systems / OSs etc. must be somehow recognized in the document. Suggest that this proposal be expanded into an informative annex of principles and procedures document - N1502R.
f) Mr. Bruce Paterson: We can take these back and digest and feedback etc.

## Action Item:

NBs, LOs to feedback on document N1725. Dr. Umamaheswaran, Mr. Ken Whistler and Dr. Asmus Freytag -- to work together to incorporate updated versions into N1502R for discussion in London.

## 8 Repertoire issues

### 8.1 Repertoire Additions - Cumulative List \# 6

Input documents:
1667 Repertoire additions for ISO/IEC 10646-1 - Cumulative List No. 6 - replaces N 1529; Paterson; 1997-10-31
1721 Content under consideration for future edition of 10646; WG2 meeting 34 - Asmus Freytag; 1998-03-16
(See also discussion under section 5.4.1 on page 15)
Mr. Bruce Paterson: Document N1667 contains a list of all scripts and characters that have been agreed to be added to 10646. Some of these have been published as Amendments - for example, AMD 5, 6 and 7. Edition 1 has Tables 1 to 123. Document N1667 shows the accumulated changes for the next edition.
Document N1721 - created under agenda item 5.4.1, is to be compared and verified with document N1667. We should add Amendments 1 to 9, TCOR 1 and 2 and Editorial Corrigenda to the list in N1721.

## Discussion:

a) Mr. Ken Whistler: In document N1667 - under item 32.11 replace pDAMb with pDAM15. Kang Xi should be called 'KangXi' without the intervening space. Item 33.20 - change fPDAM to PDAM.
b) Mr. Zhang Zhoucai: IRG has two items -- CJK Radicals Supplement and KangXi radicals - the status is the same for both -- part of Amendment 15.

Some of the dates for completion were reviewed:
31.4 Ethiopic -- 98-03? may slip to 98-05?
31.6 - Canadian Aboriginal. Syllabics - DAM-11 -- 98-05.
31.7 - Cherokee DAM-12 -- 98-05.
33.27 - PDAM-22 - 98.03
33.17-Sinhala - 98-06

## Action Items:

Mr. Bruce Paterson will update document N1667-Cumulative List \#6 of Repertoire Additions. Dr. Asmus Freytag will update document N1721.

### 8.2 Mongolian script - update

Input documents:
1515 Report of ad hoc on Mongolian encoding proposal; United Nations University, China and Unicode Consortium; 1997-01-23
1691 Joint Proposal of 4th International Mongolian Encoding Meeting; China, Germany, Mongolia; 1997-08-21
1711 Mongolian encoding update to N 1691; China; 1998-02-15
Output document:
1734 Comments on Mongolian proposal N 1711; Ken Whistler; 1998-03-20
Mr. Chen Zhuang reported on the document N1711. Four more control characters are proposed to be added based on discussion between the various experts. This is the outcome of the discussion in Ulanbaatar.

## Discussion:

a) Mr. Michael Everson: Regarding Mongolian - there is an overwhelming preponderance on the repertoire. The repertoire has been stable for a long time. The format control characters seem to be changing in number $-10,4$, now 7 . Somehow the control characters are different. The NBSP and the Mongolian Space have slightly different semantics.
b) Dr. Asmus Freytag: I disagree with Ireland. The alternate format characters are central to writing and processing Mongolian. It is a good sign that the repertoire has not changed. Not a good sign that the control characters are not stable. I do not think we can nail down all the questions at this meeting. Are the repertoire of SHAPES in the code table unchanged - or new / changes have been made from the previous one? The last column in the tables in N1711 contain the rules. Were there new rows added or were there any changes made to contents of columns? Perhaps we should have an ad hoc to clarify all open questions that need to be addressed before the London meeting.
c) Mr. Chen Zhuang: There are changes to the shapes for the control characters.
d) Mr. Ken Whistler: The Ulanbaatar proposal and the latest one have the same number of 'numbered' rows. Most of the document seems to be stable -- with some questions on formatting and positional characters for inclusion. The US NB has to study the proposal in detail. Some of the positional characters could possibly be unified with the Zero Width Non-Joiner character. These will be controversial. The Mongolian Vowel Separator will be a problem - these could also be represented using existing characters. Mongolian space mark -- why could it be not unified with NBSP? Combinatory punctuation mark will need some justification - and if there is justification it should be encoded outside the Mongolian block. (Document N1734 contains Mr. Ken Whistler's comments for consideration by the Mongolian experts - this document was made available towards the end of the meeting.)
e) Mr. Bruce Paterson: I support the ad hoc group to agree on the set of questions that need to be addressed. Also, please do not re-distribute the entire document. I would like to see only the changes with respect to the previous proposal especially when 90 percent of the document is the same.
f) Dr. Umamaheswaran: I request the commenters to write down their questions and give it to China. I suggest the ad hoc group at this meeting produce a list of questions that need addressing by Mongolian ad hoc group.
g) Mr. Mike Ksar: I would like to see changes marked in the document for helping the delegates. Two experts from Mongolia are expected to arrive for the SC 2 meeting on Tuesday next week. I would encourage the Chinese delegation to discuss the contribution with them - if there are any problems etc. I encourage the Chinese delegation to get together with Mr. Ken Whistler, and get the comments and concerns understood and accommodated. There was some email from Mr. Richard Moore on this subject - he has requested for more time to study the new proposal. His suggestion is to process it at the London meeting. Feedback on document N1691 was sent to China - and these have been accommodated by China. Need Mr. Richard Moore to review the content of the updated document. Mr. Joe Becker also had indicated that he wants to review the new proposal - being one of the experts

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participating in the Mongolian ad hoc. I have no problem with an ad hoc at this meeting. Not all the Mongolian experts are present here. The ad hoc output will not be the final Mongolian output. The ad hoc will be only for clarification of the questions and comments made during the meeting so that these are clearly understood. I would like to see the updates identified. End of May is the target for the next WG 2 mailing input to the convener - and to be put on the agenda for the London meeting.
h) Mr. Michael Everson: We have made progress in the ad hoc to understand the different issues.
i) Mr. Mike Ksar: We certainly have made progress-- except that we have some uncertainty in the control character area. The experts on Mongolian can discuss on the email and agree on the solutions before the next WG 2 meeting.

## Action Items:

China is invited to take back all the comments made at this meeting - including document N1734, and from other Mongolian experts on document N1711. Convener to send document N1711 and document N1734 for review and feedback to Messrs. Richard Moore, Oliver Corf and Joe Becker.

### 8.3 Two Romani language characters

Input document:
1619 Proposal to add 2 Latin characters; Finland; 1997-07-01
Mr. Erkki Kolehmainen introduced document N1619. Two additional characters were proposed to be added in Crete. The requirement has been well known in Finland. Romani is an accepted Minority Language and has to be supported in Finland. The characters are being asked to be included in 10646. These are being asked to be included in Nordic 8-bit standards also, along with Nordic Sami sets. I see no reason why these should not be added to 10646.

## Discussion:

a) Dr. Asmus Freytag: I recognize the needs of the minority languages. Do you have any information as to how soon or how widespread will the information with these languages be in practice. You do have a Nordic standard with these characters in it. We understand we have a need to trans-code between 10646 and the 8 -bit code. Is the Finnish government going to make the implementation freely available?
b) Mr. Erkki Kolehmainen: The 8-bit implementations will be made freely available. The 10646 will come into being only after these characters are added. The Sami parliament will make it freely available in the Nordic countries.
c) Mr. Michael Everson: There are implementors of these on different platforms - on windows NT platforms etc. -- it will be useful to add these in 10646.
d) Mr. Mike Ksar: If there is no support for these characters in 10646, there will be a problem to migrate to and interwork with 10646.
e) Mr. Michael Everson: The Livonian (N132x) characters proposal is minuted to be for comments. We need some information from Mr. Metra -- along the lines of discussion at this meeting. What can be done? Await input from Mr. Metra.
Disposition: Accept the two proposed characters -- the glyphs and their proposed code positions:
021E LATIN CAPITAL LETTER H WITH CARON
021F LATIN SMALL LETTER H WITH CARON
Place these characters in a new accumulation of accepted characters to be processed together.

```
Relevant resolution:
RESOLUTION M34.12 (FPDAM on Various New Characters): 12 YES, Netherlands - NO
WG 2 accepts the following additional characters, their shapes and their names for inclusion in the BMP:
in accordance with document N1619 on Romani characters:
    021E LATIN CAPITAL LETTER H WITH CARON
    021F LATIN SMALL LETTER H WITH CARON
in accordance with document N1655 on Additional Canadian Syllabic characters
        Eight Additional Canadian Syllabic characters in positions 166F to 1676:
in accordance with document N1720 for KIP SIGN - Laos Currency:
        20AD KIP SIGN
in accordance with document N1668R2 on additional keyboard symbols:
    20E2 ENCLOSING SCREEN
    20E3 ENCLOSING KEY CAP
in accordance with document N1719 on additional Syriac symbols:
    2670 WEST SYRIAC CROSS
    2671 EAST SYRIAC CROSS
in accordance with document N1713R on Bopomofo extensions:
        24 Extended Bopomofo Characters in positions 31A0 to 31B7, and, the modifier letters -
        02EA YIN DEPARTING TONE MARK
        02EB YANG DEPARTING TONE MARK.
in accordance with document N1728 on Variation Mark:
        303E IDEOGRAPHIC VARIATION INDICATOR, with a shape similar to the shape of 2246
WG 2 further instructs its editor to:
        create a new sub division proposal, with the following target dates:
            WD 1998-03, FPDAM-1998-09, DAM-1999-02 and AM 1999-05
        prepare registration request and FPDAM text, including all the above accepted characters, with
assistance from Ireland (Mr. Michael Everson) and TCA (Emily Hsu), and
        forward these to SC 2 secretariat for further processing.
```


### 8.4 Enclosing screen \& enclosing keycap

Input document:
1668 Joint proposal to encode two symbols; Unicode/US; 1997-08-05
Dr. Asmus Freytag introduced document N1668. COMBINING ENCLOSING SCREEN - a symbol with an aspect ratio of $4 \times 3$ to approximate the screen, and COMBINING ENCLOSING KEYCAP - the keycap symbol looks like a square -- are proposed to be added. The glyphs are being finalized.
Discussion:
a) Mr. Alain LaBonté - The proposal is a good compromise to meet the JTC 1/WG 5 requirement as well as others. As to the processing can we add it to the existing amendment.
b) Mr. Bruce Paterson: The PDAM ballot closes in March. NBs have opportunity to comment on the ballot to include these characters.
c) Mr. Michel Suignard: The shapes of these characters are to be agreed upon. These are new characters.
d) Dr. Umamaheswaran: We can still propose to add these to Amendment 22 FPDAM even if we miss the PDAM deadline.
e) Mr. Michael Everson produced acceptable glyphs, and will be incorporated into revised N1668.

## Disposition:

Proposed code positions are ENCLOSING SCREEN 20E2 and ENCLOSING KEY CAP 20E3. See the relevant RESOLUTION M34.12 on page 32.

### 8.5 Bangla Coded Character Set

Input documents:
1634 Incorporation of Bangla (Bengali) Coded Character Set; Bangladesh Standards and Testing Institution; 1997-06-29
1714 Proposed response on Bengali - N1634; updated at WG2 meeting 34 as N1714R; Everson; 1998-03-18
Mr. Mike Ksar: The proposal from Bangladesh (BSTI) was to add / replace characters and change names in the standard to align with their national standard. Document N1634 contains the proposal summary form that was returned to us by them. Document N1714 contains a proposed response prepared by Mr. Michael Everson. A copy of Unicode V2.0 and 10646 standard have been sent to BSTI. They have been invited to the meeting -- but have stated that they could not afford it at this time.

Mr. Michael Everson: Explained the proposed response in N1714. A new character Bengali Avagraha was found to be potential addition, pending clarification as to whether it is the same as the Devanagari avagraha or not. Some feedback was received from Unicode (Dr. Asmus Freytag) during the preparation of the response. One could use this as a template for future similar situations also.

## Action Item:

Convener to forward the response in N1714 (with possible editorial changes) to the Bangladesh Standards and Testing Institution -- copying SC 2, JTC 1 and ITTF etc. the same parties as their letter was copied to.

### 8.6 Disposition of Comments - DAM 5 - Hangul

Input document:
1671 Disposition of Comments - DAM 5 - Hangul; Paterson; 1997-11-21
Mr. Mike Ksar: There have been some delays in getting the final version of the Amendment 5 ready due to interaction between Korea and the editor. It has been sent to ITTF at the end of December 97.

### 8.7 Two ecological symbols

Input document:
1661 Proposal to encode two ecological symbols in ISO/IEC 10646; Everson; 97-12
Mr. Michael Everson introduced document N 1661. Two proposed ecological symbols -- RECYCLE SIGN and DER GRUENE PUNKT -- are used very widely and are needed in the standard.

## Discussion:

a) Dr. Asmus Freytag: In general, such symbols are recognized to be required. However, there are some concerns. As to the RECYCLE SIGN - there are different versions of the signs. There are Open Arrows, Closed Arrows etc. There are also different enclosed information within the symbol. The information is there to indicate which aspect of the material is recyclable etc. So this symbol is a candidate for COMBINING enclosing symbol. The second symbol the DER GRUENE PUNKT -- is the symbol of a consortium that exists, and which will collect a license fee permitting one to put that LOGO on a BOX. It may be presumptuous on our part to assume that such LOGOS which are for a fee can be encoded, even though it appears very commonly. Even if we go over the hurdle of encoding a licensed logo in the standard, we have to address the text going around the logo -- often printed as such. The second symbol is in heavy use -- it is used as a LOGO -- and not necessarily used in text. The Unicode Consortium's position is that we do not accept the second character unless a written consent is obtained from the owner of the symbols. Ms. Joan Aliprand, the Unicode Technical Committee chair, has sent an email with the relevant contact information -- can be made available to Mr. Michael Everson. Ms. Joan Aliprand has found some more web sites with similar more ecological symbols. Some more research needs to be done.
b) Mr. Mike Ksar: If there are any symbols which are copyrighted or licensed by other parties we have to be careful about getting the consent and perhaps request from the owner of that symbol. There are several regulations -- that govern such symbols - such as safety, road signs, packages etc. These may not be used in Embedded Text using 10646 -- if it is only going to be printed on a box and not in plain text, we should not include in the standard.
c) Mr. Michael Everson: The symbol is used everywhere -- but I am not aware of the ownership issues. These characters are NOT frivolous. One has to answer the question raised by Mr. Mike Ksar. I would welcome any information in the use of the Recycle symbols - for example, with single characters or texts inside.

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d) Mr. Ken Whistler: If you consider other logos - for example, the JIS logo, the JIS Logo appears in line in text in almost any dictionary. Such examples are needed to justify these characters.

## Disposition:

Await more information and justification.

### 8.8 Tibetan script - extensions

## Input document:

1660 Proposal to encode Tibetan Extensions in ISO/IEC 10646; Everson; 97-12
Mr. Michael Everson introduced document N1660. It contains additional characters for Tibetan script - these did not get into the first go around on Tibetan. There is a group of Tibetan experts discussing these additional characters on the email. The proposal will be brought forth at the next meeting based on the results of the discussions.

## Discussion:

a) Mr. Mike Ksar: Some of the proposed new characters are in the nature of controls - see last page. Would we get comments such as Alternate Format characters etc. Have these been addressed?
b) Mr. Michael Everson: All possible controversial topics have been identified, discussed and addressed - and the answers are well in hand.

## Action Item:

LO and NBs to feed back on document N1660 on Tibetan extensions to Mr. Michael Everson.

### 8.9 Buginese, Coptic, Glagolitic and Avestan scripts

### 8.9.1 Buginese script

Input document:
1657 Proposal to encode Buginese in ISO/IEC 10646; Everson; 97-12
Mr. Michael Everson introduced document N1657. It contains a proposal for 30 characters. Buginese script has been recognized as a potential script in the road map.

## Discussion:

a) Dr. Asmus Freytag: Do you have information on the user community?
b) Mr. Michael Everson: There is no contact with residents of Sulawesi, the users of Bugis language.
c) Mr. Michel Suignard: This proposal is a beginning - the user community verification and more information will help us to evaluate this proposal. Some information on punctuation, its use etc. would be needed.
d) Mr. Bruce Paterson: Would like to see Newspaper article etc. would be demonstrative of the use of the script.
e) Mr. John van Wingen: I want to consult with experts back in Netherlands (Delft University) and get an evaluation.
f) Mr. Don Carroll: There is a numbering error in the table.
g) Mr. Ken Whistler: This seems to be close to what the user community may need. But we need confirmation / verification of user buy-in. There is a question on the use of Virama.
h) Mr. Mike Ksar: Request Mr. Michael Everson and others - to get more information to answer questions on the usage of this script, and update the document for discussion at the next WG 2 meeting.

Action Items: Comments on document N1657 on Buginese script should be sent to Mr. Michael Everson. Mr. Michael Everson to provide a revised draft including the answers / examples.

### 8.9.2 Coptic script

Input document:
1658 Proposal to encode Coptic in ISO/IEC 10646; Everson; 97-12
Mr. Michael Everson introduced document N1658. It proposes 57+ characters for Coptic for inclusion in the standard. There is some discussion on whether these could be unified with Greek, Cyrillic etc. This is an exploratory proposal. Coptic and Greek have been unified. There are also some contributions on dis-unification. Discussion: Mr. Michel Suignard: There is not enough supporting information.
Disposition:
Await further maturing of the proposal.

### 8.9.3 Glagolitic script

Input document:
1659 Proposal to encode Glagolitic in ISO/IEC 10646; Everson; 97-12
Mr. Michael Everson introduced the document N1659 on Glagolitic. 92 characters based on TC 46 standards are proposed. The proposal does not have enough supporting information.
Disposition:
Await further maturing of the proposal.

### 8.9.4 Avestan script

Input document:
1684 Proposal to encode Avestan in the BMP of ISO/IEC 10646; Michael Everson; 1998-01-20
Mr. Michael Everson: Avestan script is for use by the Zoroastrian community - proposed for inclusion in the BMP. Mr. Ken Whistler: I would like to see an endorsement from the Scholarly community.
Disposition:
Await further maturing of the proposal.

### 8.10 Additional Canadian Syllabic characters

Input document:
1655 Canadian/rish proposal for a new character; Everson; 1997
Mr. Michael Everson introduced document N1655. Eight characters were found to be needed in addition to the Canadian Syllabic character repertoire. Chair of CASEC and Canadian national body were contacted -- and are in agreement with the proposal. The Unicode Consortium has also looked at these. These are additions to the repertoire of Canadian Syllabics Repertoire. Names and proposed locations are given.

## Discussion:

a) Mr. Bruce Paterson: Is the intent to amend the existing amendment? Is the collection with the new characters another collection ? -- for example, the collection identifier that has been in Annex A. The existing collection identifier already includes the open positions at the end in the range - 1400 to 167F
b) Mr. Ken Whistler: The UTC did not have any objection to adding these characters as proposed.

## Disposition:

Accept this set of characters for inclusion at positions 166F to 1676. -- see document N1655. See relevant
RESOLUTION M34.12 on page 32.

### 8.11 Yi Script - Update

Input document:
1608 Yi Script high quality code tables and names; China; 1997-06-20
Editorial changes are being made to match the proposal with the style of the first edition of 10646-1.
No discussion.

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### 8.12 Bangjeom characters

Input document:
935 Adding two Bangjeom chars (Old Hangul tone marks) to UCS-2; Kyongsok Kim Korea; 1993-10-29
1599 Proposal Summary form for two Bangjeom characters (Old Hangul tone marks); Korea; 1997-06-30
Documents N935, N1599 contain the original proposal summary form from Korea. Professor Kim has sent a message to the convener stating that no comments were received from anyone and we should proceed with processing their request. The proposal is to add two characters to existing Jamo block.

An ad hoc group of WG 2 experts met and drafted the following proposed response:
WG 2, having examined N935 and N1599, finds that it is not necessary to add two Bangjeom characters to ISO/IEC 10646, but rather instructs the editor to prepare a Technical Correction deleting the names of the characters U+302E and U+302F from Annex B. 1 and from Annex B. 2 , and removing the dotted circles from the glyphs in Table 50.
However, later discussions changed the above to NO CHANGE needed.
Mr. Ken Whistler: The request from Korea is to remove the characters and change the properties etc. The two tone marks are to be applied to the syllable. The request seems to be coming out of a misunderstanding of how the combining works. A clarification on how to use the existing characters -- without a need for any changes to the standard - is all that is needed.

## Action Item:

Mr. Ken Whistler and Mr. Michael Everson to draft a proposed response to Korea.

### 8.13 Math Symbols

Input document:
1716 Proposal for Additional Math Symbols and Technical Symbols - submitted via American Mathematical Society (AMS) ; STIPUB Consortium ; 1998-03-13

Mr. Mike Ksar: Document N1716 contains LINKS to the sites where the complete set of Math Symbols from American Mathematical Society can be found.

## Action Items:

NBs, and LOs are requested to examine the proposed list of approximately 1200 characters. The US member body and Unicode Consortium are requested to work with the American Mathematical Society, examine the proposals, refine the proposals and propose an updated document for consideration at the next meeting. Password protected site of American Mathematical Society can be accessed by contacting either Mr. Mike Ksar or Dr. Asmus Freytag.

### 8.14 Three East Asian Characters

## Input document:

1727 Support for implementing interlinear annotations as used in East Asian Typography; Asmus Freytag - expert contribution; 1998-03-19

Dr. Asmus Freytag introduced the document. This is an expert contribution - for further study. Three characters for interlinear annotation - anchor, base /annotation separator and terminator - are proposed. These are for supporting East Asian Typography using plain text. Some aspects of these are like objects others are like texts. There are at least three known implementations -- which ended up using three different private use characters, and this is an indication that these should be considered for standardization so that they can inter-operate. The example in the paper shows Ruby annotation. The fallback mechanism is to show the annotation in-line treating the three characters as any others. The presentation aspects of how the inter-linear annotation is left to the layout processing.
Discussion:
a) Mr. Michael Everson: Can I use these for non-East-Asian text?
b) Dr. Asmus Freytag: Yes - though the original intent was for Asian Typography.
c) Mr. Bruce Paterson: What are the semantics -- is it mandatory for the presence of the set of these?
d) Dr. Asmus Freytag: To get the desired results - these should appear as sets. In practical implementations there are limits on the lengths of the base and annotation text. They are meant for

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short words at a time - or a single ideograph. The standard need not specify the maximum length. There could be mal-formed sequences just like other controls in the standard. These should be added to the paper.
e) Mr. Takayuki Sato: We need to have a cross check with any potential conflict with existing Japanese standards on this subject.
f) Ms. Emily Hsu: Can one use these in use with Bopomofo? Potentially each Chinese character could be an anchor.
g) Mr. Ken Whistler: Yes - it is possible to have entire lines annotated in educational texts.
h) Dr. Asmus Freytag: Yes - in the annotations part, any conceivable character can show up. It is possible that an entire set of ideographic set - all of which is annotated. There can be special text processing where these could be large. Unicode consortium will be reviewing this at its next meeting. It is currently an expert contribution.

## Action Item:

Reviewers are requested to send feedback on document N1727-interlinear annotation characters - to Dr. Asmus Freytag, towards coming up with a proposal to WG 2.

### 8.15 KIP SIGN - Laos currency sign

Input document:
1720 Proposal to encode KIP Sign, Laotian Currency Symbol; U.S./Unicode and Uma; 1998-02-27
Dr. Umamaheswaran introduced the document - containing a proposal to add the Laotian Currency Symbol - KIP SIGN, a proposed glyph and a proposed code position.
Discussion:
a) Dr. Asmus Freytag: I endorse this proposal.
b) Mr. Michael Everson: Let us accept it.

## Disposition:

Accept the proposal - proposed name KIP SIGN, glyph in document N1720 at code position x20AD. See relevant RESOLUTION M34.12 on page 32

### 8.16 Thaana script

Input document:
1699 Updated Thaana proposal; Everson; 1998-03-09
Mr. Michael Everson - earlier document on Thaana script was N1619. Mr. Disanayaka and Mr. Moniku (?) have written a book on Thaana (Maldivian). There have been discussion on the email among the experts. There was some doubt on one of the characters- the REYTU SIGN - is it a glyph variant of commercial at sign or otherwise. We could leave this questionable character out for now. There was some question on how the numerals are used and what the punctuation marks are etc. The names are stable. I feel that the proposal can go to FPDAM - if there are still some open issues we can go for PDAM.

## Discussion:

a) Ms. Lisa Moore: Talking to the UTC members, there is nothing holding back from the BiDi point of view. It may be a good idea to progress it as a PDAM allowing more time for comments. We may have to redo the Unicode BiDi algorithm any way to deal with numerals in general with other BiDi scripts.
b) Mr. Bruce Paterson: You can still make substantive (minor) comments on FPDAM. Only if the subject has some perceived controversy then we should go for PDAM.
c) Mr. Ken Whistler: The character properties are all provided. The only questionable character was B1 - REYTU SIGN. It should be left out for now.
d) Dr. Asmus Freytag: People have expressed that resolution of the BiDi issues are optimistically viewed. I would like to see that the BiDi issues are resolved in the interest of synchronization between the Unicode and 10646. It would be better if we take a cautious approach. In the better interests of synchronization between Unicode Book and 10646, we need to address more issues than just the repertoire and coding issues. The PDAM approach gives us a little more time to get any outstanding issues regarding BiDi . One could also use the process of directly including in the next edition without going for any amendment.
e) Mr. Michael Everson: The BiDi issues are related to Maldivian Locales. Not with respect to the repertoire, shapes etc.
f) Mr. Keld Simonsen: We could save about 5 to 6 months if we use the FPDAM process.
g) Dr. Umamaheswaran: It also depends on whether the timing for the next edition is such that we can afford the PDAM delay.
h) Mr. Mike Ksar: Even though WG2's charter today is only for repertoire and coding items, we should strive to be in synchronization with the Unicode standard. There is an extra 6 months using the PDAM process than FPDAM. The new TD from JTC 1 may merge the activities of SC 2, SC 22/WG 20 and JTC 1/WG 5 - this has to be kept in mind. Looks like the consensus is for a PDAM processing.

## Relevant resolution:

## RESOLUTION M34.9 (Thaana script): UNANIMOUS

WG 2 accepts 49 characters, their shapes, and their names in document N1699 (excluding the REYTU SIGN), and assigns them to code positions in the range 0780 to 07BF in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael
Everson), and
forward these to SC 2 secretariat for further processing.

### 8.17 Khmer script

Input document:
1524 Proposal for encoding the Khmer script; Everson, Ireland ; 1997-01-22
Output document:
1729 Ad hoc report on Khmer and Burmese; US, Unicode, Ireland + other experts; 1998-03-18
There was an ad hoc group meeting on Burmese and Khmer -- with participation of experts from US, Ireland, and the Unicode Consortium. See discussion and dispositions under section 8.18 - Burmese script. The ad hoc report is in document N1729.

### 8.18 Burmese script

Input document:
1523 Proposal for encoding the Burmese script in ISO 10646; Hugh McG Ross, UK; 1997-01-22
Output document:
1729 Ad hoc report on Khmer and Burmese; US, Unicode, Ireland + other experts; 1998-03-18
There was an ad hoc group meeting on Burmese and Khmer scripts -- with participation of experts from the US, Ireland, and the Unicode Consortium. The ad hoc report is in document N1729.

Mr. Michael Everson: The proposals are laid out in the fashion of Devanagari, with some holes etc. Changes are to rearrange the code tables without any holes and to rearrange alphabetically. There was acceptance on using the Virama. There has also been some discussion on the net with other experts. There is general agreement on the Glyphs, the names and proposed code positions. The ad hoc would like to process the document (when it is ready before the meeting) to PDAM stage for feedback from the NBs and LOs. The ad hoc feels the proposal is stable enough for us to proceed right now. Some of the spellings of names are being finalized.

## Discussion:

a) Mr. Ken Whistler: I believe that all the necessary information is available to Mr. Michael Everson to enable him to prepare the PDAM text.
b) Mr. Bruce Paterson: A draft document containing names etc. would be useful for a sooner review and feedback before you finalize the text for the PDAM document.
c) Ms. Lisa Moore: I would like to point out that there was complete consensus in the ad hoc. Previous differences in view points were reconciled completely.
d) Mr. Michael Everson: There are two models - Virama model and the subscript model. There was no benefits for user input etc. to go for the subscript model. Oval substitution sign and Dotted Circle were unified.
e) Mr. Johan van Wingen: Is there a relationship with the Thai model? NO.

Disposition:
Process the updated versions of N1523 and N1524 for Khmer and Burmese -- submit for simultaneous registration and ballot of PDAM texts - one for each script.

## Relevant resolution:

RESOLUTION M34.10 (Burmese script): 12 - YES; Netherlands ABSTAINS
WG 2 accepts 84 characters, their shapes, and their names in document $\mathbf{N} 1729$, and assigns them to code positions in the range 1700 to 177F in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael
Everson), and
forward these to SC 2 secretariat for further processing.

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Relevant resolution:
RESOLUTION M34.11 (Khmer script): 12 - YES; Netherlands ABSTAINS
WG 2 accepts }103\mathrm{ characters, their shapes, and their names in document N 1729, and assigns
them to code positions in the range 1780 to 17FF in the BMP. WG 2 further instructs its editor to:
    create a new sub division proposal, with the following target dates:
    WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
    prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael
Everson), and
    forward these to SC 2 secretariat for further processing.
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8.19 Several Proposals for Plane 1 (documents 1636-1643, 1685--1689)

Input documents:
1636 Encoding Egyptian Hieroglyphs in 10646-2; Everson; 1997-08-25
1637 Proposal to encode Basic Egyptian Hieroglyphs in Plane 1; Everson; 1997-09-18
1638 Proposal to encode Meroitic in Plane 1 of 10646-2; Everson; 1997-09-18
$1639 \quad$ Proposal to encode Old Persian Cuneiform in 10646-2; Everson; 1997-09-18
$1640 \quad$ Proposal to encode Ugaritic Cuneiform in 10646-2; Everson; 1997-09-18

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Proposal to encode Old Permic in Plane 1 of ISO/IEC 10646-2; Michael Everson; 1998-01-20
Proposal to encode Sinaitic in Plane 1 of ISO/IEC 10646-2; Michael Everson; 1998-01-20
Proposal to encode South Arabian in Plane 1 of ISO/IEC 10646-2; Michael Everson; 1998-01-20
Mr. Michael Everson introduced the documents containing proposals for adding Egyptian Hieroglyphs, Persian Cuneiform, Ugaritic Cuneiform, Tengwar, Cirth, and Klingon - to plane 1.

- The largest of these is the Egyptian Hieroglyphic characters in documents N1636 and N1637. The proposal includes a large number of formatting characters that are controversial.
- Document N1638 contains a preliminary proposal on Meroitic. Mr. Michael Everson is in contact with one expert. The document is for review by WG 2.
- Document s N1639 and N1640 contain preliminary proposals on Cuneiform scripts. These are small well-understood scripts. Feedback to add one character has been received.
- Tengwar in document N1641, Cirth in document N1642 and Klingon in document N1643, are artificial scripts. There is already a lot of discussion on the merits of encoding these on the Unicode list. Mr. Tolkien, a linguist, invented these scripts. There are journals on modern languages etc. studying his work. Tengwar is going to take a lot of work to solidify. Swedish delegation may be interested to note that there is a large set of Tengwar data being accumulated in Sweden. One of the questions has been -- should these be encoded in 10646 at all. An email survey will show you that there is a large user community. Klingon is a limited set, has been endorsed by Klingon Language Institute and is unlikely to change.
- Brahmi script proposal in document N1685 uses the Virama approach.
- Old Hungarian is proposed in document N1686. It may be appropriate to include these in BMP. These are in plane 1 road map at this time. This proposal is initially for Plane 1, however, there are reasons for moving these into the BMP. Columns 0,1 and 2 are the proposed characters -- others are ligatures.
- Permic script is in document N1687.
- Document N1688 contains Sinaitic - primordial behind Latin, Greek Cyrillic etc. - it is for discussion.
- South Arabian script proposal in document N1689 is still preliminary.


## Discussion:

a) Mr. John van Wingen: The proposal on Egyptian Hieroglyphs may not be mature enough, and possibly will never be complete.
b) Mr. Bruce Paterson: We need to examine the Naming Rules of 10646 - to deal with names in document N1637 - which are references to some catalog numbers. There are also several control functions in the proposal. If such controls are accepted one has to consider its interactions with other characters. Rule 1 already allows via a note the inclusion of digits etc. is permitted where leaving it out would be inappropriate.
c) Mr. Michel Suignard: I really admire the work that has been done by Mr. Michael Everson. It is a good piece of work - would like to get some support from the experts. As to the naming rules, Annex K already has exception for Ideographs.
d) Mr. Ken Whistler: Some of the Egyptian Hieroglyphics are really Ideographic. I would like to see an endorsement from the scholarly community on all these proposals.
e) Mr. Erkki Kolehmainen: I have difficulty in understanding why these should not be only in PU zone. From the NB point of view we will have difficulty in being able to meaningfully ballot on these. Mr. Van Wingen's input regarding Egyptian Hieroglyphs - claims that the proposals are not mature.
f) Dr. Asmus Freytag: The fact that these names come from a catalog and are used in a user community. We will have to deal with this problem again and again. We are happy with the kind of flexibility in naming for some characters can have numbers in their names. We can encourage Mr. Michael Everson to examine the names again and see if the flexibility in the Naming Rules can be applied. I would like to have the evidence of support usage etc. attached with these proposals. One of the consideration WG 2 should be alerted to is regarding the use of our Scarce Resources effectively. One can question the effort spent on the Scholarly scripts. I would invite a contribution from Finland to open such a discussion.
g) Dr. Umamaheswaran: Different National Bodies have to keep in mind -- in Part 2 - as we encounter more scholarly scripts, there may not be usual resources that can be brought to bear to review these.

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Such difficulty should not cause WG 2 to reject the proposals -- since 10646 is the home for all scripts that could be demonstrated to have a need for encoding however small or exclusive the user community may be.
h) Mr. Mike Ksar: PU zone is being used with prior understanding between sender and receiver. Thanked Mr. Michael Everson for his work on these scripts. We would like to see more information on the usage and some endorsement of these proposals. We have a roadmap document that has entries for many of these potential scripts to be encoded. Some NBs do not wish to see any scripts that is of no interest to them - this should not stop WG 2 from entertaining the proposals.

## Disposition:

All the proposed scripts are for review and feedback by NBs and LOs -- comments should be sent to Mr. Michael Everson.

### 8.20 Etruscan and Gothic scripts

Input documents:
1580 Proposal for encoding the Etruscan script; Everson; 1997-05-27
1581 Proposal for encoding the Gothic script; Everson; 1997-05-27

### 8.20.1 Etruscan script

There is agreement among the experts. The UTC has approved this script in principle. Plane 10200 to 02FF are proposed locations.

### 8.20.2 Gothic script

Three punctuation symbols in Gothic will be removed. Plane 10230 to 024F are proposed locations.

## Disposition:

WG 2 accepts both the above proposals -- the proposed names, glyphs and code positions for inclusion in Part 2. See relevant RESOLUTION M34.14 on page 28.

## Action Item:

Mr. Michael Everson to work with Editor for Part 2 to provide the Text and Code Tables for inclusion in Part 2.

### 8.21 Western Music symbols

Input document:
1693 Proposal for encoding Western Music symbols; Perry Roland; 1998-02-19
Dr. Asmus Freytag: The UTC has examined this proposal We endorse this proposal - except for three characters - the sharp sign, flat sign and natural signs, which are already in the BMP. Two musical notes are considered as dingbats and are not considered to be unifiable with similar notes in Plane 1 proposal.
The UTC thinks it is a mature proposal and has had considerable discussion with all interested parties and we should go for immediate processing. The character code chart is organized in Row by Row and then Column by Column. The first three characters are not to be included. Additional information on properties of the symbols are also included in the document towards synchronizing with the Unicode standard.

## Discussion:

a) Mr. Michael Everson: I have reviewed the earlier version of this document. Some comments that I have made have all been taken care of. I am expected to prepare the font for this set. I propose allocation immediately following the Byzantine symbols block.
b) Mr. Bruce Paterson: Some of the names seem to be extremely long -- almost like a prayer.
c) Dr. Asmus Freytag: The long names are also elsewhere.
d) Mr. Mike Ksar: If we keep the block name Western Musical Symbol - do we need to include these three words in each name? Also, three characters are marked as reserved for future coding of three signs - which are also duplicated elsewhere. "This position shall not be used" will be used for the first three code positions in the block.
e) Dr. Umamaheswaran: will there be any user community harm if we move up the entire set and move the three characters at the end of the block -- for possible future additions.
f) Dr. Asmus Freytag: When we adopt a proposal, we adopt with modifications. We start with the fourth entry in the table. These entries can be easily be mechanically matched with mnemonics etc.
g) Mr. Michael Everson: We have other characters with Western Musical Symbol for other characters; there are also Byzantine Musical Symbols with full names.
h) Mr. Mike Ksar: Do the names cause any problems from French translatability?
i) Mr. Alain LaBonté: Length of the characters is not an issue for French translation.

## Disposition:

Mr. Mike Ksar: In principle, we accept the proposal in N1693 for inclusion in Part 2. Instruct the editor to include in the proposed CD Draft. If the code positions is going to cross a half-block boundary, we should start at the full block. $\mathrm{xx} 00, \mathrm{xx01}$ and $\mathrm{xx02}$ are to be left unused. Characters proposed from $\mathrm{xx03}$ to xxDB (in the block D100 to D1DF). The proposal should also be accompanied with a proposal for a Collection Id. Prepare the relevant text and code tables. See relevant RESOLUTION M34.14 on page 28.

## Action Item:

The Unicode Consortium and US member body to re-format the proposal on Western Musical symbols in document N1693 in a form suitable for inclusion in part 2 -- including appropriate text.

### 8.22 Mirrored Characters - BiDi

Input document
1708 Proposed corrections to Mirroring list - Annex C; US - Suignard; 1998-03-02
Mr. Michael Suignard: Four additional characters should be in Annex C containing the list of Mirrored characters -there is an error in the original list. Annex C is Informative. The request is to add these to the Annex C list.

## Discussion:

a) Mr. Bruce Paterson: I remember there was discussion in connection with a defect report. At least two of the characters seem to have been already agreed to. The double angle quotation marks are already in Annex P. There is already a remark 'This may be used as an Arabic Opening quotation mark, and the graphic symbol may differ in presentation ....???'. We tried to get an agreement in Annex C at the time of defect report - see document: N1396-which contains the collection of all the editorial corrigenda up to June 1996.
b) Mr. Michael Suignard: Document N1708 will be revised - two of the proposed characters (the double angle quotation marks) -- have been dealt with in an earlier editorial response to defect reports.

## Disposition:

All the four characters are considered to be editorial corrigenda. Accept N1708R - as editorial corrigendum. Instructs the editor to add to N1696, which is the latest cumulative list of editorial corrections to the standard.

## Relevant resolution:

RESOLUTION M34.19 (Mirror Characters): UNANIMOUS
WG 2 accepts the editorial corrigendum proposed in document N1708R, and instructs its project editor to prepare the necessary corrigendum text.

### 8.23 Syriac script

Input document:
1718 Proposal to encode Syriac script; U.S./Unicode; 1998-03-05

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Dr. Asmus Freytag: Syriac proposal in document N1718 is a model of how other proposals should be prepared. It contains endorsements from the user community. It contains a list of Unicode Properties for the characters. There are two symbols we separated out into another submission - document N1719. Syriac script is in very many aspects similar to Arabic scripts and has similar encoding issues -- these are spelled out in the document. We think the proposal can be accepted in the BMP as is proposed.
Discussion:
a) Mr. Michael Everson: The proposal has identified the author of this proposal. Comments on the earlier work on this subject has been sent to the authors. I have seen this proposal before and endorse it.
b) Mr. Bruce Paterson: There is specific space allocated in the road map.
c) Mr. Michel Suignard: The US NB endorses this proposal.
d) Mr. Mike Ksar: WG 2 experts are invited to examine the proposal. It has addressed all the issues expected from the procedures and guidelines document. If there are no objections -- documents N1718 and N1719 (see section 8.24) can be accepted.

## Disposition:

Syriac is a new script. Process the proposal in document N1718 as a separate PDAM - allocated to BMP code positions 0700 through 074F.

## Relevant resolution:

RESOLUTION M34.8 (Syriac script): UNANIMOUS
WG 2 accepts 73 characters, their shapes, and their names in document $\mathbf{N} 1718$, and assigns them to code positions in the range 0700 to 074 F in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael
Everson), and
forward these to SC 2 secretariat for further processing.

### 8.24 Syriac symbols

Input document:
1719 Proposal to add Syriac crosses to miscellaneous symbols; U.S./Unicode; 1998-03-06
See discussion under section 8.23 above.

## Disposition:

2670 and 2671 -- are proposed for the West Syriac Cross and East Syriac Cross in document N1719-- in the miscellaneous symbols block. WG2 accepts these and include in the collection of accepted characters for BMP. See relevant RESOLUTION M34.12 on page 32.

### 8.25 Bopomofo characters

Input document:
1713 Proposal to add 33 Bopomofo and other modifiers - updated by N1713R at meeting 34; TCA; 1998-03-19
Ms. Emily Hsu introduced document N1713 - a proposal for 33 Extended Bopomofo and 20 Modifier Letters for Minnan and Kakka languages. Bopomofo was invented in 1948(?) This extended system is used by scholars students use it as a language of learning. The document contains background information and some samples. Several Bopomofo characters are already in the BMP. Since these are extensions to the set, it would be useful to have these also in the BMP. The feedback from Mr. Ken Whistler was that the modifier letters can be created using existing characters from the BMP.

## Discussion:

a) Mr. Ken Whistler: I have reviewed the proposal - the basic set of characters is fully justified. However, some details are needed. The final letter forms with the dots above them, should be possibly decomposed into letter plus tone mark. Of the marks in 1C through 20, two are already in the modifier letter block. The remaining should be accepted -- but should be in the modifier letter block instead of Bopomofo block. There is a distinction between use of the tones indicated with middle dot versus those indicated by the raised dot between the languages - Mandarin versus others. Mandarin neutral tone (fifth tone) - 02D9 - has a note in the standard, which is incorrect.
b) Mr. Zhang Zhoucai: We agree that the Bopomofo characters should be included in the Bopomofo block. 14, 15, 16 and 17 - are to be removed - are already encoded with the same shape but different

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pronunciation. 1C, 1E and 20 are already encoded tone marks. Also, 18--1B -- look like precomposed characters. Should be decomposed. Also, I do not see any examples of the use of these characters in the attachment.
c) Ms. Emily Hsu: 14--17-- the shapes are different - these are lower and not the same as what is in there. xx 1 E - it is arguable as to whether it is same as the second tone of Bopmofo.
d) Mr. Ken Whistler: 1C and $20--$ I agree as duplicates -- xxxx and 02D9. As to 1 C -- looks like a 02CA (acute mark), whereas the 1 E is reverse acute mark. One could possibly consider the unification of this character. There may be existing conversions from existing codes etc. Initial reaction was P, T, K , H - were duplicates. However, the examples in print, show a distinction by a Large Form for initial and Small Form for final. Having a form which is NOT SMALL in the text is incorrect in text. The two forms -- small form and large forms -- are needed, so that we can avoid ambiguities in representation of text.
e) Mr. Mike Ksar: Can the two forms -- small and large -- coexist? YES.
f) Ms. Emily Hsu: We agree that $18-1 \mathrm{~B}$ should not be encoded. As to the examples, I can provide them -- we agree that these can be decomposed. 1C and 20 are duplicates and should be removed. 1E is still to be resolved by experts. 14 through 17 - there is still some contention on the initial and final forms. Consensus was also on moving the agreed upon modifier letters to modifier block.
g) Mr. Michael Everson: Looks like the Annex K may need revision if names of characters need to contain Numbers / Digits in their names.
h) Mr. Bruce Paterson: Please update the names of the characters so that they are consistent and able to read coherently.

An ad hoc group with participation from Mr. Ken Whistler, Ms, Ms. Emily Hsu and Mr. Zhang Zhoucai met to discuss and resolve the differences and come up with a concrete proposal for further progression. Mr. Ken Whistler reported the results of the ad hoc group's deliberation.

Mr. Ken Whistler: All the controversial issues were addressed. TCA will produce a new document. 14--17 will be redrawn smaller in the left hand corner of the box. Only two of the tone marks will be included for inclusion with the modifier letters; 1C, 1E and 20 - will be separated into another document. Decimal versus Hex will be corrected, following Annex K guidelines.

## Discussion:

a) Mr. Zang Zhoucai: A separate proposal will address our concerns on the tone marks 1C, 1E and 20.
b) Mr. Bruce Paterson: Assuming that WG 2 agrees to include these Bopomofo characters, presumably it goes as close as possible near the current Bopomofo block. There is no space immediately adjacent to the current block. There are some vacant columns very close with another column intervening. Are there any suggested locations? 31A0 is closest. If the number of characters is about 10 then one could fit into existing vacant spots.
c) Mr. Ken Whistler: Logical location would be - 31A0 as the suggested starting position. Kuouo - in the roadmap - as extensions to Bopomofo - were allocated two columns. Suggested positions - 02EA and 02EB in the modifier block for the two tone marks. The document will still need comment - hence prefer to process as a PDAM if we decide to progress the proposal at this meeting.
d) Mr. Mike Ksar: The document will be updated and two documents will come out of the ad hoc discussion. One will include the agreed upon Bopomofo extensions and two tone marks. Ms. Emily Hsu will prepare the new document. Issuing a PDAM will give opportunity to seek comments. If it would be ready for the next meeting addressing all the comments then we can shoot for FPDAM. We can create a resolution to SC 2 to go ahead with subdivision proposal at this meeting and the registration and further processing could be based on input to London meeting.

Revised document N1713R was prepared and submitted by Ms. Emily Hsu. Four tone marks were removed. Modifier letters have been removed. There are only two modifiers shown for entry into Modifier block. Proposed code positions are in the tables. $\mathrm{P}, \mathrm{T}, \mathrm{K}$ and H are shown as smaller fonts.

## Discussion:

a) Mr. Michel Suignard: Please do not discard attachments from old 1713.
b) Mr. Ken Whistler: This revised document resolves all my objections. Suggest rename the modifier letters to remove EXTENDED BOPMOFO. Change the name to YIN DEPARTING TONE MARK and YANG DEPARTING TONE MARK.
Disposition:

Accept and propose a subdivision of work -- need target dates. Accept the revised N1713R, shapes, proposed code positions and modified names for further processing as FPDAM.-- 26 characters. Text and tables to be supplied by Ms. Emily Hsu (TCA) to the editor. See relevant RESOLUTION M34.12 on page 32.

### 8.26 Latin Characters for Latinized Taiwanese

Input document:
1593 Proposal to add Latin characters by Latinized Taiwanese languages; Everson; 1997-05-27
1712R Comments on N1593 - Latin characters by Latinized Taiwanese language - updated as N1712 at meeting 34; Taipei Computer Association (TCA); 1998-03-18

Ms. Emily Hsu - document N1593 was proposed by Mr. Michael Everson. Document N1712R is a set of comments on document N1593. There are suggestions from TCA. (See document N1712R for details) Taiwan has three official standards for Latinized systems for Minnan, Hakka and Formosa languages - announced by the Ministry of Education. Document N1593 proposed characters belong to the church system used in religious texts -- for Minnan language. The proposed 45 characters were prioritized -- of these 42 can be reproduced using existing characters in the standard. Remaining three characters are requested to be included in the standard.

## COMBINING RIGHT DOT ABOVE

LATIN CAPITAL LETTER O WITH RIGHT DOT ABOVE LATIN LETTER O WITH RIGHT DOT ABOVE

## Discussion:

a) Mr. Michael Everson: It is quite acceptable - the two O letters with RIGHT DOT above are proposed to avoid triple combinations when additional tone marks are to be added. This is similar to the Vietnamese characters.
b) Mr. Bruce Paterson: In the current text of 10646-1 we do have a DOT ABOVE. Is the positioning of the DOT to the Right significant enough for getting another code position? YES - significant enough.
c) Mr. Takayuki Sato: Do we need a standalone non-combining RIGHT DOT ABOVE?
d) Mr. Ken Whistler: What is the phonetic quality of this RIGHT DOT ABOVE? Looks like this is a middle dot -used to indicate the lengthened vowel. It may have migrated over time to the RIGHT DOT ABOVE. I am wondering if this is not simply a LIGATION of the Middle Dot. Reference document N1593 - last page examples. In early century transcriptions, the middle dot was above or not? Is it O with Middle Dot or Not?
e) Dr. Asmus Freytag: Looks like a X-high middle dot.
f) Mr. Mike Ksar: There is still a question on the need for the RIGHT DOT ABOVE. We need explanation to satisfy the concerns raised by Mr. Ken Whistler.

## Action Item:

TCA and Mr. Michael Everson to get clarification on the question -- 'why the MIDDLE DOT is not the same as the new proposal for RIGHT DOT ABOVE?'

## $9 \quad$ IRG status and reports

### 9.1 IRG Resolutions - Meeting \# 10

Input document:
1676 IRG Resolutions Meeting \# 10 - IRG N500; IRG; 1997-12-18

### 9.1.1 Administrative

Resolutions 1, 9 and 10 are administrative.
Resolution IRG M10-1 - As a country, Hong Kong has returned to China - Hong Kong Information Technology Federation (HKITF) has requested retaining C liaison.

As far as SC 2 and JTC 1 are concerned, HKITF is already a C liaison member.

## Disposition:

Request SC 2 to accept the IRG recommendation to reconfirm the HKITF's C-Liaison status to SC 2. See relevant RESOLUTION M34.22 on page 24.

Resolution IRG M10-9 - Rapporteur and Editors

Mr. Zhang Zhoucai has been nominated as the rapporteur. A list of editors and chief editor is included. Officers' term needs reconfirmation or extension at every SC 2 meeting.

## Disposition:

WG 2 accepts the IRG nomination of the rapporteur, IRG Project Editor and the IRG contributing editor, with the position of a contributing editor from the US/Unicode to be confirmed at a later date - N 1676.

## Relevant resolution: <br> RESOLUTION M34.23 (Appointment of IRG Officers): UNANIMOUS <br> WG 2 accepts the list of IRG contributing editors presented in document N1676 under Resolution IRG M10.9, with the position of a contributing editor from the US/Unicode to be confirmed later.

## IRG Resolution M10-10 - future meetings

Meetings IRG 11 in Tokushima, Japan, Hosted by Just Systems. and IRG 12 in the US, hosted by Oracle Corp. / Unicode Consortium were requested to be accepted by WG 2. WG 2 accepted these.
See the RESOLUTION M34.24 on page 54.

### 9.1.2 Resolution M10-8- IRG Vertical Extension A

Input documents:
1698 Usage of 10646 R-zone; US - Michel Suignard; 1998-03-02
1723 CJK Unified Ideographs - Extension A - for use in pDAM-17-3 pages only - please contact convener for complete document; IRG; 1998-03-02

Mr. Zang Zhoucai: Document N1723 has the front cover sheet and a sample of one of the pages of this about 140 page document containing the text for PDAM.
Mr. Mike Ksar: It is important that the fonts used for this amendment from different sources be also available for printing the next edition of the standard. Also IRG editors should complete the work in time to meet the March 99 proposed date?

Mr. Michel Suignard: Introduced the document N1698R. There are two items in the paper:
a) Two ideographic characters of the R zone (compatibility zone) FA1F and FA23 are duplicated in the Vertical Extension A. These should not be encoded twice in the standard.
b) The current formatting of the Ideographs in the R zone should be realigned with the presentation style (4 column format) for the CJK ideographs.

## Discussion:

a) Mr. Takayuki Sato: These characters are "Canadian Minority Ideographs" - they are not CJK ideographs, and we do not accept these to be same as the two characters in CJK. We should leave the comment for PDAM ballot time.
b) Mr. Bruce Paterson: If the duplicate is eliminated, it will leave two holes in the camera ready version (almost) provided by IRG editor. Perhaps these should be left for ballot comment.
c) Dr. Asmus Freytag: Unicode consortium supports this formally. We should fix the problem now. If it leads to two holes - and if it cannot be avoided, we have to live with it.
d) Mr. Takayuki Sato: The second item about the formatting of the R-zone Ideographs to be the same as the CJK style could be problematic. We need to see a contribution from the proposers on it.
e) Mr. Zhang Zhoucai: We still need to add some text etc. and produce N1723R. At that time we can eliminate the two characters and move up the remainder by two and produce the CJKV charts. The total number is now 6584 less 2.

## Disposition:

Accept document N1723, revised with the elimination of the duplicates identified in N1698. The revised document N1723 will be forwarded for balloting by the editor. The total number of characters reduces to 6582.

## Action Item:

US is invited to provide a practical way to show the R-zone Ideographs - keeping in synch with the currently printed R-zone in the standard.

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## Relevant resolution:

RESOLUTION M34.5 (FPDAM-17 CJK Unified Ideograph Extension A):
12 YES; Japan - NO
WG 2 accepts the proposed text for FPDAM-17 in document N1723 with the elimination of duplicate characters identified in document N1698 (reducing the number of characters in the repertoire to 6582, and moving up the code positions filling the vacated positions). WG 2 further instructs its project editor with assistance from the IRG editor to prepare the final text of FPDAM-17 and forward it to the SC 2 for further processing, with the following target dates: FPDAM-1998-07, DAM-1999-01 and AM 1999-03

### 9.1.3 Other IRG resolutions

Resolution M10-5 - Ideographs in Plane-2 encoding - See document N1677 and discussion under section 9.2 on page 47.

Resolution M10-2 - see discussion later under section 9.3 - Variation Mark on page 47.
Resolutions M10-3 and M10-4 - Structure Characters - See document N1680 and discussion under section 9.5 - Ideograph Description Sequence on page 50.
Resolution M10-7-Radicals - document N1629 contains the previous proposal. An updated draft will be provided containing text for PDAM on KangXi radicals, CJK radicals and Hanghzou numerals.

### 9.2 Ideographs in plane 2

Input document:
1677 Project Sub-Division Proposal on Ideographs in Plane 2; IRG; 1997-12-18
Mr. Zhang Zhoucai - the work on Plane 2 repertoire definition has started. Document N1677 describes the status and approach.
Discussion:
a) Mr. Mike Ksar: CD Stage 1 is slated for early 1999 . We need to synchronize the schedule with the proposed part 2 schedule.
b) Mr. Takayuki Sato: IRG is planning to have two stages. We have to recognize the split into two and synchronize the stage 1 .

Dispassion:
We accept the splitting up the work of Ideographs in Plane 2 into two stages. The first stage target dates should be synchronized with Part 2 schedule. Also need schedule for Stage 2 - see documents N1717 and N1697.

## Relevant resolution:

RESOLUTION M34.16 (Staging of work on Ideographs for Plane 2): UNANIMOUS WG 2 accepts the organization of the project on Ideographs for Plane 2 into two stages. The IRG is instructed to provide a new schedule for Stage 1 in synchronization with the schedule for 106462 by 1998-05.

### 9.3 Variation Mark

Input document:
1678(IRG N518) Further explanation on Variation Mark; IRG; 1997-12-18
Reference document N1676, Resolution 2 Variation mark.
Mr. Takayuki Sato: presented the further explanation in document N1678 requested of IRG on the semantic of Variation Mark. The "V" character is an independent character, followed by a CC-Data Element or an ideographic description sequence. It is just a HINT to the possible variant interpretation of the following characters. The Variant and Operand can be edited in or out with unpredictable results.
Discussion:
a) Mr. Ken Whistler: There are a number of proposals on such variant mark uses. The proposal introduces an element of uncertainty in the interchange. If private agreement is needed then perhaps private use
should be used. If predictable results are needed, it has to be accompanied by a registry for example to get predictable behaviour.
b) Mr. Bruce Paterson: If the results require private use agreements then these belong to private use area and we should not be discussing it here. A Latin character typically contains far less information in it as compared to the ideographic character. An ideographic character conveys a much larger information content -- perhaps the Variation Mark should be restricted to the ideograph characters. If the purpose of the GVM is to for example act as a pointer why can't we use one of the existing symbols / pointers to do the same job.
c) Mr. Zhang Zhoucai: The character was originally proposed as Ideographic Variation mark. We have gone through several variations on this. Later on, WG 2 meeting generalized this to a General Variation Mark. The IVM was just a mark to indicate alternate interpretation of the following ideographic character.
d) Mr. Erkki Kolehmainen: The interpretation is between sender and receiver - what follows the mark gives a hint as to the possible interpretation.
e) Mr. Michael Everson: Looks like this character is another character which tells you that the character looks like the cc-data element following. If it is so, let us go ahead and encode it. However, I would like to see it as a character following than preceding.
f) Mr. Takayuki Sato: I agree with Michael - there is no difference in the behaviour of the mark with the ideographic versus Latin characters. There is a lot of information in the ideographic character. The VARIATION MARK is used to indicate the intended character shares some information with character operand. There is very high ambiguity with the ideographic characters -- that is why one has to have prior agreement. If we introduce a character like VM it will produce problems of the kind that are being expressed. You will not get an answer on the question on what is VM - beyond the current set of explanations. The question to ask may be -- what is the problem that is being tried to be solved by this VM. There may be other solutions to the problem.
g) Dr. Asmus Freytag: How should we progress -- the proposals such as these will keep coming up. In the US delegation - there was a mention of other possible such marks under consideration. A possible approach is to create an ad hoc on the subject to bring these parties together. Technical - the Variation mark, followed by private use character, followed by a character from the main part of the standard. The exact form of the variation could be expressed by the PU character. Looks like people are far apart on this question. I am completely disturbed that we pull out an existing character for purposes that it was not meant for in the standard. The problems associated with the ideographs are well known - we have contributed to the problem by unifying the variants in the CJK. Countries using the variants are unfortunately excluded by the standard, so we need a proper solution. One has to dig a deeper into the requirement. It is not intended for a READER of the standard. It is meant for implementations to be able to provide a consistent behaviour -- for example properties of characters such as the pointer. Unicode has a 'related but not equal' -- 'compatibility equivalents' to permit variations in the standard -- but make them equal. A VARIATION MARK permits the equivalencing the character following the VM to be treated similar to compatibility equivalents -- but can have different possibly unpredictable renderings. My suggestion is to create an ad hoc and solve the issue at the technical issue.
h) Dr. Umamaheswaran: If the requirement for Variation marks is to include characters that are not currently in the standard then perhaps we should be looking at the missing characters themselves. May be the ad hoc can articulate the problem the VM is trying to solve. There were some documents from IRG that did give us some examples.
i) Mr. Michael Everson: Is this VM going to be used in newspaper text? May be the IRG can show some examples.
j) Mr. Ken Whistler: One of the scenarios is use of these standard is for text editing people using 10646. They are given a large set of characters but have no means of encoding them. There are several methods to solve this problem:

GVM - shows it looks like that.
Second is to show explicit variant which is supported by a registry.
Third is using the ideographic structure characters.
If the issue is to avoid encoding characters that are unencoded -- and either they have not been brought forward, or we do not wish to add these -- we have to provide a way to enter them and represent them.
k) Mr. Zhang Zhoucai: It is expected to be used in Large Scale publications - among the editors etc. but not for the final publications. The editors get the notion that the following character is a variant of the following. Beyond 30000 characters that are already encoded, there are a LARGE NUMBER of additional characters that need to be represented. The VM permits us not to ask for coding all the large variants needed. The VM is already used in GBK standard and is implemented widely in existing Windows in

China. There is a requirement for interoperability with UCS. The GBK will have all the characters in UCS along with the Vertical Extension A.
I) Dr. Asmus Freytag: The compatibility issue is a new piece of information for compatibility with GBK. The VM may intended to be used with Ideographic Characters only -- however it is difficult to restrict only to ideographics. It is a variation of the REPLACEMENT character for example. The name could be Ideographic Variant Replacement Character - for conformance etc.
m) Mr. Takayuki Sato: There are contributions from IRG -- however, the real problem that is being solved is not expressed.
n) Mr. Michael Everson: If this is one character - let us encode it.
o) Mr. Mike Ksar: The protocol issues etc. need some clarification. Agreement between sender and receiver disturbs me to put in the standard as use. It could be for private use. There are still several comments and concerns. An ad hoc group should meet and resolve the concerns.

An ad hoc group met and its report is contained in document N1728.
Mr. Ken Whistler: The ad hoc group report proposes a name change to IDEOGRAPHIC VARIATION INDICATOR - changed from being a MARK. There is some description of where it is to be used. A proposed GLYPH is shown. 303E - is the proposed code position.
Mr. Takayuki Sato: The only change from the original proposal is the name change.
Disposition:
Accept the IDEOGRAPHIC VARIATION INDICATOR at 303E in N1728 and add to the collection of accepted characters. See relevant RESOLUTION M34.12 on page 32.

### 9.4 Proposed disposition of comments on PDAM-13 IHS

Input document:
1679
Proposed disposition of comments on pDAM-13; IRG; 1997-12-18
Document N1679 - is disposition of comments on PDAM-13 -- and is for information to WG 2. Mr. Zhang Zhoucai described the proposed disposition of comments.
Japan would like to know the 'source of information' from China. The simple answer - the source is Japan. There may be copying errors.
Discussion:
a) Mr. Takayuki Sato: While reviewing JIS X208, we discovered several characters that were introduced by mistake.
b) Mr. Zhang Zhoucai: The characters that are under question from Japan are in the Chinese national standard GB 16500.
c) Mr. Mike Ksar: In the process of disposition of comments on IHS, China claimed that they have sources for some of these characters. If these are used in China, China is requested to inform Japan of the sources.
d) Mr. Bruce Paterson: If there are defects in Part 1, these should not hold up the processing of IHS amendment. A separate defect report should be submitted to fix Part 1.
Disposition:
WG 2 accepts the disposition of comments on IHS in document N1679, and instructs its editor to forward it to SC 2 secretariat for further processing - as DAM-13 ballot.

## Relevant resolution: <br> RESOLUTION M34.3 (FPDAM-13 on Internal and Horizontal Ideographic Supplementation): <br> UNANIMOUS

WG 2 accepts the disposition of comments in document N1679, and instructs its project editor to prepare the final text of DAM-13 with assistance from the IRG editor, and forward these documents to SC 2 secretariat for further processing with the following target dates: DAM-1998-03 and AM 1998-10.

### 9.5 Ideograph Description Sequence

Input document:
1680 Project Sub-Division Proposal on Scheme of Ideograph Description Sequence - IRG N 518 with attachments IRG N523, 524 and 525; IRG; 1997-12-18

Mr. Takayuki Sato presented document N1680. Definition of the Ideographic Structure Character - ISC, can be found in IRG document N523. Definition of Ideographic Description Sequences can be found in IRG document N524. Answers to questions raised by WG 2 have been included. The rendering is still outside the scope of these sequences.
Discussion:
a) Mr. Bruce Paterson: EMB - item C on page 4, no example is shown. Overlay or Superimposition may be a better term to use. Embedment may be a term more applicable to item 5 , where something goes inside another.
b) Mr. Zhang Zhoucai: These are for coding characters that are not yet encoded. We can provide an example later - there is a lack of pretty fonts to give an example.
c) Mr. Ken Whistler: The critical question is - are these characters intended to be a graphic character in line in a text, or is it a control character that builds up a character?
d) Mr. Takayuki Sato: The 12 characters are independent graphic characters (like Variation mark) in inline text. This is an important point. On page 6: Answers to Qs 1 and 2 - The purpose of these is to describe un-encoded characters. The components are from unified CJK set. It cannot be used for showing Glyph Variants. If we can use such a sequence for an existing unified character then it would cause duplication. The canonical form was withdrawn from the proposal.
e) Mr. Mike Ksar: Can these sequences be used as a tool to describe future proposals for ideographic characters? It is an open question.
f) Mr. Takayuki Sato: The proposal is for use by external users -- not just a tool for use within WG 2.
g) Dr. Asmus Freytag: I am a little confused as to the use of these?

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h) Mr. Ken Whistler: The objective is to describe the un-encoded ideographs --the question is can we use the same mechanism to use an already encoded character? If we encode something like this -and if I describe 'the forest character', for example, by this sequence -- one should not be asked to imply equivalence between such a sequence and a stand alone already coded (or future coded) character.
i) Mr. Nelson Ng: The analogy is the phonetic spelling out in Western Dictionaries. This sequence is the equivalent for the Ideographic.
j) Mr. Mike Ksar: Is it in use today?
k) Mr. Michael Kung: It is currently encoded in simplified Chinese using GBK.
l) Mr. Takayuki Sato: Any side benefits that can be there --will not be used as justification. Even though the equivalence is possible -- the answer was the pre-composed and sequence representation should be treated differently.
m) Mr. Zhang Zhoucai: In China, in printing where a character does not exist in coded form, they used to put a blank box. Now, more people are using the computers and for them to interchange the information, they are using the description sequences to describe the un-encoded characters. The editors and printers are interchanging these sequences to communicate information.
n) Mr. Mike Ksar: If these are tools for such communication, why should these be encoded -- are these for electronic communication, and if not, one could use a piece of paper.
o) Dr. Asmus Freytag: What has become clear in this discussions, is that the purpose of these is different -- there is no clear Latin equivalent. When some one tries to enter character that is not recognized -- one could use the Geta mark ( 3000 block) -- one could use the Variation mark (looks something like this -- but do not know what it is precisely). The sequence method says here is what it looks like, but there is no code for it. The implementation can use any means at its disposal to render it properly. Mechanism such as this is needed to flow information from the keyboard operator to the editor.
p) Mr. Ken Whistler: In text entry when coming across characters which are not encoded - to be able to type a description and get on with the task. The fact that it is in GBK, is probably another factor. Soon there will be lots of data using the GBK, and we need to find away of representing these characters in UCS.
q) Dr. Asmus Freytag: Based on the ad hoc work on Variation Mark, we have some suggested wordings. Also some explanatory text to describe the proposal will be needed.
r) Mr. Takayuki Sato: There is also an activity to encode many more characters in Plane 2. What would then be the value of these sequences? This sequence could be used in input methods - and if these are used in the text strings, there will be duplicate encoding?
s) Dr. Umamaheswaran: If these are considered equivalent to the Plane 2 characters then there will be possible duplication.
t) Mr. Ken Whistler: The key differentiator is COMPOSED versus DESCRIBED. It also helps the systems which do not have a method of dealing with these additional characters.
u) Dr. Asmus Freytag: If we do not intend to progress these to PDAM stage now, why are we asking for a new subdivision proposal? We may encode the 12 characters also for interchanging with GBK -- even though that standard was created after 10646. If there are no architectural implications why don't we accept this right now.
v) Mr. Zhang Zhoucai: IRG has answered all the questions asked of it by WG 2. From China's position these characters are already encoded in our national standard and also implemented in NT systems. As a minimum these should be interchangeable with 10646.
w) Mr. Mike Ksar: If we add these - there are still some concerns from Mr. Takayuki Sato.
x) Mr. Takayuki Sato: Once we approve this, we have to get into the components that can be used, how many symbols are to be entertained etc. We need to open up the discussion on which components can be used with this method. There are three pieces -- 12 symbols, Radicals and Components are required The radicals are already used.
y) Mr. Erkki Kolehmainen: If these are not used for COMPOSITION and only for DESCRIPTION - then we need not understand fully all the components. We need not be concerned with the validity of the components.
z) Mr. Michael Kung: The original proposal was to use character composition. It has changed from being composition to description over its three year development. The third element --
COMPONENTs -- is not here.
aa) Mr. Bruce Paterson: Why are we sending this to SC 2 -- when all the same experts are at this table. We should make a decision at this meeting.

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bb) Mr. Takayuki Sato: If there are still outstanding issues - still some approval is required for IRG to proceed and provide the work. That is why SC 2 approval is required for them to go ahead.
cc) Mr. Mike Ksar: If WG 2 cannot come to SC 2 with an agreed upon proposal -- SC 2 will not be discussing the technical aspects of this problem.
dd) Mr. Zhang Zhoucai: For clarification -- what will be required for using the sequence? Ideographic Component Supplement -- we use the encoded ideographs as the components.
ee) Mr. Ken Whistler: Without the addition of more components not all characters may be described using this method. However, most of the pieces to describe most of the characters is already there. They will need more characters -- identified as Component Supplement in N1680 (page 1).
ff) Mr. Bruce Paterson: There seems to be some concern on the size or amount of the supplement's content.
gg) Mr. Mike Ksar: The document should be updated to address the questions raised at this meeting. We can accept this document in principle and request IRG to provide a revised version of this document. We can accept the 12 characters proposed. We do not see any objection of accepting the 12 characters in principle. We can progress the sub division proposal to SC 2 and ask IRG to create a new document.

## Disposition:

We accept the project subdivision for scheme of ideographic description sequence and instruct the IRG to prepare a working draft of the proposal suitable for further processing.

## Relevant resolution:

RESOLUTION M34.17 (Ideographic Description Sequences): UNANIMOUS
WG 2 accepts the project sub-division proposal for Ideographic Description Sequences in WG 2 accepts the project sub-division proposal for Ideographic Description Sequences in document N1680. WG 2 instructs its project editor to prepare a project sub division submission and forward it to SC 2 with the following target dates: WD 1998-10, FPDAM-1999-04, DAM-1999-08, AM 1999-10. WG 2 instructs the IRG to prepare the draft PDAM text and submit to WG 2 convener by 1998-05.

## 10 Defect reports status:

Input document:
1696 Editorial Corrigenda - 3rd Cumulative List - Issue 3 - Replaces N 1529; Bruce Paterson; 1998-03-01
Mr. Bruce Paterson: Some changes were to be made to some editorial text to accommodate some concerns on Indic by Glenn Adams. Changes from document N1529 are marked with comments. Document N1396 took care of the editorial name annotations for the Japanese characters at 3332--3346. The square bracketed text will be removed. When we get the printed DAMs from ITTF, I can apply the accepted corrigenda -- both technical and editorial -- to reflect the latest text containing up to Amendment 9. Document N1306 shows the revision marks from the first edition - we will keep the same format.

## Discussion:

a) Mr. Alain LaBonté: Request for a copy of the text for French Translation
b) Mr. Ken Whistler: The ASTERISKs to point to Annex P, can cause some synchronization problem in tracking in the data base.

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## Action Item:

WG 2 accepted document N1696 - with one correction SQUARE from SQURAE on hex 43 on page 3. Instruct the editor to prepare revised standing document N1696 - incorporating as much of the published amendments and corrigenda by May 98 time frame.

## 11 Liaison reports

### 11.1 Unicode Consortium

Unicode is in the process of publishing V2.1, and accumulating information towards publishing V3.0.

### 11.2 CEN / TC 304

Mr. Mike Ksar: We need to establish closer working relationship with CEN/TC 304.
Disposition:
WG 2 nominates Mr. Mike Ksar to SC 2 to be another liaison officer to CEN/TC 304. See relevant RESOLUTION M34.22 on page 24.

### 11.3 AFII

Dr. Asmus Freytag: AFII has registered the EURO SIGN in the AFII Register. AFII will support the effort of printing the next edition.
Mr. Mike Ksar: Dr. Asmus Freytag is the president of AFII. The main task of AFII right now is to focus on the printing of the next edition of 10646 with help of Unicode Consortium. I would like to express WG 2's appreciation for AFII's assistance.

### 11.4 SC 22/WG 20

Mr. Takayuki Sato was the liaison representative to WG 2.
Disposition:
WG 2 nominates Mr. Arnold Winkler from SC 2/WG 2 to SC 22/WG 20, requests SC 2 to confirm this. See relevant RESOLUTION M34.22 on page 24.

### 11.5 TC 211 / TC 204

Input document:
1710 Possible liaison to ISO TC 211 - Geomatic info; Canada; 1998-03-04
Dr. Umamaheswaran: An email from Mr. Doug O'Brien, Canada, is brought to the attention of the meeting. There is opposition in acceptance of 10646 for the work of TC211 on Geomatics. The problem seems to be some education / clarification needed to the member of TC 211 in Japan.

## Action Item:

Japanese NB SC 2 reps will contact the Japanese TC 211 members to understand their concerns and see why UCS cannot be used in TC 211.

## 12 Other business:

### 12.1 Web Site Review N 1502, N 1509

Input documents:
1502 Update of N 1402 - Principles \& Procedures of WG2; Sven Thygesen; 1997-01-24
1509 Summary of WG2 Work Items, including spreadsheet; Sven Thygesen; 1997-01-24
The plan is to provide hot links to the electronic documents from the register, the minutes and the next meeting agenda etc. All contributors are requested to submit the documents in electronic form so that it can be posted to the WG 2 site.

### 12.2 Future Meetings

Meeting 35 was reconfirmed to be in London, hosted by BSI, from 21--25 September 1998. Meeting 36 was to be

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hosted by China in February. However, the SC 2 plenary was being planned to be in Tokyo by March 1999 tentatively. The venue of WG 2 Meeting 36 was changed to be co-located with the SC 2 plenary to be tentatively in Tokyo.

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Relevant resolution:
RESOLUTION M34.24 (Future meetings): UNANIMOUS
WG 2 confirms the following future meeting schedule:
    Meeting 35: 21--25 September 1998, London, UK - Host: BSI
    Meeting 36: 15--19 March 1999, Tokyo, Japan (Tentative)
    Meeting 37: September 1999 -- Denmark
    Meeting 38: March 2000 --China
WG 2 accepts and confirms the following IRG future meeting schedule:
    IRG 11: 11--15 May 1998 in Tokushima, Japan
    IRG 12: 14-18 December 1998 in Redwood Shores, CA, USA
```


## 13 Closing - Approval of Resolutions

Output document:
N1704: Resolutions of WG 2 Meeting 34
The following 13 national bodies, and 8 liaison organizations were represented when the resolutions were discussed and adopted:

Canada, China, Denmark, Finland, Greece, Ireland, Japan, Netherlands, Poland, Sri Lanka, Sweden, UK, and USA; Taipei Computer Association, the Unicode Consortium, CEN/TC 304, JTC 1/WG 5, GSE, SC 22/WG 20, TC 46/SC 2 and SC 22.

## Appreciation

Thanks were expressed to AFII and Unicode consortium for assistance offered to WG 2 in the preparation of the planned next edition of 10646-1, and to DKUUG, Denmark, for providing and maintaining the web site and electronic discussion list server for WG 2.

## Relevant resolution:

RESOLUTION M34.25 (Appreciation to the host): (By Acclamation)
WG 2 thanks its host Microsoft Corporation and its staff, especially Mr. Michel Suignard, and the US national body, for hosting the meeting, and to the Unicode Consortium (Dr. Julie Allen) for providing excellent secretarial and administrative support. WG 2 further extends its thanks to Microsoft Corporation and the Unicode Consortium for their kind hospitality.

## 14 Adjournment

The meeting was adjourned at approximately 12:30h on Friday.

## 15 Cumulative list of action items

Note: WG 2 experts, national bodies and liaison organizations are encouraged to verify the action items against the final list given below -- recording secretary, Dr. V.S. UMAmaheswaran.
15.1 Action items from previous WG 2 meetings -- Meetings no. 25 to 28

All the action items from meeting 25, Antalya, Turkey, meeting 26, San Francisco, CA, USA, meeting 27, Geneva, Switzerland, and meeting 28, Helsinki, Finland, have been either completed or dropped.
15.2 Outstanding action items from WG 2 meeting 29, Tokyo, Japan

| Item | Assigned to / action (Reference Meeting 29 Resolutions document N1304 and <br> Unconfirmed Meeting 29 minutes in document N1303 -and corrections to these <br> minutes in section 3 of document N1353.) | Status |
| ---: | :--- | :--- |
| Al-29-10 | China |  |


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| Item | Assigned to / action (Reference Meeting 29 Resolutions document N1304 and <br> Unconfirmed Meeting 29 minutes in document N1303 -and corrections to these <br> minutes in section 3 of document N1353.) | Status |
| :---: | :--- | :---: |
| aTo take comments in document N1246 and comments from this meeting (M29) as <br> feedback to the appropriate experts on Uyghur, Kazakh and Kirgihiz. <br> M30, M31, M32, M33 and M34: In progress. | M35: |  |

### 15.3 Outstanding action items from WG 2 meeting 30, Copenhagen, Denmark

| Item | Assigned to / action (Reference Meeting 30 Resolutions document N1354 and <br> Unconfirmed Meeting 30 minutes in document N1353 and corrections to these <br> minutes in section 3 of document N1453.) | Status |
| ---: | :--- | :---: |
| Al-30-16 | Latvia, Ireland and Finland <br> a <br> to provide additional supporting documents to address the various concerns expressed on <br> proposal for Livonian characters in document N1322 at this meeting to permit WG 2 to <br> better evaluate the proposal. <br> M31 and M32: Outstanding; M33 and M34: In progress. | M35: |

### 15.4 Outstanding action items from WG 2 meeting 31, Québec City, Canada

| Item | Assigned to / action (Reference Meeting 31 Resolutions document N1454 and Unconfirmed Meeting 31 minutes in document N1453 and corrections to these minutes in section 3 of document N1503,) | Status |
| :---: | :---: | :---: |
| Al-31-3 | Editor - Mr. Bruce Paterson <br> To prepare the appropriate PDAM texts and entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following WG 2 resolutions: <br> RESOLUTION M31.9 (Internal Supplementation / Horizontal Supplementation): WG 2 accepts documents N1427, N1428, N1429 and N1434 on Internal Supplementation / Horizontal Supplementation from the IRG. WG 2 further instructs its editor to prepare the PDAM text, with assistance from IRG editor, and forward it to SC 2 secretariat for an SC 2 ballot. <br> M32, M33 and M34: In progress. | M35: |

### 15.5 Outstanding action items from meeting 32, Singapore

| Item | Assigned to / action (Reference Meeting 32 Resolutions document N1504 and Unconfirmed Meeting 32 minutes in document N1503 -with the corrections noted in section 3 of document N1603.) | Status |
| :---: | :---: | :---: |
| $\begin{array}{r} \hline \text { Al-32-6 } \\ b \end{array}$ | US member body (Michel Suignard, John Jenkins) <br> Mr. John Jenkins, is invited to prepare the draft text on the Deseret script (in document N1498) in a form suitable for inclusion in the future ISO/IEC 10646-Part 2. <br> M33 and M34: in progress. | M35: |
| Al-32-12 <br> c <br> d | IRG (Mr. Zhang Zhoucai, Rapporteur) <br> to prepare text on Ideograph Radical Supplement for inclusion as a separate item in the PDAM per resolution M32.10 (see action item a above), for consideration at the next WG 2 meeting, per resolution M32.15 below: <br> WG 2 accepts the 31 Ideographic Radicals proposed in document N1492, and provisionally allocates them to code positions in the range 2FE0 to 2FFF. WG 2 further invites the IRG to assign a character name and a single graphic symbol to each. .. <br> M33 and M34: in progress. <br> the IRG editor is to prepare PDAM text on CJK Unified Ideograph Extension A Version 1.1, for consideration at the next WG 2 meeting, per resolution M32. 14 below: <br> WG 2 provisionally allocates the set of 6585 characters of CJK Unified Ideograph Extension A Version 1.1 in documents N1423 and N1424 to code positions in the range 3400 to 4DBF, .. <br> M33 and M34: in progress. | M35: <br> M35: <br> Complete d; See document N1723. |

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### 15.6 Outstanding action items from meeting 33, Heraklion, Crete, Greece

## Item $\quad$ Assigned to / action (Reference Meeting 33 Resolutions document N1604 and Unconfirmed Meeting 33 minutes in document N1603 - with the corrections noted in section 3 of document N1703.)

AI-33-2 Convener - Mr. Mike Ksar
a to instruct the future editor of ISO/IEC 10646 Part 2, to take note of resolution M33.13 (Greek Byzantine Musical signs):
WG 2 accepts the repertoire of 246 Greek Byzantine Musical signs proposed in document N1582 (based on documents N1208 and N1375) with the following changes:
a. combining characters are to be shown in the code tables with dotted circles b. provisional code positions will be in plane 1 starting at D000.

This repertoire will be held in a collection of characters to be encoded in the future part 2 of ISO/IEC 10646.
M34: In progress.
c to request through SC 2 to ISO to advise Bangladesh, with reference to their proposal on Bengali coded character set, to acquire a copy of 10646; also to arrange for a copy of the Unicode V 2.0 book to be sent to them.
M34: In progress.
Al-33-3 Editor - Mr. Bruce Paterson
to prepare the appropriate AM, DAM or PDAM texts, sub-division proposals, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following WG 2 resolutions:
I M33.18 (Yi script and Yi radicals):
WG 2 accepts:
1165 characters, their shapes and names in document N 1608 for the Yi script, and their assignment to code positions in the range A000 to A48C in the BMP,
and
57 characters (Note: 18 more than in resolution M32.8), their shapes and names in document N 1611 for the Yi radicals, and their assignment to code positions in the range A490 to A4C8 in the BMP.
WG 2 further instructs its editor to create PDAM text, with assistance from Ireland (Mr. Michael Everson) and China (Mr. Mao Yong Gang), based on documents N 1608 and N 1611, and forward these to SC 2 secretariat for further processing. M34: In progress.
Al-33-5 IRG (Mr. Zhang Zhoucai, Rapporteur)
b to prepare the appropriate texts per resolution M33.29 (IRG - NPs):
In accordance with IRG\#9 resolutions 4 and 7 in document N 1591, WG 2 instructs IRG
to prepare new sub division proposals for the following projects:
CJK Ideographs for Plane 2
Ideograph Structure Characters and Ideograph Component Supplement and submit them to WG 2 for consideration at its next meeting.
M34: Document N1680 addresses Ideograph Description Sequence; Item on CJK Ideographs for plane 2 is in progress.
Al-33-6 Ad hoc group on principles and procedures (lead - Mr. Sven Thygesen)
to update the standing document on Principle and Procedures per following:
a M33.11 (Block Assignment Guideline):
WG 2 accepts the request to add Block Assignment Guideline (see document N1583 item 72.18) with the qualification that the high frequency occurrence criterion be used when no other overriding criterion exists. WG 2 further instructs the ad hoc group on principles and procedures to update the standing document on Principles and Procedures accordingly.
M34: In progress-action item transferred to Dr. V.S. Umamaheswaran.
b M33.12 (Empty 00 position in a block):
WG 2 emphasizes that proposals for code allocations should not leave position 00 unassigned in each block unless there are compelling documented reasons for doing so. WG 2 further instructs the ad hoc group on principles and procedures to update the standing document on Principles and Procedures accordingly.
M34: In progress-action item transferred to Dr. V.S. Umamaheswaran.
c add the graphical view of the road map of the BMP in document N1520, after it is updated
M35: by Mr. Michael Everson ensuring that it is in synchronism with the road map text. M34: In progress-action item transferred to Dr. V.S. Umamaheswaran.

| Item | Assigned to / action (Reference Meeting 33 Resolutions document N1604 and Unconfirmed Meeting 33 minutes in document N1603 - with the corrections noted in section 3 of document N1703.) | Status |
| :---: | :---: | :---: |
| $\begin{array}{r} \hline \text { AI-33-8 } \\ b \end{array}$ | Korean member body (Professor Kyongsok Kim) <br> is invited to submit a proposal summary form to cover requests for Gugyeol characters (original requests in documents N936) with a possible updates to these documents and submit to WG 2 for consideration at meeting 34. <br> M34: In progress. | M35: |
| $\begin{array}{r} \text { Al-33-11 } \\ \text { a } \end{array}$ | Chinese member body (Mr. Mao Yong Gang) <br> to assist the editor in the preparation of PDAM on Yi-script and Yi-radicals, per resolution M33.18 (Yi script and Yi radicals) - see action item Al-33-3-I on the editor. M34: In progress. | M35: |
| Al-33-12 | Irish member body (Mr. Michael Everson) <br> to assist the editor in the preparation of PDAM on Yi-script and Yi-radicals, per resolution M33.18 (Yi script and Yi radicals) - see action item AI-33-3-I on the editor. <br> M34: In progress. <br> is invited to update his graphical view of the road map, document N1520, ensuring that it is in synchronism with the road map text in the principles and procedures document and assist Mr. Sven Thygesen in incorporating it into the guidelines in principles and procedures, currently document N1502. <br> M34: In progress. | M35: M35: |

### 15.7 Outstanding action items from meeting 34, Redmond, WA, USA

Item | A |  |
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| re |  |

## Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and Unconfirmed Meeting 34 minutes in document N1703 - this document you are reading.)

Al-34-1 Meeting Secretary - Dr. V.S. UMAmaheswaran
a to finalize the document N1703 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.
b to finalize the document N1704 containing the adopted meeting resolutions and send it to the convener as soon as possible.
Al-34-2 Convener - Mr. Mike Ksar
a to come up with a schedule for the revision (next edition) of 10646-1: 1993, with assistance from the editor.
b to set up an ad hoc group of interested experts, along with the editor, to consider and recommend the format for the next edition of 10646-1.
c to monitor the progress of the IETF electronic publication of 10646 on the web - the web edition, to ensure that all the approved amendments are included; and to bring this matter to the attention of SC 2 also.
d to forward WG 2 program of work in document N1731R, per RESOLUTION M34.20, to SC 2.
e to forward documents N1705 and N1726 to SC 2 and to SC 2 / WG 3 per RESOLUTION M34.15 (Sub-Repertoire Identification).
f to send document N1670 as a liaison document to IETF from SC 2/WG 2. WG 2 is concerned because the initial MLSF proposal is in conflict with UTF-8.
g to forward the revised scope of 10646-2 in document N1697, per RESOLUTION M34.13, to SC 2 for confirmation.
h to send document N1711 on Mongolian script (including expert comments in document N1734) for review and feedback to experts on Mongolian - Messrs. Richard Moore, Oliver Corf and Joe Becker
i to forward document N1714 (with possible editorial changes) to the Bangladesh Standards and Testing Institution in response to their request in document N1634 -- copying SC 2, JTC 1 and ITTF etc. the same parties as their letter was copied to.
Al-34-3 Editor of 10646-1: Mr. Bruce Paterson
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:
a RESOLUTION M34.1 (DTR 15285 Character Glyph Model):

## Item Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and Unconfirmed Meeting 34 minutes in document N1703 - this document you are reading.)

WG 2 further instructs its project editors for ISO/IEC 10646 Part 1 and Part 2 to add TR 15285 as a reference to the next edition of ISO/IEC 10646-1 and to the WD of ISO/IEC 10646-2.
b RESOLUTION M34.2 (DTCOR-2 Blocks and Collections):
WG 2 accepts the disposition of comments in document N1692R, and instructs its project editor to prepare the final text of TCOR 2 to ISO/IEC 10646-1: 1993, and forward these documents to SC 2 secretariat by 1998-05 for publication
c RESOLUTION M34.3 (FPDAM-13 on Internal and Horizontal Ideographic Supplementation):
WG 2 accepts the disposition of comments in document N1679, and instructs its project editor to prepare the final text of DAM-13 with assistance from the IRG editor, and forward these documents to SC 2 secretariat for further processing with the following target dates: DAM-1998-03 and AM 1998-10.
d RESOLUTION M34.4 (FPDAM-16 Braille patterns):
WG 2 accepts the disposition of comments in document N1695, and instructs its project editor with assistance from Ireland (Michael Everson) to prepare the final text of DAM-16 (revised document N1646), and forward these documents to SC 2 secretariat in April 1998 for further processing.
e RESOLUTION M34.5 (FPDAM-17 CJK Unified Ideograph Extension A):
WG 2 accepts the proposed text for FPDAM-17 in document N1723 with the elimination of duplicate characters identified in document N1698 (reducing the number of characters in the repertoire to 6582, and moving up the code positions filling the vacated positions).
WG 2 further instructs its project editor with assistance from the IRG editor to prepare the final text of FPDAM-17 and forward it to the SC 2 for further processing, with the following target dates: FPDAM-1998-07, DAM-1999-01 and AM 1999-03.
f RESOLUTION M34.6 (FPDAM-19 Runic script):
WG 2 accepts the disposition of comments in document N1695, and instructs its project editor with assistance from Ireland (Michael Everson) to prepare the final text of DAM-19 (based on document N1647), and forward these documents to SC 2 secretariat in April 1998 for further processing.
g RESOLUTION M34.7 (FPDAM-20 Ogham):
WG 2 accepts the disposition of comments in document N1695, and instructs its project editor with assistance from Ireland (Michael Everson) to prepare the final text of DAM-20 (based on document N1648), and forward these documents to SC 2 secretariat in April 1998 for further processing.
h RESOLUTION M34.8 (Syriac script):
WG 2 accepts 73 characters, their shapes, and their names in document N 1718 , and assigns them to code positions in the range 0700 to 074 F in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10 prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael Everson), and
forward these to SC 2 secretariat for further processing.
I RESOLUTION M34.9 (Thaana script):
WG 2 accepts 49 characters, their shapes, and their names in document N1699
(excluding the REYTU SIGN), and assigns them to code positions in the range 0780 to 07BF in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
prepare registration request and PDAM text, with assistance from Ireland (Mr.
Michael Everson), and
forward these to SC 2 secretariat for further processing.
j RESOLUTION M34.10 (Burmese script):
WG 2 accepts 84 characters, their shapes, and their names in document N 1729, and

## Item <br> Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and Unconfirmed Meeting 34 minutes in document N1703 - this document you are reading.)

assigns them to code positions in the range 1700 to 177 F in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael Everson), and
forward these to SC 2 secretariat for further processing.
k RESOLUTION M34.11 (Khmer script):
WG 2 accepts 103 characters, their shapes, and their names in document N 1729 , and assigns them to code positions in the range 1780 to 17FF in the BMP. WG 2 further instructs its editor to:
create a new sub division proposal, with the following target dates:
WD 1998-03, FPDAM-1999-05, DAM-1999-07 and AM 1999-10
prepare registration request and PDAM text, with assistance from Ireland (Mr. Michael Everson), and
forward these to SC 2 secretariat for further processing.
I RESOLUTION M34.12 (FPDAM on Various New Characters):
WG 2 accepts the following additional characters, their shapes and their names for inclusion in the BMP:
in accordance with document N1619 on Romani characters:
021E LATIN CAPITAL LETTER H WITH CARON
021F LATIN SMALL LETTER H WITH CARON
in accordance with document N1655 on Additional Canadian Syllabic characters Eight Additional Canadian Syllabic characters in positions 166F to 1676:
in accordance with document N1720 for KIP SIGN - Laos Currency: 20AD KIP SIGN
in accordance with document N1668R2 on additional keyboard symbols:
20E2 ENCLOSING SCREEN 20E3 ENCLOSING KEY CAP
in accordance with document N1719 on additional Syriac symbols: 2670 WEST SYRIAC CROSS 2671 EAST SYRIAC CROSS
in accordance with document N1713R on Bopomofo extensions: 24 Extended Bopomofo Characters in positions 31A0 to 31B7, and, the modifier letters -
02EA YIN DEPARTING TONE MARK 02EB YANG DEPARTING TONE MARK.
in accordance with document N1728 on Variation Mark: 303E IDEOGRAPHIC VARIATION INDICATOR, with a shape similar to the shape of 2246
WG 2 further instructs its editor to: create a new sub division proposal, with the following target dates: WD 1998-03, FPDAM-1998-09, DAM-1999-02 and AM 1999-05 prepare registration request and FPDAM text, including all the above accepted characters, with assistance from Ireland (Mr. Michael Everson) and TCA (Emily Hsu), and
forward these to SC 2 secretariat for further processing.
m RESOLUTION M34.17 (Ideographic Description Sequences):
WG 2 accepts the project sub-division proposal for Ideographic Description Sequences in document N1680. WG 2 instructs its project editor to prepare a project sub division submission and forward it to SC 2 with the following target dates: WD 1998-10, FPDAM-1999-04, DAM-1999-08, AM 1999-10. WG 2 instructs the IRG to prepare the draft PDAM text and submit to WG 2 convener by 1998-05.
n RESOLUTION M34.18 (Collection Identifiers in Parts 1 and 2):
WG 2 accepts the recommendations of the ad hoc on collection identifiers in document N1726, and instructs the ad hoc on Principles and Procedures to include these in the

## Item Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and Unconfirmed Meeting 34 minutes in document N1703-this document you are reading.)

Principles and Procedures document (N1502R). WG 2 further instructs its project editors to take note of these recommendations for adoption in Parts 1 and Part 2.
o RESOLUTION M34.19 (Mirror Characters):
WG 2 accepts the editorial corrigendum proposed in document N1708R, and instructs its project editor to prepare the necessary corrigendum text.
p to prepare revised the standing document N1696-incorporating as much of the published amendments and editorial corrigenda by May 98 time frame.
q to assist the convener to come up with a schedule for the revision (next edition) of 106461: 1993.
r to update document N1667-Cumulative List \#6 of Repertoire Additions.
s to prepare an editorial corrigendum to Amendment 6 to correct the names in the text corresponding to Annex E in AM-6 (the names in the main body are correct).

## Al-34-4 Editor of 10646-2: Mr. Michel Suignard

to take note of the following and incorporate the needed text in the draft of 10646-2:
a RESOLUTION M34.1 (DTR 15285 Character Glyph Model):
... ... WG 2 further instructs its project editors for ISO/IEC 10646 Part 1 and Part 2 to add TR 15285 as a reference to the next edition of ISO/IEC 10646-1 and to the WD of ISO/IEC 10646-2.
b RESOLUTION M34.14 (Characters for inclusion in WD of Part 2):
WG 2 accepts the following:
Plane 14 Characters for Language Tags according to document N1670. ETRUSCAN script in the range Plane 10200 to 022F, in accordance with document N1580.
GOTHIC script in the range Plane 10230 to 024F, in accordance with document N1581, with the last three characters in that document deleted from the repertoire.
WESTERN MUSICAL SYMBOLS in the range Plane 1 D100 to D1FF, starting at D103, in accordance with document N1693.
and instructs its project editor to include the above accepted characters in the working draft of 10646-2.
c to update the working draft in document 1717-accommodating the various comments during meeting 34, and to draft some text for inclusion in Part 1 referring to the architectural statements that need to be included in Part 1.
d RESOLUTION M34.18 (Collection Identifiers in Parts 1 and 2):
WG 2 accepts the recommendations of the ad hoc on collection identifiers in document N1726, and instructs the ad hoc on Principles and Procedures to include these in the Principles and Procedures document (N1502R). WG 2 further instructs its project editors to take note of these recommendations for adoption in Parts 1 and Part 2.
Al-34-5 Co-editors of TR 15285 (Messrs. Edwin Hart, Alan Griffee)
a to prepare the final text for TR 15285, and to forward it along with the disposition of comments in document N1694, per RESOLUTION M34.1 (DTR 15285 Character Glyph Model), to SC 2 secretariat by 1998-05 for publication.
Al-34-6 IRG (Mr. Zhang Zhoucai, Rapporteur)
a per resolution M34.5 (FPDAM-17 CJK Unified Ideograph Extension A) to produce revised text for FPDAM (revised document N1723), with the elimination of duplicate characters identified in document N1698 (reducing the number of characters in the repertoire to 6582, and moving up the code positions filling the vacated positions).
b per RESOLUTION M34.16 (Staging of work on Ideographs for Plane 2) to provide a new schedule for Stage 1 in synchronization with the schedule for 10646-2 by 1998-05.
c per RESOLUTION M34.3 (FPDAM-13 on Internal and Horizontal Ideographic Supplementation) to assist the editor in preparing the final text of PDAM-13 reflecting the disposition of comments in document N1679.
d per RESOLUTION M34.17 (Ideographic Description Sequences) to prepare the draft PDAM text and submit to WG 2 convener by 1998-05.

## Al-34-7 Ad hoc group on principles and procedures (lead - Dr. V.S. UMAmaheswaran)

 to update the standing document on Principle and Procedures per following:a RESOLUTION M34.18 (Collection Identifiers in Parts 1 and 2): WG 2 accepts the recommendations of the ad hoc on collection identifiers in document

| Item | Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and Unconfirmed Meeting 34 minutes in document N1703 - this document you are reading.) <br> N1726, and instructs the ad hoc on Principles and Procedures to include these in the Principles and Procedures document (N1502R). <br> to create a guideline document for submission of requests for Collection Identifiers, for inclusion in the Procedures and Guidelines document. <br> with assistance from Mr. Michael Everson, to update the principles and procedures document with the latest agreed upon pictorial view of the roadmap. | Status <br> M35: <br> M35: |
| :---: | :---: | :---: |
| d | based on input received on document N1724 - Formal Criteria for Dis-Unification, prepare draft text (with assistance from the Unicode Consortium - Dr. Asmus Freytag ) for inclusion in Principles and Procedures document. | M35: |
| e | based on input received on document N1725 on Formal Criteria for Coding Pre-Composed Characters. prepare draft text (with assistance from the authors - Mr. Ken Whistler and Dr. Asmus Freytag ) for inclusion in Principles and Procedures document. | M35: |
| AI-34-8 <br> a <br> b | TCA (Ms. Emily Hsu) <br> to provide relevant text and tables for the Bopomofo extension characters and the two modifier characters from document N1713R, in a form suitable for an FPDAM per Resolution M34.12. <br> to get clarification on the question -- 'why the MIDDLE DOT is not the same as the new proposal for RIGHT DOT ABOVE?' (reference documents N1593 and N1712R). | M35: <br> M35: |
| $\begin{array}{r} \text { AI-34-9 } \\ \text { a } \end{array}$ | Danish member body (Mr. Keld Simonsen) <br> to verify that the Tibetan character names in the Annex E list in document N1675 are in accordance with the names in the main body of AM-6. | M35: |
| AI-34-10 <br> a | The Unicode Consortium (Dr. Asmus Freytag, and some US experts) based on comments received on document N1724 on Formal Criteria for Dis-Unification, assist the ad hoc on principles and procedures (Dr. Umamaheswaran) in preparing revised text for inclusion in Principles and Procedures document. <br> to update document N1721 - Content under consideration for future edition of 10646-1. is requested to work with the American Mathematical Society, examine the proposal in document N1716 - Math Symbols, refine the proposals and draft (jointly with the US member body) an updated document for consideration at the next meeting. | M35: <br> M35: <br> M35: |
| d | is invited to prepare a revised document N1727 - interlinear annotation - incorporating NB/LO feedback. | M35: |
|  | is invited to re-format the proposal on Western Musical symbols in document N1693 in a form suitable for inclusion in part 2 -- including appropriate text, in accordance with RESOLUTION M34.14.. | M35: |
| Al-34-11 | Japanese member body <br> National SC 2 representatives to contact the Japanese national TC 211 members to understand their concerns and see why UCS cannot be used in TC 211 | M35: |
| AI-34-12 | Chinese member body <br> The Chinese delegation is encouraged to consult with the authors of document N1724 on Formal Criteria for Dis-Unification, to see if the criteria can be used for resolving some of the comments on the Mongolian script. <br> China is invited to consider and accommodate all the comments on the Mongolian script made at this meeting - including document N1734, and from other Mongolian experts on document N1711. | M35: <br> M35: |
| Al-34-13 <br> a | Irish member body (Mr. Michael Everson) <br> In accordance with resolution M34.4 (FPDAM-16 Braille patterns), to assist the editor in the preparation of the prepare the final text of DAM-16 (based on revised document N1646 and disposition of comments in document N1695), to enable the editor to forward the documents to SC 2 secretariat in April 1998. <br> In accordance with resolution M34.6 (FPDAM-19 Runic script), to assist the editor in the preparation of the prepare the final text of DAM-19 (based on document N1647 and disposition of comments in document N1695), to enable the editor to forward the documents to SC 2 secretariat in April 1998. <br> In accordance with resolution M34.7 (FPDAM-20 Ogham), to assist the editor in the preparation of the prepare the final text of DAM-20 (based on document N1648 and disposition of comments in document N1695), to enable the editor to forward the documents to SC 2 secretariat in April 1998. <br> In accordance with resolution M34.8 (Syriac script), to assist the editor in the preparation of the prepare the PDAM text on Syriac script based on document N1718, to enable the | M35: <br> M35: <br> M35: <br> M35: |
| ISO/IEC JT | C 1/SC 2/WG 2 N1703Unconfirmed Minutes <br> Meeting 34, Redmond, WA, USA; 1998-03-16--20 | $\begin{array}{r} \hline 1998-07-02 \\ \text { age } 61 \text { of } 62 \\ \hline \end{array}$ |


| Item | Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and Unconfirmed Meeting 34 minutes in document N1703 - this document you are reading.) <br> editor to forward the document to SC 2 secretariat in April 1998. <br> In accordance with resolution M34.9 (Thaana script), to assist the editor in the preparation of the prepare the PDAM text on Thaana script based on document N1699 (excluding the REYTU SIGN), to enable the editor to forward the document to SC 2 secretariat in April 1998. <br> In accordance with resolution M34.10 (Burmese script) to assist the editor in the preparation of the prepare the PDAM text on Thaana script based on document to enable the editor to forward the document to SC 2 secretariat in April 1998. <br> In accordance with resolution M34.11 (Khmer script) to assist the editor in the preparation of the prepare the PDAM text on Thaana script based on document to enable the editor to forward the document to SC 2 secretariat in April 1998. <br> Ireland is invited to create a 'Defect Report' on changing the block name IPA Extension to IPA Latin Extension. <br> to assist Dr. Umamaheswaran in updating the principles and procedures document with the latest agreed upon pictorial view of the roadmap. <br> is invited to provide a revised draft of document N1657 on Buginese script including the answers / examples and incorporating any feed back comment received. <br> to draft a proposed response, with assistance from Mr. Ken Whistler, to Korea on their request for two Bangjeom characters in documents N935 and N1599 -- appropriate clarification text on how to use the existing characters in the standard and that there is no need to add the requested characters. <br> to work with Editor for Part 2 to provide the Text and Code Tables for Etruscan and Gothic scripts for inclusion in Part 2 - per resolution M34.14. | Status <br> M35: <br> M35: <br> M35: <br> M35: <br> M35: <br> M35: <br> M35: <br> M35: |
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|  | to get clarification on the question -- 'why the MIDDLE DOT is not the same as the new proposal for RIGHT DOT ABOVE?' (reference documents N1593 and N1712R). | M35: |
| Al-34-14 | US member body (Mr. Ken Whistler and other experts) based on comments received on document N1725 on Formal Criteria for Coding PreComposed Characters, to assist the ad hoc on principles and procedures (Dr. Umamaheswaran), in preparing revised text for inclusion in Principles and Procedures document. | M35: |
|  | to draft a proposed response (with assistance from Mr. Michael Everson) to Korea on their request for two Bangjeom characters in documents N935 and N1599 -- appropriate clarification text on how to use the existing characters in the standard and that there is no need to add the requested characters. | M35: |
|  | is requested to work with the American mathematical society, examine the proposal in document N1716 - Math Symbols, refine the proposals and draft (jointly with the Unicode Consortium) an updated document for consideration at the next meeting. | M35: |
|  | to prepare the proposal on Western Music Symbols in a format suitable for inclusion in Part 2, including the appropriate text, per resolution M34.14. | M35: |
|  | is invited to provide a practical way to show the R-zone Ideographs - keeping in synch with the currently printed R -zone in the standard. | M35: |
|  | is invited to re-format the proposal on Western Musical symbols in document N1693 in a form suitable for inclusion in part 2 -- including appropriate text. | M35: |
| AI-34-15 | All member bodies and liaison organizations <br> to feed back comments on document N1724 on Formal Criteria for Dis-Unification to the Unicode Consortium (Dr. Asmus Freytag). | M35: |
|  | to feed back comments on document N1725 on Formal Criteria for Coding Pre-Composed Characters to the authors Messrs. Ken Whistler and Dr. Asmus Freytag. | M35: |
|  | to feed back comments on document N1660 on Tibetan extensions to Mr. Michael Everson. | M35: |
|  | to feed back comments on document N1657 on Buginese script to Mr. Michael Everson. <br> to feed back comments on Egyptian Hieroglyphic characters in documents N1636 and N1637, Meroitic in document N1638, Cuneiform scripts in documents N1639 and N1640, Tengwar in document N1641, Cirth in document N1642, Klingon in document N1643, Brahmi script in document N1685, Old Hungarian in document N1686 (potentially in the BMP?), Permic script in document N1687, Sinaitic script in document N1688, and South Arabian script in document N1689-- proposed for inclusion in Plane 1 -- to Mr. Michael | M35: <br> M35: |

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Item Assigned to / action (Reference Meeting 34 Resolutions document N 1704R and
Unconfirmed Meeting 34 minutes in document N1703 - this document you are
reading.)
Everson.
    f to examine the proposed list of approximately }1200\mathrm{ mathematical and technical symbols
    proposed via the WWW-links identified in document N1716 (contact Messrs. Mike Ksar or
    Asmus Freytag for access information) and feed back comments to the US member body.
        g to feed back comments on document N1727 - interlinear annotation characters - to Dr.
        Asmus Freytag.
    h}\mathrm{ to submit the documents in electronic form so that it can be posted to the WG 2 web site.
        i RESOLUTION M34.24 (Future meetings):
        35:
                            Meeting 35: 21--25 September 1998, London, UK - Host: BSI
                            Meeting 36: 15--19 March 1999, Tokyo, Japan (Tentative)
            Meeting 37: September 1999 -- Denmark
            Meeting 38: March 2000 --China
        WG 2 accepts and confirms the following IRG future meeting schedule:
            IRG 11: 11--15 May 1998 in Tokushima, Japan
            IRG 12: 14--18 December 1998 in Redwood Shores, CA, USA
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[^0]:    *A Standard Organization accredited by JISC

