

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

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

**ISO/IEC JTC 1/SC 2/WG 2 N1453**  
**Date: 1996-12-06**

<p><b>Title: Unconfirmed Minutes of WG 2 Meeting # 31, Copenhagen, Denmark; 1996-08-12--16</b></p> <p><b>Source: V.S. UMaaheswaran, Meeting Secretary, Mike Ksar, Convener</b></p> <p><b>Action: WG 2 members and Liaison organizations</b></p> <p><b>Distribution: ISO/IEC JTC 1/SC 2/WG 2 members and Liaisons</b></p>
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## 1. Opening and roll call

### 1.1 Opening

**Input Document:**

**N1387 Second Call and Tentative Agenda for Meeting 31 in Quebec; Mike Ksar; 1996-05-15**

Mr. Mike Ksar convened the meeting at 10:07h. He welcomed the delegates to Québec city, and introduced Mr. Alain LaBonté representing the hosting organization.

Mr. Jacques Roy, Secrétaire Adjoint from the Québec treasury board, Mr. Marcel Cloutier, from the Québec ministry for international affairs and immigration, and Mr. Royal Messier, from the Québec ministry of Culture and Communications, all welcomed and addressed the delegates. At the recent Cotonou summit with participation from 47 Francophonie countries, the importance of standards for the promotion, sensitizing the participants for the preservation of French use and culture, was affirmed via a resolution. Use and promotion of French on the information highway is a high priority for all the electronic networking and electronic media projects being undertaken by the Québec government and the other Francophonie countries. The character coding related standards play an important role towards making this possible and particularly the work of WG 2 is of great importance. A final report on French in the information highway will be prepared by end of this year in advance of the meeting in 1997 of the ministers from the 47 Francophonie countries. A new product of Québec -- a CD-ROM post-card of Québec City was demonstrated (on Wednesday) by Mr. Alan LaBadie -- with several aspects of Multi-Media technology incorporated in the product.

Mr. Alain LaBonté explained the logistics of the meeting. Delegates were each given a welcome package containing information about the city, the meeting arrangements and the internet access facility specially arranged for this meeting. The meeting was hosted by Secretariat du Conseil du trésor du Québec, the Canadian Advisory Committee on information coding (CAC/SC2) under the auspices of Standards Council of Canada. The following organizations sponsored the various aspects of hosting the meeting:

Secrétariat du Conseil du trésor du Québec, ALIS Technologies, IBM Canada, Xerox Canada, Ministère de la Culture, des Communications et de la Francophonie du Québec, Ministère des Affaires internationales du Québec, Standards Council of Canada, Réseau Internet Québec, Canadian Standards Association and Communauté urbaine de Québec.

## 1.2 Roll Call

### Input Document:

**N1351R** WG 2 Distribution List - Post Copenhagen meeting #30; Mike Ksar; 1996-08-01

Mr. Mike Ksar requested the attending delegates to introduce themselves, and update the distribution list in document N1351R with corrections, deletions or additions of not only their own information, but also the information for others from their countries. The following thirty (30) delegates representing thirteen (14) member bodies and two (3) liaison organizations; In addition, four (4) observers were present at different times during the meeting.

NAME	COUNTRY / LIAISON ORGANIZATION	AFFILIATION
Alan Griffee	AFII	Association for Font Information Interchange; IBM Corp.
Alain LaBonté	Canada	Treasury Board of Québec Government
V.S. UMaaheswaran	Canada; Meeting Secretary	IBM Canada
Fu Yonghe	China	State Language Commission
Mao Yong Gang	China	Chinese Electronics Standardization Institute
Wang Xiaoming	China	CCID (Research Center of Computer and Microelectronics Industry Development)
Zhang Zhoucai	China, IRG Rapporteur	CCID
Keld Jørn Simonsen	Denmark	Danish UNIX-system User Group
Sven Thygesen	Denmark	Kommunedata
Bernard Chauvois	France	Ministry for National Education
Stefan Fuchs	Israel; ITU TS SG 8	BEZEQ - the Israel Telecommunication Corp. Ltd.
Kohji Shibano	Japan	Tokyo International University
Takayuki K. Sato	Japan	Hewlette-Packard Japan Ltd.
Hyeon Kyu-Seob	Korea	Kongju National University
Young-Goo Kwon	Korea	Korean National Institute of Technology and Quality
Johan van Wingen	Netherlands	Consultant
Elzbieta Broma-Wrzesien	Poland	Polish Telecom
Maria Bylica	Poland	Polish Committee for Standardization
Wilson Lee	Singapore	National University of Singapore
Karl Ivar Larsson	Sweden	Consultant
Wera Lundström	Sweden	Information Technology Standardization
Bruce Paterson	UK; Editor	Consultant
Glenn Adams	Unicode Consortium	Spyglass, Inc.
Arnold Winkler	USA	Unisys
Edwin Hart	USA	The Johns Hopkins University
Michel Suignard	USA	Microsoft Corp.
Mike Ksar	USA, Convener	Hewlett-Packard Company
Ngô Thanh Nhàn	Vietnam	New York University, NY, USA
Ngô Trung Viet	Vietnam	Steering Committee of National Program on IT
Tan Luu Chuong	Vietnam	Steering Committee of National Program on IT
Alain LaBadie	Observer, Canada	iX Média
Jacques Roy	Observer, Canada	Treasury Board of Québec Government
Marcel Cloutier	Observer, Canada	Ministry of International Affairs, Immigration and Cultural Communities (Check with Alain)
Royal Messier	Observer, Canada	Ministry of Culture and Communications, Québec

Messrs. Sven Thygesen, Bruce Paterson, Mike Ksar and UMaaheswaran were appointed to the drafting committee.

## 2. Approval of the agenda

### Input Document:

**N1387** Second Call and Tentative Agenda for Meeting 31 in Quebec; Mike Ksar; 1996-05-15

A revised version of document N1387, document N1387R was presented by the convener. This agenda was discussed and adopted. As the meeting progressed, several agenda items were not discussed at all or were postponed to the next meeting. The following list of items includes only the items that had some discussion and / or disposition during this meeting:

1	Opening and roll call	N1387, N1351R	
2	Approval of the agenda	N1387R	
3	Approval of minutes of meeting 30, Copenhagen	N1353	
4	Review action items from previous meeting	N1353	
5	Status of documents sent to JTC1 and ITTF		
	AMD 5 - Korean Hangul	N1391	
	AMD 6 - Tibetan	N 1386, N1397, N1418	
	AMD 7 - Hebrew Cantillation Marks and Others	N1398	
	AMD 8 - CJK Informative Annex	N1399	
	NP 15285 - Character Glyph Model	N1392, N1411, N 1412, N1413, N1456	
	Technical Corrigendum 1 (Æ) Publication	N1393	
	French version of 10646	N1448	
6	Status of documents sent to SC2		
	pDAM 9 - Unique Identifiers	N1389, N1445	
	WG 2 report to SC2 Plenary	N1394	
7	Non-repertoire issues		
	Naming of Characters	N1287, N1329	
	Editorial Corrigenda - standing documents	N1207, N1223R, N1384,	N1396
	Repertoire additions for 10646 - Cum. List # 3	N1385	
8	Repertoire issues:	N1408	
	Mongolian Script	N1368, N1383, N1437, N1438	
	Indic and South East Asian Scripts		
	Indic Scripts	N1320, N1406	
	South East Asian Scripts	N1321	
	Additional Latin Characters		
	Romanian	N1440	
	Livonian	N1322	
	Yoruba	N1143, N1321	
	Pinyin	N1464	
	Additional Cyrillic Characters	N1323, N1324, N1407, N1408	
	Ethiopic	N1326, N1372, N1408, N1420	
	Runic	N1330, N1382, N1408, N1417	
	Symbols		
	Updated Cumulative List of Symbols	N1340, N1416	
	Naming and coding	N1340	
	APL Function	N1419	
	Canadian Aboriginal Syllabics	N1441	
	Modified Braille	N1409	
	Encoding Yi Script	N1415	
	Armenian Repertoire	N1395, N1444, N1446	
	Cherokee Script	N1172, N1356, N1362, N1408	
9	IRG Status and reports	N1421 --- N1435, N1449, N1455	
	IRG Rapporteur's report	N1421, N1422, N1435	
	General Items from IRG Recommendations		
	Vertical Extension A	N1423 --- N1426, N1439, N1449, N1455	
	Repertoire of Vertical Extension A		
	Allocation of Vertical Extension A		
	Vertical Extensions B and C		
	Internal Supplementation / Horizontal Supplementation	N1425 --- N1429, N1434, N1436	
	Ideographic Structure Characters	N1430	
	Ideographic Variation Mark	N1431	
	Ideographic Radical Supplement	N1432	
	Ideographic Component Supplement	N1433	
10	Defect reports status		
	Arabic names in Annex B - Mis-spelling Letter Heh		
	Indic Scripts	N1406	
	Defect Report Index No. 2	N1414	

11	Liaison reports	
	Unicode Consortium	N1410
	AFII	N1459
	ITU	N1457
	Response to X-Consortium	N1388
	CEN/TC304	N1458
	SC18/WG9	
12	Other business:	
	Second Part of ISO/IEC 10646	
	Working with IETF	
	Web Site Review	
	Principles and Procedures Document - Update	N1402, N1460
	Status of Collections of Characters	
	Alphabetic Rapporteur Group - a proposal	N1442
13	Closing	
	Future Meetings	
	Approval of Resolutions	
14	Adjournment	

### 3. Approval of minutes of meeting 30

#### Input Document:

N1353 Draft minutes of WG 2 Copenhagen Meeting # 30; Ksar & Umamaheswaran; 1996-06-25

Highlights from the unconfirmed minutes of meeting 30 in document N1353 was presented by the meeting secretary, Dr. Umamaheswaran. These were approved with the following corrections. Some of these corrections were pointed out during the meeting and others were given to the meeting secretary off-line.

- a) Correct Mr. Paterson's name -- change all instances of 'Peterson' to 'Paterson'.
- b) Replace all instances of 'p' with 'P' in Mr. Ólafsson's first name.
- c) Page 6, section 4 - Review of Action Items, item AI-27-6, Status column:  
This action item has been marked as dropped. It should be changed to 'Completed -- the questions and comments were assembled by Mr. Michael Everson and have been forwarded to Vietnam'.
- d) Page 10, section 5.1, 3rd paragraph under 'Presentation' - correct document number cited:  
Change 'N1310-N1314' to 'N1310-N1313' in lines 1 and 2.
- e) Page 15, section 6.2 Item F - reword to read:  
Israel: ... if the concerned national body agrees (if exists) ...
- f) Page 32, first paragraph, last line -- reword to read as:  
... of the next edition rather than being ...
- g) Page 35, section 8.9, discussion item a) - reword to read as :  
'... Document N1339 - liaison letter from Mr. Mike Ksar ... '  
Page 41, Item I - Vertical Extension, end of last sentence -- reword to read as:  
There are now .. - six columns in the ...
- h) Page 46, section 11.4:  
Change 'SG VIII' to 'SG 8' wherever it occurs under this section.
- i) Page 46, section 11.4, discussion item b: change:  
ITU-TS8 should be ITU-TS SG 8  
I18N should be WG 20  
Mr. Rafik ?? should be Mr. Tzortzinis.
- j) Page 45, section 11.1 -- reword the paragraph to read as:  
'Document N1339 - liaison letter from ...'
- k) Page 53, Move action Item AI-30-6 Greece to the end of the table and renumber it as AI-30-18 (duplicate number AI-30-6); Also reword the 'action item a.' to read as:  
"To prepare ... proposal on Byzantine Musical Symbols addressing ...".
- l) Page 53, last line in the table -- correct the action item number to 'AI-30-12'.
- m) Page 54 - Action item AI-30-17-h: correct document number N 359 to N1359.

## 4. Review of action items from meeting 30

Input Document:

N1353 Draft minutes of WG 2 Copenhagen Meeting # 30; Ksar & Umamaheswaran; 1996-06-25

Section 14 of document N1353 contains the list of action items from previous meetings. The meeting secretary had prepared the latest known status of the various action items since the Copenhagen meeting. These were reviewed. Several action items have been completed. Some were dropped. Others are in progress or outstanding. The following reflects the results of this review:

### 4.1 Outstanding items from WG 2 meeting 25 Antalya, Turkey

Item	Assigned to / action (Reference document N1034 - resolutions, and document N1033 - minutes of Antalya meeting WG 2-25, and corrections to these minutes in Section 3 of document N1117)	Status
<b>AI-25-5 Japanese member body</b>		
a	<p>is requested to forward a set of bit maps and /or the outline of the corrected shapes reported in document N1006 and document N1014 along with a blown-up (96x96) hard copy to the editor.  <i>Note:</i> Japan needed more information from the project editor regarding fonts See discussion under section 8.1.2 in WG 2-M26 minutes document N1117.                      First choice is True Type, or any Outline Font that can be converted to True Type; Last choice is 96x96 bit maps. The set is to be sent to Mr. Mike Ksar.                      M26, 27, 28, N29: In progress                      M30: Japan had sent the appropriate fonts to the convener. However, they could not be utilized -- reason unknown. JIS has already published material and it can be used by WG 2. Japan will further supply a camera ready copy of appropriate pages.</p>	<b>M31: Completed. Camera ready copy provided by Japan to the convener.</b>
<b>AI-25-6 Korean member body</b>		
	<p>is requested to forward the set of bit maps, and or the outline of the corrected shapes of the characters in defects in document N975, along with a blown-up (96x96 bits) hard copy is needed by the editor.                      M26, M27: M28, M29: In progress; Korea will attempt to speed up the availability of fonts.                      M30: Of the 6 characters that had the defective shapes, four have been over-ridden by pDAM-5 on Korean. Professor Kim will investigate the fonts for two remaining shapes in defect.</p>	<b>M31: Still in progress.</b>
<b>AI-25-10 Chinese member body</b>		
a	<p>is requested to study this possibility of composition to reduce the number of characters of the Yi script in document N965 that needs coding in the BMP.                      M26, 27, 28, 29, 30: Under study.</p>	<b>M31: Still under study; Target M32.</b>

### 4.2 Outstanding items from WG 2 meeting 26, San Francisco, CA, USA

Item	Assigned to / action (Reference document N1118 - resolutions, and document N1117 - minutes of San Francisco meeting WG 2-26, and corrections to these minutes noted in Section 3 of document N1203)	Status
<b>AI-26-8 Ms. Joan Aliprand - Liaison to TC 46</b>		
	<p>to take parts related to TC 46 in document N1071 for formal submission as liaison document by TC 46 along with the completed Proposal Summary Form.                      M27, M28: In progress.                      M29: Mr. Arnold Winkler tried to reach Ms. Aliprand - no success.                      M30: Mr. Mike Ksar will pursue the item with Ms. Aliprand - target M31.</p>	<b>M31: Still Outstanding.</b>
<b>AI-26-13 Mr. Michael Everson and Canada</b>		

Item	Assigned to / action (Reference document N1118 - resolutions, and document N1117 - minutes of San Francisco meeting WG 2-26, and corrections to these minutes noted in Section 3 of document N1203)	Status
	With reference to document N1104 on Canadian Aboriginal syllabics, to work with Canadian member body (and CASEC) and get agreement on a common position. M27--M30: CASEC (Mr. Dirk Vermeulen), the Canadian national committee, Mr. Everson and Mr. Hugh Ross are in correspondence with each other exploring the different alternatives and addressing some outstanding differences in views. Mr. Vermeulen has also presented on the topic to Unicode technical committee and to Unicode conference. Target M31.	<b>M31: Completed; See document N1441.</b>
<b>AI-26-14</b>	<b>Mr. Hugh McGregor Ross and Canada</b>	
	With reference to document N1073 on Canadian Aboriginal syllabics, to work with Canadian member body (and CASEC) and get agreement on a common position. See AI-26-13 above.	<b>M31: Completed; See document N1441.</b>

#### 4.3 Outstanding items from WG 2 meeting 27, Geneva, Switzerland

Item	Assigned to / action (Reference Meeting 27 Resolutions document N1204, Unconfirmed Meeting 27 Minutes in Document N1203, and corrections noted in document N1253)	Status
<b>AI-27-12</b>	<b>Mr. Johan van Wingen, Netherlands</b> is invited to examine the standard for the need for any statements regarding conventions used for naming characters such as 'digits', 'letters', etc. and propose clarification texts -- see minutes item 6.1.2.2. M28, M29, M30 - No new progress.	<b>M31: In progress.</b>

#### 4.4 Outstanding items from WG 2 meeting 28, Helsinki, Finland

None.

#### 4.5 Outstanding Action items from WG 2 meeting 29, Tokyo, Japan

Item	Assigned to / action (Reference Meeting 29 Resolutions document N1304 and Unconfirmed Meeting 29 minutes in document N1303; and corrections to these minutes in section 3 of document N1353).	Status
<b>AI-29-9</b>	<b>Korea</b> <b>b</b> To take note of the following comment from Mr. Zhang Zhoucai: "The latest Korean standard document (from Professor Kim) being published still has one glyph in the Korean column of unified ideograph as a serious defect. The Korean national body has not fixed it nor reported to WG 2". M30: Professor Kim to check.	<b>M31: Dropped.</b>
<b>AI-29-10</b>	<b>China</b> <b>a</b> To take comments in document N1246 and comments from this meeting (M29) as feedback to the appropriate experts on Uyghur, Kazakh and Kirgihiz. M30: In progress.	<b>M31: Still in progress.</b>

#### 4.6 Action items from WG 2 meeting 30, Copenhagen, Denmark

Item	Assigned to / action (Reference Meeting 30 Resolutions document N1354 and Unconfirmed Meeting 30 minutes in document N1353; and corrections to these minutes in section 3 of document N1453)	Status
<b>AI-30-1 Meeting Secretary - Dr. V.S. UMaaheswaran</b>	<p><b>a</b> To finalize the document N1354 containing the adopted meeting resolutions and send a plain text and word processor source to the convener as soon as possible, for electronic distribution by the convener to the WG 2 membership and to SC 2.</p> <p><b>b</b> To finalize the document N1353 containing the unconfirmed meeting minutes and send to the convener for distribution to WG 2.</p> <p><b>c</b> To contact Mr. Leigh Clayton (SC22 WG 3 - APL) and request that a Proposal Summary Form for APL QUAD character be prepared and submitted to WG 2</p>	<p><b>M31: Completed; See document N1354.</b></p> <p><b>M31: Completed; See document N1353.</b></p> <p><b>M31: Completed; See document N1419.</b></p>
<b>AI-30-2 Convener, Mr. Mike Ksar</b>	<p><b>a</b> With reference to query from X Consortium on identification of versions of the standard, to send a suitable response based on the discussion at the meeting.</p> <p><b>b</b> To investigate if AFII's font resources can be used for producing 8859 code tables for ISO publication.</p>	<p><b>M31: Completed; See document N1388.</b></p> <p><b>M31: Completed; See AFII liaison document N1459.</b></p>
<b>AI-30-3 Project Editor, Mr. Bruce Peterson</b>	<p><b>a</b> With reference to resolution M30.1 on naming guidelines, to add editorial corrections in document N1287 to the list of editorial corrigenda in document N1288.</p> <p><b>b</b> With reference to resolution M30.2 on Unique Identifiers, to prepare the final pDAM text and forward it to the SC 2 secretariat for further processing as pDAM-9 in SC2.</p> <p><b>c</b> With reference to resolution M30.3 to prepare the revised text of pDAM-7 -- with the choice of shape which looks like the character LATIN SMALL LETTER LONG S at x017F with a dot above added to it, for the character at x1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE -- and forward it along with an updated disposition of ballot comments (document N1315) to SC2 secretariat for further processing in as DAM-7 JTC1.</p> <p><b>d1</b> With reference to resolution M30.4 to prepare the revised text for pDAM-8 (based on document N1333), update disposition of comments (based on N1343) and forward them to SC2 secretariat for further processing as DAM-8 in JTC1.</p> <p><b>d2</b> With reference to resolution M30.10 on Yiddish character, to add the shape, name and proposed code position of xFB1D from document N1364 to the cumulative list of characters for future processing.</p> <p><b>e</b> With reference to resolution M30.8 on OBJECT REPLACEMENT CHARACTER to add the shape (to be provided by Dr. Asmus Freytag), name and proposed code position of xFFFC from document N1365 to the cumulative list of characters for future processing.</p> <p><b>f</b> With reference to resolution M30.11 on Tibetan, to create a disposition of comments document (based on Table of Replies in N1295 and N1314, and agreements reached at meeting 30), and a revised text of pDAM-6 reflecting the disposition of comments and forward them to SC2 secretariat for further processing as DAM-6 in JTC1. A camera ready copy of the code table is to be provided by China.</p> <p><b>g</b> With reference to resolution M30.6 on four additional Cyrillic characters (from documents N418 and N1323), to add the names and shapes to a standing document containing a cumulative list of characters for future processing. Their provisional encoding proposed in N1323 will be confirmed based on national body feedback.</p> <p><b>h</b> With reference to resolution M30.7 on Cherokee script, to add the 85 accepted characters - their shapes and names to cumulative list of characters for future processing. The encoding is to be finalized based on further input from the US national body on acceptable ordering of these 85 characters.</p>	<p><b>M31: Completed; See document N1384.</b></p> <p><b>M31: Completed; pDAM-9 ballot in progress.</b></p> <p><b>M31: Completed; DAM-7 text sent to SC 2 for JTC 1 ballot.</b></p> <p><b>M31: Completed; DAM-8 text sent to SC 2 for JTC 1 ballot.</b></p> <p><b>M31: Completed; See document N1385.</b></p> <p><b>M31: Completed; See document N1385.</b></p> <p><b>M31: Completed; See document N1386; DAM-6 sent to SC 2 for JTC 1 ballot.</b></p> <p><b>M31: Completed; See document N1385.</b></p> <p><b>M31: Completed; See document N1385; Encoding feedback from US national body received at meeting 31.</b></p>

Item	Assigned to / action (Reference Meeting 30 Resolutions document N1354 and Unconfirmed Meeting 30 minutes in document N1353; and corrections to these minutes in section 3 of document N1453)	Status
	<p><b>l</b> To create a standing document containing all the symbols accepted for encoding, with the proposed shapes (possibly cut and pasted), names and proposed code positions. The document should include the eight electrotechnical symbols accepted in resolution M30.9. Messrs. Everson and Freytag are to assist the editor.</p> <p><b>j</b> To update document N1223R - the textual part of 10646 -- reflecting Amendments 1 to 4, COR-1, and all the accepted technical and editorial amendments as a WG 2 standing document.</p> <p><b>k</b> To prepare Annex P entries as editorial corrigenda and add to the cumulative list of editorial corrections based on the proposal from Israel (document N1346 - Hebrew characters) - after clarification is received from Mr. Stefan Fuchs on what is meant for the last two entries x05C0 and x05C3.</p>	<p><b>M31: Completed; See document N1416.</b></p> <p><b>M31: Completed; See document N1396.</b></p> <p><b>M31: Completed; First six entries cannot be entertained since DAM-7 ballot is in progress - Israel can comment during ballot; For the last two entries (x05C0 and x05C3) suitable text will be prepared by the editor.</b></p>
	<p><b>AI-30-4 Israel (Mr. Stefan Fuchs)</b> To clarify (communicate to the editor and convener) what is meant for the last two entries x05C0 and x05C3 in document N1346 - proposal for entries in Annex P for some Hebrew characters..</p>	<p><b>M31: Completed; First six entries cannot be entertained since DAM-7 ballot is in progress - Israel can comment during ballot; For the last two entries (x05C0 and x05C3) suitable text will be prepared by the editor.</b></p>
	<p><b>AI-30-5 IRG</b></p> <p><b>a</b> To work towards completion of the Vertical Extension proposal - a set of 6608 characters and their shapes for discussion on encoding at meeting 31.</p> <p><b>b</b> With reference to resolution M30.12 on Horizontal Extension (Supplementation) to continue its work on the subject addressing the concerns on whether the source-code separation rule was properly applied.</p> <p><b>c</b> To change the use of the term 'Level' to 'Stage' I, II, III etc. in their documentation on Vertical Extension, to avoid confusion with the Levels of conformance in 10646.</p> <p><b>d</b> To revise their proposals on Ideographic Composition (in documents N1348 and N1357) based on the feedback received at this meeting.</p>	<p><b>M31: Completed; See documents N1423, through N1426.</b></p> <p><b>M31: Completed; See documents N1425 through N1429.</b></p> <p><b>M31: Completed; See documents N1423 through N1426.</b></p> <p><b>M31: Completed; See document N1430 and N1433.</b></p>
	<p><b>AI-30-6 Liaison Representative to SC 22 (Mr. Johan van Wingen)</b></p> <p><b>a</b> With reference to resolution M30.2 on Unique Identifiers, to send the proposed pDAM text in document N1289R along with a liaison letter, immediately to SC 22 requesting their feedback - by middle of May, to be able circulate the feedback prior to August 96 WG 2 meeting</p>	<p><b>M31: Completed.</b></p>
<p><b>NOTE: RENUMBERED DUPLICATED AI-30-6 as AI-30-18 and moved to the end of this table -- Uma</b></p>		
	<p><b>AI-30-7 Japan</b></p> <p><b>a</b> To forward any information on 'Braille is a script on its own' to the Unicode Consortium as information.</p>	<p><b>M31: Dropped; Japan will contact Unicode liaison representattive off-line.</b></p>
	<p><b>AI-30-8 China</b></p>	



Item	Assigned to / action (Reference Meeting 30 Resolutions document N1354 and Unconfirmed Meeting 30 minutes in document N1353; and corrections to these minutes in section 3 of document N1453)	Status
	<p><b>a</b> With reference to resolution M30.14, to provide a camera ready copy of the code tables for the revised text of pDAM-6 on Tibetan, reflecting the disposition of comments to be prepared by the editor, and forward it the editor.</p> <p><b>b</b> To resubmit the request for missing Pinyin characters as New Character proposals</p>	<p><b>M31: Completed; Editor has sent DAM-6 text to SC 2 secretariat for JTC 1 ballot.</b></p> <p><b>M31: Completed; See document N1461.</b></p>
	<p><b>c</b> To ensure the meeting notice for the ad hoc meeting on Mongolian in August 1996, Beijing, China, is sent out well in advance to national bodies and liaison organizations.</p>	<p><b>M31: Completed; See documents N1437 and N1438.</b></p>
	<p><b>AI-30-9 Ireland (Mr. Michael Everson)</b></p> <p><b>a</b> In order to alleviate the copyright concerns related to the true type fonts for the keyboard symbols, to supply a letter to the WG 2 convener, permitting WG 2 to use the true type fonts his company supplies for use of WG 2 work.</p>	<p><b>M31: Completed; Letter has been sent to the convener.</b></p>
	<p><b>b</b> To prepare Proposal Summary Forms and proposals for Sinhala, Burmese and Khmer scripts, based on contribution N1321 and N1376 from Mr. Hugh Ross.</p> <p><b>c</b> To assist the editor in preparation of the standing document on symbols.</p>	<p><b>M31: In progress; Mr. Everson has these on his web page - he is requested to submit them in hardcopy form to the convener.</b></p> <p><b>M31: Completed; Editor has prepared document N1416.</b></p>
	<p><b>AI-30-10 US (Mr. Michel Suignard)</b></p> <p><b>a</b> To provide information on the preferred order for the 85 Cherokee characters accepted in resolution M30.7 to enable finalizing their code positions.</p>	<p><b>M31: Completed; See document N1408.</b></p>
	<p><b>AI-30-11 Unicode Consortium (Dr. Asmus Freytag)</b></p> <p><b>a</b> To assist the editor in preparation of the standing document on symbols.</p> <p><b>b</b> To provide the shape for the OBJECT REPLACEMENT CHARACTER accepted in resolution M30.8 to the editor.</p>	<p><b>M31: Completed; Editor has prepared document N1416.</b></p> <p><b>M31: Completed; Editor has prepared document N1385.</b></p>
	<p><b>AI-30-12 Ad Hoc Group on Principles and Procedures (Mr. Sven Thygesen - lead)</b></p> <p><b>a</b> To work with Mr. Hugh Ross and document the guidelines / criteria that were used in the creation of the first edition of the standard, for deciding when a pre-composed character was considered for inclusion directly versus when it would be left as Level 3 composition encoding.</p>	<p><b>M31: Outstanding.</b></p>
	<p><b>b</b> To provide some guidelines on when provisional code positions could / should be assigned for new character proposals.</p>	<p><b>M31: Outstanding.</b></p>
	<p><b>c</b> To enhance document N1352 on Principles and Procedures to indicate how a proposal progresses through different stages in WG 2 from the initial proposal stage to the final publication. A description of how the relevant information is captured (possibly in document N1302) as each proposal progresses through the different stages should be included.</p>	<p><b>M31: Completed; See document N1460 for material to be incorporated.</b></p>
	<p><b>AI-30-13 CEN/TC 304 Liaison (Mr. Evangelos Melagrakis)</b></p> <p><b>a</b> To provide a more detailed liaison report on CEN /TC 304 activities or projects which are supposed to be joint with WG 2 per the Vienna agreement -- towards avoiding duplication of work in CEN/TC 304 and to communicate the same message to CEN/TC 304.</p>	<p><b>M31: In progress.</b></p>
	<p><b>AI-30-14 Denmark (Mr. Keld Simonsen)</b></p> <p><b>a</b> To update proposed revision to Annex E (document N1360) to include all the character names from 10646 and all its amendments and corrigenda - as a WG 2 standing document..</p>	<p><b>M31: Completed.</b></p>
	<p><b>AI-30-15 Romania (Ms. Alexandrina Statescu)</b></p>	

Item	Assigned to / action (Reference Meeting 30 Resolutions document N1354 and Unconfirmed Meeting 30 minutes in document N1353; and corrections to these minutes in section 3 of document N1453)	Status
	<p>a to take into consideration the feedback received at this meeting and inform WG 2 on whether they need (from document N1361) -- s, S, t and T with comma below --characters separately or can stay with the current unification of Cedilla with Comma Below, including considerations for impact on Latin-2 based implementation for Romanian. Romania is also encouraged to consult with Turkish experts.</p>	<p><b>M31: Completed; See document N1440; Turkish national body has NOT been contacted.</b></p>
	<p><b>AI-30-16 Latvia, Ireland and Finland</b></p> <p>a to provide additional supporting documents to address the various concerns expressed on proposal for Livonian characters in document N1322 at this meeting to permit WG 2 to better evaluate the proposal.</p>	<p><b>M31: Outstanding.</b></p>
	<p><b>AI-30-17 All member bodies and liaison organizations</b></p> <p>a To feedback on the proposed encoding in document N1323 - for Macedonian Cyrillic characters (reference resolution M30.6).</p> <p>b Those NBs who have questions about how fonts supplied to AFII are being protected from copyright point of view, should contact AFII directly.</p> <p>c With reference to resolution M30.5 on Runic script to provide feedback to the Swedish national body towards resolving the names in document N1382, based on comments expressed in meeting 30. Also, to provide feedback on how to deal with the additional information about the names and where these characters should be coded - in the BMP or in an extended plane.</p> <p>d to feedback to Mr. Michael Everson on document N1329 on several questions raised on character naming principles.</p> <p>e To submit contributions on ' collection identifiers' - how these should be treated in the standard with each pDAM, repertoire enhancements etc.</p> <p>f To feedback on Braille encoding proposal</p> <p>g to feedback on contributions N1320 and N1373 on Level 2 support for Indic &amp; other scripts from Mr. Hugh Ross.</p> <p>h to review and comment on document N 1359 and provide feedback to the IRG rapporteur before the next IRG meeting (IRG-7) 24--28 June 1996 in Hong Kong.</p> <p>i To take note of the following future IRG / WG 2 meeting schedules:</p> <ol style="list-style-type: none"> <li>1. Meeting no. 31: 12 to 16 August 1996, in Quebec City, Canada (the week prior to WG 3 and SC 2 meetings)</li> <li>2. Meeting no. 32: 20 to 24 January 1997, in Singapore (backup USA - Seattle or San Francisco area)</li> <li>3. Meeting no. 33: 23 to 27 June 1997, in Cyprus (backup Greece or Ireland)</li> <li>4. IRG Meeting 7: 24--28 June 1996, Hong Kong</li> <li>5. IRG Meeting 8: 13--17 January 1997, Singapore</li> <li>6. Ad hoc group on Mongolian: meeting planned for August 1996 in Beijing, China</li> </ol>	<p><b>M31: Noted. Feedback from Unicode consortium in document N1408.</b></p> <p><b>M31: Noted.</b></p> <p><b>M31: Noted. Feedback from Unicode consortium in document N1408. See also documents N1417, N1443.</b></p> <p><b>M31: Noted. No feedback.</b></p> <p><b>M31: Outstanding. No feedback.</b></p> <p><b>M31: Feedback in document N1409 from Unicode consortium.</b></p> <p><b>M31: Noted. Some feedback from Unicode consortium in document N1462.</b></p> <p><b>M31: Noted. Some feedback from Unicode consortium in document N1408.</b></p> <p><b>M31: Noted.</b></p>
	<p><b>AI-30-18 Greece</b></p> <p>a To prepare a revised proposal on Byzantine Musical Symbols addressing the concerns expressed during the discussion at meeting 30, for consideration at meeting 31.</p>	<p><b>M31: In progress.</b></p>

## 5. Status of documents sent to JTC1 and ITTF

### 5.1 AMD 5 - Korean Hangul

Input Document:

**N1391** Hangul syllable name algorithm, simplified; Bruce Paterson; 1996-05-18

Document N1391 is a contribution from the editor Mr. Bruce Paterson for information. AMD-5 was sent to SC2 / ITTF around the middle of March 96. It is expected to be circulated by JTC 1 sometime in August.

## 5.2 AMD 6 - Tibetan

### Input Documents:

**N1386** Disposition of Comments pDAM6 - Tibetan; Bruce Paterson and Tibetan ad-hoc; 1996-05-14  
**N1397** DAM 6 - Tibetan - Attachment B - Names List; Bruce Paterson; 1996-06-06  
**N1418** Comments by ACIP on Unicode Encoding of Tibetan (July 1996) - The Asian Classics Input Project (ACIP); Robert Chilton, (ACIP); 1996-07-23

Documents N1386 and N1397 are for information. Amendments 6, 7 and 8 - all were sent middle of June to SC 2 secretariat and has been forwarded to ITTF for JTC 1 ballot. Document is expected to be circulated in August by JTC 1 for ballot.

Document N1418 contains feedback from Asian Classics Input project. WG 2 notes the feedback.

**Action Item:** The convener is to communicate to the Asian Classics Input Project (ACIP) that DAM6 is for ballot, and that ACIP should communicate through the appropriate national body to get their feedback in.

## 5.3 AMD 7 - Hebrew Cantillation Marks + Others

### Input Document:

**N1398** DAM 7 - Additional 33 characters, Hebrew, Latin Extended and Currency symbol; Bruce Paterson; 1996-06-06

Document N1398 is for information. AMD-7 is in Process at JTC 1.

## 5.4 AMD 8 - CJK Informative Annex

### Input Document:

N1399 DAM 8 - Informative Annex S - Procedure for the Unification and arrangement of CJK Ideographs; Bruce Paterson; 1996-06-06

Document N1399 is for information. AMD-8 is in Process at JTC 1.

## 5.5 NP 15285 - Character Glyph Model

### Input Documents:

N1392 Summary of Voting on Document JTC1 N 3745, Proposal for a New Work Item on An Operational Model for Characters and Glyphs; Secretariat, ISO/IEC JTC1 - SC2 N2677; 1996-04-03  
N1411 Revised Working Draft of Character Glyph Model; Ed Hart, Al Griffiee; 1996-06-24  
N1412 US Requests for WG 2 on the proposed TR on the topic, "An operational model for characters and glyphs"; ANSI - U.S.; 1996-06-21  
N1413 Proposed Resolution of Japanese Comments on JTC 1 N3745; Ed Hart & Al Griffiee; 1996-06-17  
N1456 Danish Comments on Character Glyph Model; Denmark; 1996-08-02

### Presentation:

Mr. Ed Hart introduced the subject. Document N1411 was sent out as a draft in June 1996. Editorial changes were made. Some glyphs were added to the examples. Comments from the NP ballot were addressed. We are awaiting feedback from different national bodies on the document. It is felt that additional time - more than the 30 day period for the formal balloting of DTRs - would be beneficial. We could address the further progressing by the next meeting. If there are people willing to have a discussion on the CGR model an ad hoc could be convened at this meeting. There is a proposal to create a Rapporteur's Group on CGM -- the reason being that other work groups are also interested in this matter.

### Discussion:

- a) Mr. Johan van Wingen: A remark about procedure - a new work item may have to be approved by SC 2 and assigned to one of the working groups. I am at the disposal of the editors of the CGR model if needed. Netherlands might abstain on this item.
- b) Mr. Arnold Winkler: Ensure that there is an SC2 resolution (at the plenary next week) to permit WG 2 to process the document as a pDTR registration and ballot. The NP number (15285) is the ISO standard / technical report number.
- c) Mr. Keld Simonsen: We would like to expand the scope of CGRM to include further definitions in one place. The title and scope have changed between WG 2 original discussion and the JTC1 ballot. The JTC 1 procedures call for a Registration of pDAMs and forwarding for SC2 ballot. (Mr. Simonsen was asked to bring it up at the SC2 meeting.)
- d) Mr. Takayuki Sato: I think it is too early to talk about a ballot at this stage. We will need assignment of the work from SC 2. This document could be made a Working Draft to permit WG 2 to review and comment. National body feedback should be requested.
- e) Mr. Alan Griffiee: A working draft could be distributed to the national bodies for feedback.
- f) Dr. Umamaheswaran: One option is to submit the document to SC 2 requesting national body feedback on this working draft.
- g) Dr. Glenn Adams: It may not be appropriate to expand the scope of the document in terms of terminology. The current document is based on existing terminology.
- h) Mr. Mike Ksar: The New Work Item has been approved with the documented scope of work. The work was started at the San Francisco meeting - the title has not changed, the work has been done by the US national body. The ad hoc should deal with looking at improving the current draft. The matter of creating a new Rapporteur Group should be brought to the attention of SC 2. Within SC 2, the common membership of CGRM - between WG 2 and WG 3 should be sufficient, on an ad hoc basis.

### Disposition:

An ad hoc group was invited to update the current draft towards making it a Working Draft. This document will be sent to SC 2 requesting national body feedback before progressing it as a pDTR by the next WG 2 meeting.

**Action Item:** National bodies are to review the draft WD for TR 15285 that will be circulated by SC 2 for national body comments to enable WG 2 to further progress it at its January 1997 meeting.

**Relevant resolution:**

**M31.1 (Character Glyph Model): Denmark, Ireland, Netherlands Sweden, and Singapore Abstained**

With reference to document N1411 on the Character Glyph Model:

- a) WG 2 requests that SC 2 assign NP 15285 to WG 2.
- b) WG 2 requests that SC 2 appoint Messrs. Edwin Hart and Alan Griffee as co-editors of the TR.
- c) WG 2 requests that SC 2 distribute the current working draft (an updated document N1411) of the TR to SC 2 members and liaisons, for comments to be returned to the convener of WG 2 and to the co-editors prior to 30 November, 1996, to enable preparation of a draft pDTR for consideration at the WG 2 meeting 32 in January, 1997.
- d) WG 2 requests that SC 2 approve a concurrent ballot on registration and approval of the pDTR that will be prepared by WG 2.

## 5.6 Technical Corrigendum 1 (AE) Pub

**Input Document:**

**N1393 ISO copy of 10646 Technical Corrigendum 1 (Æ); ISO ITTF-SC2 N 2687; 1996-02-15**

Document N1393 contains the final text sent to ITTF - it is only for the information of WG 2 members..

## 5.7 French version of 10646

**Input Document:**

**N1448 French version of 10646 text; LaBonté; 1996-08-13**

Mr. Alain LaBonté made the latest text of the French version of 10646 available for those who are interested in reviewing the document, as requested during an earlier WG 2 meeting. This document has been prepared by a group of volunteers from Canada and France, based on some initial work done by Mr. Michel Suignard. Comments should be sent to Mr. Alain LaBonté.

**Action Item:** National bodies and liaison organizations interested in the French version of 10646 are invited to review document N1448 and feedback to Mr. Alain LaBonté.

## 6. Status of documents sent to SC2

### 6.1 pDAM 9 - Unique Identifiers

**Input Document:**

**N1389 pDAM9 - Identifiers for Characters; Bruce Paterson; 1996-04-27**

**N1445 Ballot results - table of replies - pDAM 9; SC2 Secretariat; 1996-08-12**

Document N1445 contains the table of replies and ballot comments on pDAM-9. Attachments from Ireland, US, Denmark, Korea, UK. The results are: Approved 12, Approved with technical comments 2 - (UK, US); Approved with editorial comments -1 (Korea ?) ; responses from Japan and Canada were missing; Disapprove - Ireland, Denmark. No O members voted. Disposition of comments will be carried forward to next meeting.

## 6.2 WG 2 report to SC2 Plenary

### Input Document:

N1394 WG 2 Report to SC2 Plenary - draft; Mike Ksar; 1996-05-22

### Presentation:

Mr. Mike Ksar presented the draft WG 2 report to the SC2 plenary next week in document N1394. The information is based on the spread sheet being maintained by Mr. Sven Thygesen.

### Discussion:

- a) Mr. Keld Simonsen: We should add under liaison - CEN/TC304.
- b) Mr. Sven Thygesen: Under the scripts we are currently working on - An additional Hebrew character, Canadian Aboriginal Syllabics script, Byzantine, Braille, Cherokee, Armenian, Indic, Yi, Dai, Cham -- for the next year. Annex N of 10646-1: 1993 has a list of scripts to work on. There will be documents with proposal summary form in the future.
- c) Dr. Glenn Adams: What is the status of Cham? Vietnam has requested that Cham will be revived. There are two proposals by China on Dai - still under progress.
- d) Mr. Mao Gang: Add Ideographic Vertical Extensions A, B and C; Horizontal Supplementation, Ideographic Structure Character

**Action Item:** Mr. Mike Ksar is to revise the document N1394 - prepare N1394R. Dr. Umamaheswaran was delegated to present this report to SC 2 plenary next week on behalf of WG 2, since the convener was unable to attend the plenary.

## 7. Non-repertoire issues

### 7.1 Naming of Characters

#### Input Documents:

N1287 Naming of characters - draft editorial corrigenda; Bruce Paterson; 1996-01-03  
N1329 Why character names are important; Michael Everson, expert contribution; 1996-02-02  
N1384 Editorial Corrigenda - 2nd Cumulative List - Issue 2; Bruce Paterson; 1996-06-06

Document N1287 has been incorporated into document N1384. There was no feedback on document N1329. The topic was postponed to next WG 2 meeting in Singapore.

### 7.2 Editorial Corrigenda - standing documents

#### Input Documents:

N1207 Editorial Corrigenda - Cumulative List - Issue 2; Bruce Paterson; 1995-04-26  
N1223R 10646-1 Corrigendum No. 1 (First Draft); Bruce Paterson, project editor; 1995-06-15  
N1384 Editorial Corrigenda - 2nd Cumulative List - Issue 2; Bruce Paterson; 1996-06-06  
N1396 Corrigendum No. 2 - first draft - revised to 30 April 1996 - replaces N1223R (1995-07-09); Bruce Paterson; 1996-06-05

Document N1384 is a list of editorial corrigenda that were on WG 2's plate to date. Its contents have been consolidated into document N1396. This document provides the text of 10646 incorporating all the accepted defect report dispositions, the changes due to Amendments 1 through 4 -- it is the consolidated latest version of text of 10646. This document as was distributed by the convener had some formatting problems and the resulting errors were fixed by the convener in a revised version of document N1396.

**Action Item:** WG 2 members are requested to use document N1396 as the standing reference document for the textual content of the latest 10646.

## 7.3 Repertoire additions for 10646 - Cumulative List # 3

### Input Document:

N1385 Repertoire additions for 10646 - Cumulative List No. 3; Bruce Paterson; 1996-05-12

Document N1385 is for information to WG 2 members.

**Action Item:** WG 2 members are to inform the editor if there are any errors in the information in document N1385 - the cumulative list no. 3 of additional characters.

## 8. Repertoire issues

### Input Document:

N1408 UTC 69 Resolutions - Input on various repertoires under discussion by WG 2: Ethiopic, Additional Latin, Additional Cyrillic and others; Unicode Consortium, Glenn Adams; 1996-06-13

### 8.1 Mongolian Script

#### Input Documents:

N1368 Joint Proposal on Encoding Mongolian; China, Mongolia; 1996-04-10

N1383 Initial Comments on Encoding Mongolian (ad-hoc consists of China, U.K., Mongolia, Ireland and the Unicode Consortium); Mongolian ad-hoc; 1996-04-25

N1437 Report of 3<sup>rd</sup> International Mongolian Encoding Meeting; China, Mongolia; 1996-08-06

N1438 Draft on encoding Mongolian Character Set - Update; China; 1996-08-08

#### Presentation:

Mr. Mao Gang presented document N1437 - containing the meeting report of the third international meeting on Mongolian encoding, held the week of 6 August 96. Document N1438 containing the latest draft proposal for Mongolian, has only the base characters proposed, compared to document N1383 which had both base and composed characters. Because contextual analysis cannot always predict the shape of the final characters some control characters have been proposed. A table which maps from the code positions to their fully composed form and unification of the shapes among the different scripts etc. is under preparation. Some presentation forms happen to refer to different characters in different scripts. Others the shapes differ for the same character etc. The rules of unification document is being reviewed by Mongolia. The preliminary copy could be sent to interested parties. Mongolia did not have chance to review document N1438 and, therefore, this document should be considered as only for information. Punctuation marks, digits, letters and control codes are also proposed.

#### Discussion:

- a) Mr. Mike Ksar: The Mongolian ad hoc should be commended for the excellent progress that has been made over the year. China, Mongolia and other experts have participated. The national bodies and liaison organizations should study the proposal and feedback prior to next meeting. China will send the unification rules document to interested parties (Unicode request is to get it prior to first week of September 1996). China may organize another ad hoc in China prior to Singapore. Organizers of the next ad hoc meeting - should give a little more advanced information to potential attendees.
- b) Dr. Glenn Adams: Happy to see the progress made by Mongolian. The Unicode consortium would like to study the proposal in detail. Would like to explore some possible unification of some of the control characters with existing characters such as the ZWJ etc. It is regrettable that Unicode consortium could not send a delegate to the meeting. A document "Rules of the Mongolian Todo Xibe Presentations to ----" has been mentioned. Would we be able to get a copy of this? Even though a lot of progress has been made - the proposal still needs lot of review and consideration. Mongolia's expectation to finalize by Singapore meeting may be optimistic.
- c) Mr. Michel Suignard: Perhaps an ad hoc could be arranged in Singapore.

- d) Mr. Mao Gang: At the Copenhagen meeting we had suggestions from Dr. Asmus Freytag - these were fully discussed by the Mongolian meeting and the information is in the documentation. There are several countries involved in the Mongolian subject. The importance of the ad hoc consisting of the experts from various countries is to be emphasized. The expectation of Mongolia is that a final proposal would be at the Singapore meeting. Only coding experts would be present in WG 2 ad hoc. We need linguistic experts on the topic to deal with some of the complexities - it is just not coding aspects. It may not be practical to send all these experts to Singapore.

**Action Item:** WG 2 members are invited to review documents N1437 and N1438 on the Mongolian script and inform Chinese national body if they wish to participate in the ad hoc group on Mongolian. Chinese national body is requested to inform all interested parties of the ad hoc meeting as much in advance as possible.

**Relevant resolution:**

**M31.2 (Mongolian script):**

**Unanimous**

**WG 2 commends the Mongolian ad hoc group on the excellent progress that has been made on the Mongolian script. WG 2 accepts documents N1437 and N1438 on the Mongolian script. WG 2 further encourages China and Mongolia to convene another ad hoc meeting to further progress the proposal in document N1438, and invites national bodies and liaison organizations to participate.**

## 8.2 Indic and South East Asian Scripts

### 8.2.1 Indic Scripts

**Input Documents:**

N1320 Simple Use of Indic and Southeast Asian Scripts in Extended Level 2; Hugh McG. Ross, UK; 1995-12-20  
N1406 Defect Report - Indic Script problems; Hugh Ross & Bruce Paterson; 1996-05-28

**Presentation:**

Mr. Bruce Paterson introduced the documents. The essence of document N1320 has been captured in the defect report in document N1406.

**Discussion:**

- a) Dr. Glenn Adams: Regarding false compounds - Mr. Hugh Ross is trying to establish rules for spelling usage. The Unicode consortium does not believe that the standard should restrict the use of the characters. An example would be -- PHOENIX - if the font has OE ligature one could use OE. However the freedom is left not to use the OE ligature. The wish from Mr. Hugh Ross seems to be to enforce the use of ligatures if it is present. Unicode consortium does not think this is correct.

ISCII is currently using different techniques - the Unicode standard has documented the automatic conjunct formation behavior without need for additional link characters. The statement has been made by Mr. Hugh Ross that the link character is needed - the original ISCII in 1983 had it, but neither the 1988 nor the 1993 versions have it.

In some existing implementations we do in fact use some of the characters as alternative representations for other characters. Some implementations do exist without any specific marketing implications / problems.

The ZWJ etc. are not used for conjuncts - alternate format characters are not employed in Indic scripts.



- b) Mr. Bruce Paterson: Regarding false compounds - we are not here to put any restrictions in any way on how the characters of ISO/IEC 10646 are used. The OE ligature example, is OK for the English text. In the Indic scripts it is not quite the situation. There is a difference between the false compounds and the other usage. It is a matter of not just the font - but how it is used in dictionaries. The example Mr. Hugh Ross had given -- was using Unicode to be written as Unicocle - because the 'c' looks like a 'd'. One could do that - but it is a spelling mistake. The proposal is to provide a warning that some characters look like they are prepared from using other characters which look like the pieces of the characters. Document N1426 has the latest proposed text.

Regarding adding a Link character - ISCII standard 1988 or 1991 do not have it. It was in 1983. India has sent a formal letter to SC 2 requesting that ISO/IEC10646 change the current ordering of Indic coding to align / conform with the latest ISCII standard.

The intent (of Mr. Hugh Ross's proposal) was - in Level 2, not to allow for potential spelling errors. I welcome a paper describing how the conjuncts are formed from Unicode consortium. The point of contention is that these characters are, by implication, are applicable to Presentation only. There is a potential problem with Level 2 and Indic scripts leading to potential multiple spellings.

**Action Item:** UK and Unicode to take it off line and come to some agreement / proposal for some clarification text to resolve the ambiguity. Using document N1406 as the base, address the issues raised by UK and encapsulate the issues in a simple way.

## 8.2.2 South East Asian Scripts

### Input Document:

N1321 Harmonization of Indic and Southeast Asian Scripts; Hugh McG. Ross, UK; 1996-01-25

Document N1321 was presented at the WG 2 meeting in Copenhagen. There was an action item on Mr. Michael Everson to prepare specific script proposals along with the summary form.

### Discussion:

- a) Dr. Glenn Adams: This document seems to be for information at this time - would like to see specific scripts with appropriate specific proposal summary form. Unicode consortium had made previous proposals on some of the scripts in document N1321. Unicode consortium recognizes further discussion is needed on some of these scripts.
- b) Mr. Bruce Paterson: UK had prepared some proposals on Sinhala for example - did not get into the first edition, along with support from the Sri Lankan standards institution.

### Disposition:

Document N1321 will be used as a part of background information on related South East Asian scripts when proposal summary forms are brought forward for consideration by WG 2.

## 8.3 Additional Latin Characters

### 8.3.1 Four Romanian characters

#### Input Document:

N1440 Confirmation of request for 4 additional Latin characters used in Romania - reference document WG 2N1361; Institutul Roman De Standardizare (IRS); 1996-07-09

Document N1440 is in response for request for more back ground information from Copenhagen discussions. It contains more information from Romania on their request for four additional characters - s, S, t and T with Comma below - to be added to 10646. These four characters have been unified in current SC2 standards with the four corresponding Turkish characters - w, S, t and T with Cedilla below. The Turkish national body has not responded to Romania.

**Discussion:**

- a) Mr. Johan van Wingen: I thought after the extensive discussion related to 8859-xx we had convinced the Romanian delegate that it is not useful to create another part of 8859 - and there is no need for these four characters. The rendering of these characters is difficult to be distinguished from the cedilla below on print. These could be glyph variants of the ones with the Cedilla below.
- b) Mr. Michel Suignard: The Romanians do have a point and we have to work with the users as well as the standards people in Romania - it is a migration issue. The data is being tagged / identified as Latin-2 and migration to a new Latin-x has to be carefully addressed. If Romania is not answering this we should take it upon ourselves and request for some delay. We should put an action item - to explore the migration related problems - it is not just on Romania. All interested parties should work and provide evidence regarding migration problems.
- c) Mr. Mike Ksar: The issue is not whether these characters are needed or not. The action item on Romania - was to address whether the current unification is a problem or not. Copenhagen discussion went into the details. The other aspect is the question of migration. There are two aspects of migration -- one is the interchange between 10646 and 8-bit codes, and the other is the software rewrites needed to access the new characters. The cost of migration is not only borne by the country but also by the various manufacturers. If 10646 is being used to add characters -- it should not be used as a reason to go back to (interchange with?) the 8-bit code.
- d) Mr. Alain LaBonté: The contribution from the Romanian national body is quite convincing that these are distinct characters. The users and manufacturers both have to bear the cost of changing. Technical stuff in IT is to be meant for users.
- e) Mr. Keld Simonsen: I would like to concur that the evidence provided is convincing that the four characters are needed for Romanian. The longer we wait to assign these into 10646 the bigger the migration would be. I would favor a quick addition to UCS and minimize the impact on the migration.
- f) Mr. Bruce Paterson: The question would be -- in any piece of text would we have misinterpretation if these are unified. If they appear in a piece of text will they appear in a confusing way. Linguists have to answer this question.
- g) Dr. Glenn Adams: The Romanians may have a valid requirement for the characters. The question of unification can be addressed - only if Romanian and Turkish text appear together. We have not seen evidence of diligence from the Romanian national body. The de-unification should not be taken lightly either - we should be careful. For example the CJK case.
- h) Mr. Stefan Fuchs: I am not quite familiar with the discussion in the Copenhagen meeting. These four letters are in popular use. Perhaps we should address the question in two parts -- consider the four characters as new request. The second part is the migration question. So far there are no applications using 10646. They are mostly 8-bit code based systems. Currently they are using 8-bit implementations of Latin 2, with other fonts etc. What is adequate evidence for Unicode consortium? As far as I know - a solution to the migration problem is being asked of Romania - what does it mean in the context of 10646? Will Turkey respond to them or not - we do not know.
- i) Dr. Umamaheswaran: The four characters were unified with those with Comma below in SC2 standards including 10646 - the latest request from Romania is to de-unify them. The question that needs to be asked is whether or not these characters should stay unified. The questions to the Romanian national body were --- whether Romanian and Turkish text do appear together and give some justification for de-unification.
- j) Mr. Sven Thygesen: We should ask Romania to give more details -- where and when these characters are used -- not sure if Romanians have answered.
- k) Professor Kohji Shibano: The scale of unification or de-unification in the CJK case is far more wide-reaching than the four characters in question.

**Disposition:** Await further clarification from Romania.

**Action Item** On the subject of s, S, t and T with comma below, The Romanian national body and everyone else concerned with potential migration and coexistence problems are invited to

provide more information including consideration for the various points raised above and in the Copenhagen meeting, for further consideration at the Singapore meeting.

### 8.3.2 Livonian characters

**Input Document:**

**N1322** Proposal for addition of Latin characters for Livonian; Everson, Ruppel & Metra; 1995-11-01

More information was requested from Latvia / Ireland and other interested parties based on discussion at the Copenhagen meeting. WG 2 is awaiting feedback.

**Discussion:**

Mr. Johan van Wingen: Per population statistics, Livonian is spoken by only 99 people. Should we be adding characters only to satisfy such a small user group.

**Disposition:**

Postponed discussion to the next meeting awaiting further input from Ireland, Latvia and other interested parties.

### 8.3.3 Special letters for Nigerian Yoruba

**Input Documents:**

**N1143** Latin letters for African languages - proposal summary form for N 983; Hugh McG Ross, UK individual contribution; 1995-02-01

**N1390** Further Request to add Special Letters for Nigerian Yoruba; Hugh McG Ross; 1996-04-05

**Presentation:**

Mr. Bruce Paterson introduced document N1390. The proposal for special Latin letters in support of Yoruba from Mr. Hugh Ross had been completed earlier. It was distributed in July 1995, and was tabled in Copenhagen. Further evidence was requested on their use. Attachments in document N1390 from Mr. Hugh Ross is in support.

**Discussion:**

- a) Mr. Johan van Wingen: These characters may be stress marks. The school books etc. may use stress marks - it is not sufficient evidence.
- b) Dr. Glenn Adams: The Unicode's general preference is that Level 3 - composition be used. The national bodies should take a look at these. I suspect Unicode consortium will not have objections to the proposal.
- c) Mr. Mike Ksar: WG 2 need not seek or go after Official Letters before we add to UCS.

**Disposition:** Delay further discussion till Singapore meeting.

**Action Item:** All national bodies and Liaison Organizations - to review and feedback on documents N1143 and N1390 on the subject of additional characters for Yoruba, for further consideration / disposition at the next meeting.

### 8.3.4 Pinyin

**Input Document:**

**N1461** Pinyin proposal summary form; China, Canada; 1996-08-15

There were FOUR characters reported as missing originally; two were there already, remaining two are in this proposal.

**Discussion:**

Mr. Michel Suignard: I propose that we allocate x01F8 for Upper Case x01F9 for Lower Case (refer to Tokyo meeting minutes).

**Disposition:**

WG 2 accepts the proposal; Place in the Cumulative list of Latin characters for future processing. Names, Character Shape, Code Positions are all accepted as proposed In document N1461.

**Relevant resolution:****M31.8 (Pinyin):****Unanimous**

WG 2 accepts the following two characters:

x01F8 LATIN CAPITAL LETTER N WITH GRAVE

x01F9 LATIN SMALL LETTER N WITH GRAVE

in accordance with document N1461, and instructs its editor to add them (with shapes similar to x0143 LATIN CAPITAL LETTER N WITH ACUTE and x0144 LATIN SMALL LETTER N WITH ACUTE, with the ACUTE accent replaced with a GRAVE accent) to the cumulative list of characters for future inclusion in ISO/IEC 10646-1.

## 8.4 Additional Cyrillic Characters

**Input Documents:**

- N1323** Proposal and Summary for addition of Cyrillic characters; Kardalev, Jerman-Blazic & Everson; 1996-01-16
- N1324** Proposal and Summary for addition of Cyrillic characters and block; Kardalev, Jerman-Blazic & Everson; 1996-01-16
- N1407** Reconsideration of Proposal for Additional Cyrillic Characters -N1323; Ministry of Science -Rep. of Macedonia; 1996-05-15
- N1408** UTC 69 Resolutions - Input on various repertoires under discussion by WG 2: Ethiopic, Additional Latin, Additional Cyrillic and others; Unicode Consortium, Glenn Adams; 1996-06-13

Document N1407 had a proposal for encoding additional Cyrillic characters for Macedonian. Feedback was requested in Copenhagen meeting as to the preferred locations for encoding them from among the alternatives suggested in document N1407.

**Discussion:**

- a) Mr. Michel Suignard: The US national body supports First Priority in N1407. They are filling the vacant slots in the Cyrillic group.
- b) Dr. Glenn Adams: UTC accepts First Priority. UTC response is in document N1408.

**Relevant resolution:****M31.3 (Additional Cyrillic characters):****Unanimous**

WG 2 provisionally accepts the proposed code positions for the following four Cyrillic characters:

x0400 for CYRILLIC CAPITAL LETTER IE WITH GRAVE

x0450 for CYRILLIC SMALL LETTER IE WITH GRAVE

x040D for CYRILLIC CAPITAL LETTER I WITH GRAVE

x045D for CYRILLIC SMALL LETTER I WITH GRAVE

in accordance with document N1407, and instructs its editor to add these characters along with their previously accepted shapes (at WG 2 meeting 30), to the cumulative list of characters for future inclusion in ISO/IEC 10646-1.

## 8.5 Ethiopic

**Input Documents:**

- N1326** Conclusive Proposal for Encoding Ethiopic Syllabary; USA & Unicode - Joe Becker; 1995-12-09
- N1372** Update on N1270 and N1326 - Ethiopic; Hugh Ross, U.K.; 1996-04-23
- N1408** UTC 69 Resolutions - Input on various repertoires under discussion by WG 2: Ethiopic, Additional Latin, Additional Cyrillic and others; Unicode Consortium, Glenn Adams; 1996-06-13
- N1420** Conclusive Proposal for Encoding of Ethiopic Syllabary, Update; USA & Unicode Consortium - Joe Becker; 1996-07-27

**Presentation:**

Dr. Glenn Adams introduced document N1420. The Ethiopic request has been on the books for almost 8 years, the original request from British Library. The Unicode consortium has consulted various bodies and the document N1420 contains the latest position from Unicode. Document N1372 has some requests that are not accommodated in document N1420 - no further evidence has been provided for some of these additional characters. We feel the proposal in document N1420 should be progressed without further delay - if new characters are shown to be required in the future we can add them later. The UTC had a resolution to that effect.

**Discussion:**

- a) Mr. Michel Suignard: US feels that we should go ahead with it - it has been on our plate for a long time.
- b) Dr. Umamaheswaran: there are holes in the proposed tables.
- c) Mr. Bruce Paterson: The additional characters proposed by UK -- will they go into the holes?
- d) Mr. Sven Thygesen: Proposal Summary form asks for - 'potential source of fonts'.
- e) Dr. Glenn Adams: The proposal contains 346 characters - the holes represent future possible syllable valid combinations. Xerox had originally proposed the fonts. It could be made available for preparing 10646. As to the additional characters proposed by the UK, they would probably go to the end. The holes are for potential combinations of syllables and vowels that so far has not been validated.

**Disposition:**

Mr. Mike Ksar: The proposal is to go ahead with content as in document N420. If there is further evidence for the additional characters proposed by UK we could add them later.

**Action Item:** The camera ready code table to go with the text for the pDAM on Ethiopic script is to be prepared by Unicode consortium and sent to the editor.

**Relevant resolution:**

**M31.4 (Ethiopic script):**

**China Abstained**

WG 2 accepts the set of 346 characters of the Ethiopic script, their shapes and code positions in the range x1200 to x137F, in accordance with document N1420, and instructs its editor to prepare the pDAM text, with assistance from the US national body and the Unicode Consortium, and forward it to SC2 secretariat for an SC2 ballot.

## 8.6 Runic

**Input Documents:**

N1330	Final Draft - Runic Characters in 10646; ITS, ISO Runes Project; 1996-03-07
N1382	Runic Script - Proposed correction to character name; Sweden; 1996-04-25
N1408	UTC 69 Resolutions - Input on various repertoires under discussion by WG 2: Ethiopic, Additional Latin, Additional Cyrillic and others; Unicode Consortium, Glenn Adams; 1996-06-13
N1417	Runic Proposal Update; Sweden; 1996-07-17

**Presentation:**

Documents N330 and N1382 were discussed in Sweden. Mr. Karl Larson introduced the latest update document N1417. Unfortunately Mr. Olle Jarnefors could not be at this meeting. Two points raised at the Copenhagen meeting - have been addressed in the latest proposal. The names have been refined. Unicode consortium's input document N1408 - asking for unification could not be accommodated - it was considered as a false unification. WG 2 may not have decided to publish it as a pDAM.

**Discussion:**

- a) Professor Kohji Shibano: The submissions on Runic keep asking for their inclusion in the BMP because there is room. We should consider this as a script for an extended plane.
- b) Mr. Michel Suignard: The rationale provided in document N1417 for inclusion of the Runic characters in the BMP is not adequate.
- c) Dr. Glenn Adams: The repertoire was provisionally accepted by WG 2. We do not wish to see much delay - for example by placing the script in a bucket. There were questions on why

three of the punctuation symbols cannot be unified, from Unicode consortium - the response on the concerns is NOT adequate. The Middle Dot and Colon - why these cannot be unified with the existing Middle Dot and Colon? Evidence presented for not unifying - is not adequate. The Cross looks like another similar character. We like the refined names. The information proposed to be provided In Annex P - should be left out of the standard and placed in some other document. Documents like the Unicode Standard could be used for publishing additional useful information about characters etc. Also, the material proposed for Annex P includes characters which are outside the normal ASCII characters used for other information. If we set a precedence to include more than A-Z etc. in the information in Annex P it opens the door for requests for all types of other scripts. The use of Mathematical symbols etc. should not be confused with Runic use. One is for new text - Runic is for studying existing old content. The Unicode consortium agrees that this script is a very good candidate to encode in an extended plane. We would like to encourage the use of UTF-16 and access extended planes. If we do not have the Part 2 related items addressed - this will delay going outside the BMP coding. WG 2 is encouraged to remove any obstacle towards opening Part 2 documentation.

(See section 12.1 Second Part of 10646 on page 47)

- d) Dr. Umamaheswaran: The Annex P - currently does not have any specific rules about what characters are permitted in the text of Annex P - to avoid future problems regarding what can go into Annex P, we need some guidelines.
- e) Mr. Bruce Paterson: Runic is not a living script - of interest only to scholars. I propose we start a new collection for example a Category B bucket. When sufficient number of these are accumulated we may decide to publish them, at a later date.

I would like to comment on the reason for the current form proposed for Annex P. It is based on Mr. Olle Jarnefors' request to test the capability of the word processor used by the editor. The fonts used include Latin-1. This was an experiment on how much information can be put into Annex P using the Latin-1 fonts available to the editor. In Annex K, we do have some characters beyond the English alphabet - in Cyrillic. Also, some accented characters as examples in the body of the text.

If a paper (on what sort of additional information on characters qualifies to be included in Annex P) is produced, it should be included in the Principles and Procedures document.

- f) Mr. Johan van Wingen: Netherlands supports the view expressed by Mr. Paterson. We should not enter into a discussion as to whether historic scripts should be included or not etc.
- g) Mr. Karl Larson: The Runic script is used in publications. There is a lack of support for Fonts and for processing of extended planes. This will delay Runic implementation.
- h) Mr. Mike Ksar: WG 2 has accepted the repertoire. We asked the names to be refined and move the additional information for characters into Annex P. The question of whether it should be in the BMP, the question of processing it as a pDAM etc. are open.

If we start including a list of characters in Annex P - there is a risk of this annex becoming something which it was not originally intended for. The proposed Annex P information provided should go elsewhere than in the standard. Additional information is 'about character names' - not repeating character names in Annex P. A separate paper should be produced on what kind of information qualifies to be included in Annex P.

**Disposition:**

Mr. Mike Ksar: We have not decided on Code Allocation. We have not decided on what to do with Annex P -- Sweden to reconsider. Sweden is requested to address / provide more justification on reason for Not unifying the characters per comments from the Unicode consortium. We can accept the proposed modified names in document N1417.

**Action Item:** National bodies and liaison organizations are invited to write contributions on 'Guidelines on what sort of information can be included in Annex P - Additional information on characters'. The accepted text of such contributions would be included in the Principles and Procedures document.

**Action item:** Swedish national body is invited to consider the discussion on the Runic script proposal at this meeting and feedback to WG 2.

## 8.7 Symbols

### 8.7.1 Updated Cumulative List of Symbols

**Input Documents:**

N1340 Naming and coding of new symbols - proposed amendments; Bruce Paterson; 1996-03-26  
 N1416 New Symbols for 10646 - cumulative list (SYMBOLS Bucket); Bruce Paterson; 1996-06-30

Document N1416 is the cumulative list of symbols that have been accepted for future inclusion in 10646. It is for information of WG 2 members. Some items have been identified in document N1416 that have to be addressed prior to making it ready for further processing as pDAM. Document N1340 has provided suggested solutions - some principles regarding naming of symbols is also provided. The names in an English standard should be in the English language. Document N1340 contains naming and coding of new symbols - proposed amendments.

**Action Item:** National bodies and liaison organizations are to review document N1416 on cumulative list of symbols and provide feedback as to how this collection could be further progressed.

### 8.7.2 Naming and coding of symbols

**Input Document:**

N1340 Naming and coding of new symbols - proposed amendments; Bruce Paterson; 1996-03-26

See discussion under item 8.7.1 above.

### 8.7.3 APL Function Symbol Quad

**Input Document:**

N1419 Proposal Summary Form - APL Function Symbol Quad; Leigh Clayton, SC22/WG 3; 1996-07-22

The APL standards committee (SC 22/ WG 3) had requested the character APL SYMBOL QUAD. WG 2 had sent back a suggestion that this should be unified with other similar looking symbols. SC 22/WG 3 had come back and stated that it was not acceptable to them - the symbol has to be treated differently. A proposal summary form has been submitted by Mr. Leigh Clayton, on behalf of SC 22/WG 3.

**Disposition**

Accept the request - APL FUNCTIONAL SYMBOL QUAD - at x'237B' provisionally. Put into the cumulative list of symbols for future progression.

**Action Item:** The convener is to inform SC 22 WG 3 that their proposal for APL Function Symbol Quad has been accepted and will be processed along with other symbols in the Symbols collection.

**M31.5 (APL Function Symbol Quad):**

**Unanimous**

WG 2 accepts the name - APL FUNCTIONAL SYMBOL QUAD, its proposed code position x237B and its proposed shape, in accordance with document N1419, and instructs its editor to add it to the cumulative list of symbols for future inclusion in ISO/IEC 10646-1

**PLEASE TAKE NOTE:**

Date: 16 Oct 96 07:05:48 EDT  
From: b paterson <100611.2060@CompuServe.COM>  
To: VS Umamaheswaran <umavs@torolab6.vnet.ibm.com>  
Subject: APL functional symbol QUAD in 10646  
Dear Uma 16th October 1996  
I have just noticed a problem with WG 2 Resolution 31.5, which accepts APL QUAD into the symbols bucket for 10646. The code position **x237B** was approved for it on the day BEFORE WG 2 reviewed the symbols bucket paper N1416. So, surprise, surprise, **that position is already allocated** (at the Geneva meeting actually, and was already subject to conflict there - it must be a specially cosy spot). **So I have put QUAD in the next available place - x2395.** ..... I thought you should know asap for the record.  
Regards - Bruce.

**Action Item:** All national bodies and liaison organizations to take note of the above message from the editor - on having to reassign APL QUAD symbol to another position than in resolution M31.5.

## 8.8 Canadian Aboriginal Syllabics

**Input Documents:**

- N1408** UTC 69 Resolutions - Input on various repertoires under discussion by WG 2: Ethiopic, Additional Latin, Additional Cyrillic and others; Unicode Consortium, Glenn Adams; 1996-06-13  
**N1441** Update on Canadian Aboriginal Syllabics Proposal; Canada; 1996-08-02

**Presentation:**

Dr. Umamaheswaran introduced document N1441. Mr. Dirk Vermeulen, chair of CASEC, could not be present due to a last minute family emergency. The document addresses all the concerns and feedback from different experts. A French translated version of the names of the characters for the CASEC script was also made available (prepared by volunteers in Canada and Ireland) for those interested.

**Discussion:**

- a) Mr. Takayuki Sato: WG 2 should consider whether the request for BMP should be accepted or not.
- b) Mr. Mao Gang: Most of these characters look like they could be decomposed with rotation or placement of dots etc. In case of Mongolian most of the characters were presentation forms. Efficiency measure may be applicable to Mongolian also. China did not have a chance to review this. Are the characters in 2.3.2 - different presentation variants. Response: No they are not different presentation variants. What is the population? (Mr. Alain LaBonté: About half a million in Canada alone. About 50000 in Québec alone.)
- c) How is the unification done? (Response: Mostly based on appearance but also based on some common roots of the script introduction to the native languages.)
- d) Mr. Zhang Zhoucai: Are there any dictionaries etc.? (Reference Bibliography in document N1441.)
- e) Dr. Glenn Adams: Feedback from the Unicode consortium is in document N1408. The use of the word Canadian in the name may lead to the misunderstanding that this script is used only in Canada. The use of this in other countries should be recognized. The name of the characters is still long - would like to see if the name could be somehow shortened. Otherwise we support the progression of this document to a pDAM. The name of the languages are sometimes have the name TTSE CARRIER versus CARRIER TTSE. In Mongolian we use the LANGUAGE before the name. Annex K asks for Language names before the character. Look at pDAM-6 as the model for the pDAM text. Decomposition was considered - we have to use it for every character in the syllabary. Unlike Mongolian where a few characters are affected. It



was impractical to use that technique in the case of Canadian syllabics. In case of Mongolian - if the decomposition is a problem we should discuss it.

Our preference for contemporary use living scripts is to put in the BMP - it is not in the code to date. The considerations should be different from the CJK consideration.

- f) Mr. Michel Suignard: US had some discussion. It is used by living communities. We are in favor of including in BMP. Compared to other similar requests this script should be given a BMP encoding.
- g) Mr. Mike Ksar: This document has addressed all the concerns that were asked of the Canadian national body and other interested parties on the CASEC syllabary. I would like to encourage Canada to remove 'CHARACTER' from the names. We should try for pDAM level. The complete text of the pDAM -- Canada will be requested to provide the camera ready copy.
- h) Mr. Bruce Paterson: I would support the removal of 'CHARACTER' from all the character names.

**Disposition:**

Mr. Mike Ksar: Accept the document as the basis for a CRC for pDAM Text -- with code positions in the range x1400 to x167F; with name changes - delete 'CHARACTER' and put 'language before the character name'; and with the block name as proposed -Unified Canadian Aboriginal Syllabics.

**Action Item:** Canadian national body is to prepare the camera ready copy of the pDAM text and forward to the editor.

**M31.6 (Canadian Aboriginal Syllabics):**

**China Abstained**

WG 2 accepts the set of 623 characters for the Canadian Syllabics script, their names (as revised at meeting 31), and their shapes, for allocation in the range x1400 through x167F, in accordance with document N1441. WG 2 further instructs its editor to prepare the pDAM text, with assistance from the Canadian national body, and forward it to SC2 secretariat for an SC2 ballot.

## 8.9 Modified Braille Proposal

**Input Document:**

N1409 Modified Braille Proposal; Unicode Consortium, Glenn Adams; 1996-06-14

Document N1409 contains a modified proposal for encoding of Braille symbols.

**Discussion:**

- a) Mr. Takayuki Sato: We have to probably go to the TC134 on the specific 512 versus 256 proposal and ask them to see if WG 2 proposal would be acceptable to them or not. We should stimulate the discussion in their group - because it is a sensitive issue for them.
- b) Mr. Mike Ksar: We have not heard back from them in the previous communication. We may want to come to agreement in WG 2 and they may take notice only when it becomes a pDAM.
- c) Professor Kohji Shibano: We should possibly present the information to them - and as users of Braille, they may have the expertise to give us the feedback. Maybe we should set a deadline for them to give us a feedback. Because of compatibility problems we were informed to go to 512. It is a political issue and would like to get their feedback.
- d) Mr. Michel Suignard: WG 2 should take a position on whether 512 or 256 is preferred before we send it to the TC 134. It has been a long time since the original request came to us. We are dealing with only the encoding issues of Braille. Encoding aspects should be within WG 2 prerogative - why should we delay this any more?

- e) Dr. Glenn Adams: There was a question from UTC on whether the upper dots and lower dots are used in a mixed fashion. If they are NOT used in a mixed fashion, then 256 would be enough. De-unification is a problem that we should avoid. The previous question was whether or not to encode these as symbols or not. On that question there is now agreement that these can be treated as symbols. There may be no harm in sending the information to the TC involved and get their feedback.
- f) Dr. Umamaheswaran: WG 2 had enough opportunity to study the items. We have some consensus within WG 2 that they can be treated as symbols. WG 2 should accept one set -- and forward to TC134 for feedback.

**Action Item:** Mr. Mike Ksar to send with assistance from Mr. Takayuki Sato, a cover letter to TC 134, with the message that WG 2 has agreed to accept the Braille as symbols - we take a preferred choice - for example, 256 symbols. Attach both 256 and 512 proposals - requesting their feedback by November 1, 1996 or earlier.

## 8.10 Proposal for Encoding Yi Script

### Input Document:

N1415 Proposal for Encoding Yi Script on BMP; China; 1996-06-11

### Presentation:

Mr. Mao Gang: China had a proposal about 4 years ago. Mr. Michel Everson had proposed another one with combination characters which reduces the repertoire. It was sent to the Yi experts in China, and the proposal that is on the table has the original repertoire with some additional information on pages 1 to 4 in document N1415. Mr. Mao Gang will further consult with Yi experts in China to ensure that Mr. Michael Everson's proposal had been considered by them.

### Discussion:

- a) Mr. Mike Ksar: Would like to see a proposal summary form, all the questions answered, and a better document with larger shapes etc.
- b) Dr. Glenn Adams: Do you anticipate this to be in the BMP? Response: Yes - see page 1 of document N1415.

**Action item:** China is to provide a refined proposal on the Yi script, based on document N1415, and other earlier contributions.

## 8.11 Armenian Script

### Input Documents:

N1395 Armenian Repertoire Proposal Summary Form; Armenian Engineers and Scientists of America, Inc. - Richard Youatt; 1996-06-04  
 N1444 Proposed amendments to N1395 - Armenian; Everson; 1996-08-07  
 N1446 U.S. Position on Armenian (N 1395); U.S.; 1996-08-09

### Discussion:

- a) Mr. Michel Suignard: The document N1395 has a table of characters with some missing characters due to font problems. There are several Armenian communities - one in the Soviet Armenia and elsewhere in Europe. There will be naming differences in characters. The original names were Western ones. The Armenian proposal submitters are using their own form for the names. There is a quite a bit evidence provided by the submitters. This document was discussed in the joint X3L2 and Unicode meeting. The Armenian experts are asking for: Change of names, change of some code positions and implementation level. Some of their requests are for unification, changes etc. -- see document N1395 for details. We could unify some of them. There are characters that have been added in the code table without any explanation - three such characters. Encoding of digraphs etc. There is also an issue of characters which are in between combining and non-combining. The Exclamation mark or question mark appears not in line but above the text. These could be dealt with as rendering issues - they should perhaps be not treated as Combining in the traditional sense.

- b) Mr. Mike Ksar: The original proposal came from Armenian Society of Engineers in California, with some people from Armenia - with some input from Mr. Michel Suignard and Mr. Michael Everson. Armenia is not a member of ISO. Armenian script was already acknowledged for future inclusion in 10646 annex. These documents are to be considered as expert contributions and not as national body input, and are for information to WG 2.

I have explained to the submitters - that code cannot be changed, names could have explanatory information in Annex P. Punctuation marks are request for additional characters. Combining marks could be additional requests. Names they have do not follow the Annex K guidelines - in addition to being different from their names in the current standard. I have also suggested that Armenia become a member of ISO and come to attend the next WG 2 meeting as well as the UTC meeting. Country representatives need to be educated on the process and methods of participating in ISO meetings and proceedings.

Document N1444 - from Mr. Michael Everson - talks about some of the issues already brought up earlier. The proposers are not a member body - Armenia should be encouraged to become an ISO member. Mr. Michael Everson has suggested some new names etc. - to be taken as input document.

**Action Item:** The convener is to send the feedback on documents to Armenia / ASEA for their consideration and response prior to attending the Singapore meeting.

## 8.12 Cherokee Script

### Input Documents:

N 1172 Proposal for encoding the Cherokee script; Michael Everson, Ireland, expert contribution; 1995-03-14  
N1356 US Position on Cherokee script; U.S.; 1996-04-17  
N1362 Initial Comments on Encoding Cherokee; Unicode Consortium; 1886-04-01  
N1408 UTC 69 Resolutions - Input on various repertoires under discussion by WG 2: Ethiopic, Additional Latin, Additional Cyrillic and others; Unicode Consortium, Glenn Adams; 1996-06-13

### Discussion:

Dr. Glenn Adams: The feedback from the Cherokee nation was to accept the traditional order. Unicode consortium has accepted this request.

### Disposition:

The 85 characters along with their names in document N1362 in the code positions in the same order as in document N1172 (traditional order), is accepted. The US national body / Unicode consortium will assist the editor in preparing the final code tables (glyphs, names etc.)

**Action Item:** The Unicode consortium and US national body are to provide the camera ready copy of the code tables for the Cherokee script to the editor for inclusion in the pDAM.

### Relevant resolution:

#### M31.7 (Cherokee script):

**Unanimous**

WG 2 accepts the proposed code positions in the range x13A0 through x13FF, for the previously accepted (at meeting 30) 85 characters of the Cherokee script, in accordance with document N1362, and instructs its editor to prepare the pDAM text, with assistance from the US national body and the Unicode consortium, and forward it to SC2 secretariat for an SC2 ballot.

## 9. IRG status and reports

### Input Documents:

N1421	Resolutions of IRG # 7 (IRG N 360); IRG; 1996-08-01
N1422	Action Items of IRG # 7 (IRG N 361); IRG; 1996-08-01
N1423	Proposal Summary Form: CJK Unified Ideographs Extension A (IRG N 364); IRG; 1996-08-01
N1424	CJK Unified Ideograph Extension A Version 1.1 (IRG N 382); IRG; 1996-08-01
N1425	Draft Text of General Description for Extension A (IRG N 378); IRG; 1996-08-01
N1426	Draft Text of CJK Annex for Extension A (IRG N 379); IRG; 1996-08-01
N1427	CJK Unified Ideograph - Internal/Horizontal Supplementation Version 6.2 (IRG N 383); IRG; 1996-08-01
N1428	Draft Text of Clause 26 for IS/HS Revision (IRG N 376); IRG; 1996-08-01
N1429	Draft Text of CJK Annex for IS/HS Revision (IRG N 377R); IRG; 1996-08-01
N1430	Proposal Summary Form: Ideographic Structure Characters (IRG N 365); IRG; 1996-08-01
N1431	Proposal Summary Form: Ideographic Variation Mark (IRG N 366); IRG; 1996-08-01
N1432	Proposal Summary Form: Ideographic Radical Supplement (IRG N 367); IRG; 1996-08-01
N1433	Proposal Summary Form: Ideographic Component Supplement (IRG N 368); IRG; 1996-08-01
N1434	CJK Unified Ideographs, High Quality printing (IRG N387); IRG; 1996-08-08
N1435	IRG Partial Document Register (IRG N385); IRG; 1996-08-01
N1436	Korean comments on vertical extension and internal supplementation/horizontal supplementation Unified CJK; Korea; 1996-07-10
N1439	Korea's comments on IRG Proposal; Korea; 1996-08-12
N1449	The Great Chinese Word Dictionary with CJK Extensions; Wang Xiaoming, CCID, China; 1996-08-12
N1455	More Evidence on CJK Extension A; Lu Chin, HKITF, Hong Kong; 1996-08-06

### 9.1 IRG Rapporteur's Report:

#### Input Documents:

N1421	Resolutions of IRG # 7 (IRG N 360); IRG; 1996-08-01
N1422	Action Items of IRG # 7 (IRG N 361); IRG; 1996-08-01
N1435	IRG Partial Document Register (IRG N385); IRG; 1996-08-01

#### Presentation:

Mr. Zhang Zhoucai, the IRG rapporteur, presented the IRG report and introduced the various IRG documents. Document N1435 - contains a summary of the IRG documents. All the contributions from IRG are listed. Only some pages of some of the documents are distributed. Full copies of the Horizontal Extension (HE) or Vertical Extension (VE) can be obtained from Mr. Zhang Zhoucai. Documents N1421 and N1422 are general - resolutions and action items from IRG meeting 7. Documents N1423 through N1426 are Vertical Extension related. Documents N1427 through N1429 are related to Horizontal supplementation. Documents N1430 through N1433 are on other IRG topics.

CJK Unified Ideograph - the terms 'extensions A, B and C' are used instead of the terms 'Level I, II and III.' Extension A - Documents N1423, N1424 through N1426, N1449 and N1455. The name of the extension is changed from VE Level I - to CJK Unified Ideographs Extension A 1.1. 6585 ideographs from China, TCA, Japan, Korea Vietnam. and Singapore are included. About 70 percent of the set is Unified Core - i.e. more than one IRG member requested it. The unique ones are all identified, and marked indicating the source, dictionary information, vendors etc. The Version number were called drafts 1 to 5 - now they have become document submitted to WG 2 - it was called Version 1.0 - after proofing and review etc. it is now Version 1.1. Format of extension A - is now FIVE Column including Singapore and Vietnam contributions - the space in each page is very tight. The Singapore contributions are merged into the G column.

All IRG members request unanimously to include extensions A and B into UCS. Furthermore, TCA, China, Japan, Korea -- further request to include extension A into the BMP. Unicode consortium is against. Vietnam abstained. Extension A has been fully justified by IRG and documented.

Document N1449 has additional information from China. Document N1455 - contains additional information from Hong Kong. IRG volunteers to provide high quality printing of the repertoire. If Extension A is accepted, the new annex and description has to be edited - Documents N1425 and N1426 contain the descriptive proposed texts from the IRG editor Mr. Koike.

IRG has resolved that Vertical Extensions B and C, and other ideographs be included in the future UCS extensions - not in the current version of the standard.

Refer to document N1421 for IRG Meeting No. 7 resolutions.

**Discussion:**

- a) Mr. Mike Ksar: I would like to congratulate the members of IRG for the hard work done so far - I want to ensure IRG that WG 2's full support is there for the IRG work. The IRG members' efforts is fully appreciated by WG 2.
- b) Mr. Bruce Paterson: Congratulations are extended. The latest documents from IRG present all the issues to be addressed in a clear and concise way.

## 9.2 General Items from IRG Recommendations

Refer to document N1421 for IRG Meeting No. 7 resolutions.\

- Item 1: the change of name is in line with eliminating any confusion. WG 2 should accept the proposed name changes to the extensions.
- Item 2 - is regarding IRG internal version.
- Item 3 - Vertical Extension A - see discussion under section 9.3 on page 29.
- Item 4 - Vertical Extensions B and C - see discussion under section 9.4 on page 33.
- Item-5 - Thanks to Singapore, the S-column was merged with the G-column. This addresses the concern expressed by WG 2.
- Item 6 - WG 2 appreciates the high quality fonts prepared by IRG.
- Item 7 - WG 2 takes note of the offer for publishing the next edition of the standard by the IRG using the high quality fonts prepared for the CJK ideographs.
- item-8 -- WG 2 should approve the appointment of Mr. Zhang Zhoucai to continue as the next rapporteur of IRG for the next period.
- item 9 - Internal / Horizontal Supplementation related - see discussion under section 9.5 on page 33.
- Item 10 - for information and discussion in WG 2 - see discussion under sections 9.6, 9.7, 9.8 and 9.9 starting on page 35.
- Item 11 - As long as ISO rules for hard copy distribution is not violated - any means of distribution could be followed by IRG.
- Item 12 - Noted the future meeting schedule. WG 2 approves the Singapore meeting - 13--17 January 1997. IRG should consider the timing of their meetings so that the output from IRG can be distributed to WG 2 in sufficient time for national bodies and liaison organizations to consider them.
- Item 13 - Noted - IRG members are encouraged to attend WG 2 meetings.
- Item 14 - Noted - appreciation to hosts of IRG meeting no. 7.

**Relevant resolution:**

**M31.12 (IRG related):**

**Unanimous**

WG 2 commends the excellent work done by IRG on the Internal and Horizontal Supplementation, the Vertical Extension and other CJK related items.

WG 2 encourages the IRG to refine the proposals for Ideographic Structure Characters, the Ideographic Variation Mark, the Ideographic Component Supplement and the Ideographic Radical Supplement based on the comments received at WG 2 meeting 31.

WG 2 accepts the nomination of Mr. Zhang Zhoucai to continue as the IRG rapporteur.

WG 2 approves the next IRG meeting in Singapore from 13 to 17 January 1997.

## 9.3 Vertical Extension A:

**Input Documents:**

N1423 Proposal Summary Form: CJK Unified Ideographs Extension A (IRG N 364); IRG; 1996-08-01  
N1424 CJK Unified Ideograph Extension A Version 1.1 (IRG N 382); IRG; 1996-08-01

N1425	Draft Text of General Description for Extension A (IRG N 378); IRG; 1996-08-01
N1426	Draft Text of CJK Annex for Extension A (IRG N 379); IRG; 1996-08-01
N1439	Korea's comments on IRG Proposal; Korea; 1996-08-12
N1449	The Great Chinese Word Dictionary with CJK Extensions; Wang Xiaoming, CCID, China; 1996-08-12
N1455	More Evidence on CJK Extension A; Lu Chin, HKITF, Hong Kong; 1996-08-06

Mr. Mike Ksar: This WG 2 meeting should discuss along the following two notions:

- a. to accept IRG's work on repertoire definition. The work has been going on for over five years - and the repertoire should be acceptable to all national bodies since they had ample opportunity to review / comment etc.
  - b. opinions of national bodies on whether the repertoire should be included in the BMP. The national body experts and liaison representatives are to take back to their organizations towards positively confirming their position / opinion on accepting IRG's request to encode in the BMP or not. A deadline would of somewhere from November 1 to November 15 to respond back on the question of BMP allocation.
- a) Dr. Glenn Adams: Clarification - Is the question to the national bodies and Liaison organizations is only on the question of BMP or not? Response: Yes.
  - b) Mr. Mao Gang: Will we have a decision at the next meeting? (Response: We should have the necessary national body feedback by then.) Please keep in mind that about 150 pages of Extension A camera ready copy tables have to be prepared by the IRG.

### 9.3.1 Repertoire of Vertical Extension A

#### Discussion:

- a) Dr. Glenn Adams: How many of the 6000+ characters are only a single IRG member request? Response: It is documented - 4509 are minimum two members - 2074 are unique. We have taken a vote in Unicode consortium to accept this repertoire.
- b) Mr. Takayuki Sato: In Copenhagen we almost agreed to the repertoire - subject to fine tuning. IRG has done the tuning. It is not possible to separate them into smaller parts. IRG has looked at these and they have done the work. Recommend that we accept the repertoire.
- c) Mr. Michel Suignard: Accept the repertoire.
- d) Mr. Keld Simonsen: Is it possible to have a view on ordering of the characters? Was it considered - is there additional information available. Response: There is an ftp site - in which there is dictionary ordering information available for the work of SC22 WG 20.
- e) Mr. Mike Ksar: A link to the IRG web site from WG 2 web site could be put in place.
- f) Dr. Umamaheswaran: Canada supports acceptance of the repertoire.

#### Disposition:

Accept the repertoire proposed by IRG in document N1424.

#### Relevant resolution:

**M31.10 (CJK Unified Ideograph Extension A Version 1.1):**

**Unanimous**

WG 2 accepts the set of 6585 characters and their shapes of the CJK Unified Ideograph Extension A Version 1.1 in document N1424 for inclusion in ISO/IEC 10646.

### 9.3.2 Allocation of Vertical Extension A

Mr. Mike Ksar: The proposal is to ask the National Bodies for their response to 'Should the CJK VE A-1.1.repertoire be encoded in the BMP or extended planes?'. If we do NOT hear from the national bodies by November 15 - the IRG recommendation will be accepted.

**Discussion:**

- a) Dr. Glenn Adams: This is a very large set of significant size - roughly 10 percent of the BMP space. We should take more care because of the size - should take a serious look at the impact on the remaining space. In other proposals we have usage information provided. Unicode consortium's concern is on lack of similar usage information (N947 -- for example) to be able to make meaningful decision on whether they should go into the BMP or not. We would like to understand the impact on the N947 spacing etc. due to this proposal. If we decide to go outside the BMP, we need to look at planning for Part 2 of the standard - for additional planes etc. We do not have any plans - similar to the BMP - structure etc. for extended plane(s). WG 2 needs to address these concerns - due to lack of such information - Unicode's current position is to place the extension A to outside the BMP - until more information is made available to address our concerns. There are implementations available using extended planes. Unicode consortium had taken a position based on past information - there is additional information in the latest documents from IRG. If needed, there is a mechanism for re-prioritization - simply look at the sources that were unified. There are five columns - one could rank the VE - according to the requested sources - for example, like 5, 4, 3, 2 and 1. One could create subsets on that basis - for example.
- b) Mr. Bruce Paterson: Support what Dr. Glenn Adams has identified as issues - would like to get some more information on helping us decide BMP or not. Paper N1332 - it provides a redefined view of the BMP - including the amendments. On the first page - there is a band not used yet (just below CJK and just above Hangul). There are 12 rows of O-zone position still open. The Extension A will occupy about 26 rows. If in BMP, we need 26 rows -- there are 12 rows in the O zone. There are also 46 rows available in A zone. Total of 58 rows available for allocation from the BMP. If 26 rows are taken up by Extension A, there will be 32 rows left. Document N 947 - has a list of all the Alphabetic scripts that we know of - how much each script will take up. This document may have to be revised to reflect the latest situation. In my view, in terms of long term - postponing an investment may be beneficial. One could plan for the future extensions such as for supporting the Extended planes.
- c) Mr. Michel Suignard: Document N1443 - from Mr. Michael Everson can also be used as a reference on the current use of BMP.
- d) Mr. Keld Simonsen: Would like to hear - if available emptied slots from Hangul Amendment 5 can be used. Balloting process took away the window for coexistence of pre and post Amendment 5. There are also methods using UTF-8 to access extended planes. A number of recommendations are also being made - especially in the Internet area - UTF-8 with UCS-4 normalization etc.
- e) Professor Hyeon Kyu-Seob: In Korea, we are using several characters from Vertical Extension in the national electronic publications. We are using them without a standard behind it. We are also using these Vertical Extensions in Word Processing. Some 16000 Hanja characters are in use. We want to make a national standard - we want to see it in the BMP due to ease of implementation and extend the existing implementation to support additional characters without additional complications on the code.
- f) Dr. Glenn Adams: Of the 6600+ characters how many are really used?
- g) Professor Hyeon Kyu-Seob: These characters do exist in many data bases - in several existing collections of characters. We would like to get them in the standard also. Korean Hanja uses 2000 of these. They are all supported in Korean WP.
- h) Mr. Mike Ksar: IRG should look at factors such as the one expressed by Dr. Glenn Adams at this meeting. National bodies should consider all the factors also and come back with informed meaningful decision / recommendation to allow WG 2 and IRG towards arriving at a decision. We understand what is written as IRG recommendations. Extensions B and C are slated for outside the BMP. However, Extension A - is the focus. National bodies should consider the long term implications.
- i) Mr. Mao Gang: IRG had prioritized the repertoire -- with the IRG members' intention of how much could be included in the BMP. The categorization A, B and C - is the result of it.

- j) Mr. Zhang Zhoucai: We started about 6 years ago. China proposed Han character collection - HCCS. It included Japanese, Korean and other requirements. HCCS - A and HCCS -B. HCCS-B became the basis of CJK extension at the IRG. IRG has gone through the effort of minimizing the repertoire already. CJK may require 80000 characters if we focus on individual ideographs. The number has been reduced to 30000 already. Documents N1449 and N1455 have some evidences provided. If we need more information, IRG / China can provide.
- k) Mr. Sven Thygesen: For national bodies to emphasize that there are a number of scripts that are still under consideration -- document N947 gives fairly precise description of the estimated code positions needed. We all appreciate the effort of IRG. What would happen if there was only 3000 characters - what would IRG do? Response: We may have to re-prioritize?
- l) Mr. Takayuki Sato: The same question was asked in Copenhagen. The current IRG response is that we cannot split the extension A proposal from re-prioritization point of view. IRG always knew about the fact that BMP code positions will be running out. IRG has sent a message that they will NOT be asking for more etc. Did the Unicode consortium vote negative in IRG?
- m) Dr. Umamaheswaran: I have heard from Korea the rationale for including the characters of Extension A in the BMP based on the examples of national standards being aligned with UCS and when it comes to Extension B and C, all you will be doing is to extend the time to start supporting Extended planes.
- n) Professor Hyeon Kyu-Seob: We want to encourage increased use of Hanja characters in Korea. We are still discussing the problem. We have national standards - would like to keep in line with the ISO standard. Korea is concerned with both Hangeul and Ideographic characters. Document N1439 states Korea's support of the IRG's work. Supports the inclusion of the extension set A in the BMP. Korea has participated in IRG work in validating and justifying the IRG proposal. (see document N1439 for details).
- o) Mr. Zhang Zhoucai: I have been involved in planning to support the UCS in China. We minimize the Gaigi characters to get the VE. Other Gaigi will be used by using the PU zones. In the worst case, the implementers are discussing overlapping scripts -- and that is very dangerous. Technically they can do whatever they want - for example, they can use TrueType font association. I have to give them a standardized solution - want to minimize the Gaigi - just for interchange. The UTF-s are being considered for dealing with Large-Repertoires. For the common users they prefer the BMP.
- p) Mr. Mao Gang: A question on the resolution. - what will happen even if one national body objects to IRG's recommendation by Nov. 15? What are we going to do with national body feedback?
- q) Mr. Mike Ksar: WG 2 will consider the national body feedback for the discussion at Singapore meeting. Target is to make the decision at the Singapore meeting. National bodies and liaison organizations should note item 3j In document N1421 - "The IRG will not request the inclusion of other ideograph sets in the BMP in the future" - as part of the IRG members request for the VE-A to be encoded in the BMP.

**Action Item:** Mr. Sven Thygesen and the convener were requested to prepare a document extracting a summary of current allocations, space to be used by all the accepted characters for inclusion, space expected to be used by characters that are still under consideration, and the remaining space in the BMP. This summary document is to accompany the question to national bodies on whether or not they agree with the IRG recommendation to encode the characters of IRG Vertical Extension A version 1.1, all in the BMP.



**Relevant resolution:****M31.11 (CJK Unified Ideograph Extension A Version 1.1):****Canada Abstained**

WG 2 requests SC 2 to forward the following question to national bodies and liaisons for a response by 15 November 1996:

"Do you agree with the IRG recommendation to encode the 6585 characters of the CJK Unified Ideograph Extension A Version 1.1, in the Basic Multilingual Plane, with the understanding that IRG will not request any more unified Ideographs to be encoded in the BMP?"

**9.4 Vertical Extensions B and C****Discussion:**

- a) Mr. Mike Ksar: Regarding Item 4: In terms of extensions B and C are they stable enough at this time? Is IRG ready to process B and C at this time.
- b) Mr. Zhang Zhoucai: No at a lower priority. We have prioritized the collection of characters - focused on finalizing the collection A. It may take about one more year to finalize the extensions B and C. There are also contributions from IRG members beyond B and C. There are some 5000 characters in these collections. These will take a long time to validate etc. Also there are more characters - non contemporary - proposed to IRG. These have to be looked at.
- c) Dr. Glenn Adams: It took about 2.5 years to reach where we are. Would you think it will take more time? There is a large collection from CNS characters.
- d) Mr. Zhang Zhoucai probably less. Several of the CNS characters are already unified.
- e) Dr. Glenn Adams: Unicode is very happy with the work of IRG so far. Tremendous amount of effort and good job. We would continue to support their work. I have a couple of questions regarding document N1424 - notations like K1, K2, K3 appear next to some characters in some of the columns.
- f) Mr. Zhang Zhoucai: They are the justification marks from individual countries - as an internal documentation - on country unique ideographs.

**9.5 Internal Supplementation / Horizontal Supplementation****Input Documents:**

<b>N1425</b>	<b>Draft Text of General Description for Extension A (IRG N 378); IRG; 1996-08-01</b>
<b>N1426</b>	<b>Draft Text of CJK Annex for Extension A (IRG N 379); IRG; 1996-08-01</b>
<b>N1427</b>	<b>CJK Unified Ideograph - Internal/Horizontal Supplementation Version 6.2 (IRG N 383); IRG; 1996-08-01</b>
<b>N1428</b>	<b>Draft Text of Clause 26 for IS/HS Revision (IRG N 376); IRG; 1996-08-01</b>
<b>N1429</b>	<b>Draft Text of CJK Annex for IS/HS Revision (IRG N 377R); IRG; 1996-08-01</b>
<b>N1434</b>	<b>CJK Unified Ideographs, High Quality printing (IRG N387); IRG; 1996-08-08</b>
<b>N1436</b>	<b>Korean comments on vertical extension and internal supplementation/horizontal supplementation Unified CJK; Korea; 1996-07-10</b>

Item-9: WG 2 accepts the IRG documents N1425 through N1429 and N1434, for consideration by WG 2. IRG editor has fully considered the Japan's request for source-code separation. Points a and b of Resolution 9 - Refer to document N1428 - It is proposed text for a revised clause 26 for the annex on CJK Ideographs - of pDAM8. Additional clarification text will be added

**Discussion:**

- a) Mr. Takayuki Sato: Japan's concern has not been responded. Documents N1427, 1428, 1429 - Japan was requesting an explanatory statement addressing the point of source code separation.
- b) Mr. Zhang Zhoucai - the draft text written by Mr. Koike contains the summary in document N1425.
- c) Mr. Takayuki Sato: Would like to have an explanation regarding why some of the horizontal supplementation have been done.
- d) Professor Hyeon Kyu-Seob: Korea at first gathered about 40000 characters, about 7000 were in HS using the code separation rule. You should appreciate the effort done by IRG. We have conformed to the principles.

- e) Dr. Umamaheswaran: Japan should have explained the problem clearly to IRG - looks like this has not happened.

#### **Discussion regarding proposed revised text for Clause 26**

- f) Mr. Michel Suignard: A forward reference to the Annex may be enough - identifying the new source documents.
- g) Mr. Takayuki Sato: VE has not been discussed yet - will this annex be accepted before we discuss the VE? We should request IRG for a Camera Ready Copy. National standards have been introduced since the unification rule was originally accepted. This forced the duplicate coding etc. that would not have been necessary if the new standards have been introduced. Source code separated characters are to be considered as compatibility zone characters. In the vertical extension - is there a possibility of horizontal filling of extension A?
- h) Mr. Mike Ksar: The clause 26 - is tied with the VE - A. The resolution that is taken on Extension A, we may word the resolution to ask for additions to clause 26. This clause is also tied with Internal Supplementation.
- i) Dr. Umamaheswaran: A separate annex which describes the differences between two editions of the standard is the right place to put such information. Do not clutter the conformatory clauses of the document.
- j) Mr. Bruce Paterson: If a rule is referenced from clause 26, a reference to the separation rule has to be added. It is the practice of standardization to put all changes between editions in an informative annex. The Internal supplementation and Vertical supplementation should be dealt with as two separate entities. The IS could be dealt with first before the VE. Documents N1396 and N1428 - comparison shows that there are new standards used as reference.
- k) Dr. Glenn Adams: Probably a notation in Annex S may be adequate. Not in clause 26. The horizontal supplementation is independent of the Vertical Extension A. They are not logically connected. The V column is to do with Internal Supplementation and not extension. I would suggest the note to address the source code separation concern appears in two places. In clause 26 - 'the rule does not apply to some of the newer source documents that have been added', in addition to the CJK annex. Suggest to add a note - or an asterisk to indicate sources that have been added since the last edition.
- l) Mr. Zhang Zhoucai: Document N1427 is different from document N1434 - document N1434 is the high quality printing (refer to item 9c). Document N1427 is for IRG internal use. It contains information used internally by IRG. Document N1434 should be used for the final pDAM. There is no need to highlight the changes from previous edition in the code tables. As to whether horizontal filling can happen with future VEs etc, it is possible. At the moment extension A does not violate the unification and source code separation rule. The holes may get filled in - within the rule.
- m) Mr. Mike Ksar: Any proposed changes to the CJK Annex in Amendment 8 can be opened only after the ballot closes. Document N1429 - Annex S can have a note in it to address the concern from Japan.

#### **Discussion on Font Quality:**

- n) Mr. Mike Ksar: document N1434 looks acceptable for inclusion in the publication. We may need to some editorial work to align with the current edition of the standard.
- o) Mr. Zhang Zhoucai: The quality for the fonts is better. See document N1434 - for sources of Fonts.
- p) Mr. Bruce Paterson: The HS contains NO additional code positions. Will this occupy more pages? Response: NO. No changes to page numbers or number of code positions. These have to be checked.
- q) Mr. Michel Suignard: IRG has done an excellent job of putting together document N1434.

**Action Item:** Dr. Glenn Adams and Mr. Takayuki Sato - to provide the IRG Rapporteur the text of the note to be included in Annex S to address the source code separation.

**Action Item:** The current ITTF practice is to use Arial or Helvetica style for the numbers and non ideographic characters. IRG convener should work with Mr. Bruce Paterson - the editor to follow the style used by ITTF for the standard publications. In time for transmission of the pDAM text by the editor - target Singapore meeting.

**Disposition:**

Regarding Resolutions 9a, b, c, and d of document N1421:

- a. Mr. Takayuki Sato: Japan and China discussed Japan's concerns off line. An explanatory note will be prepared by IRG in the CJK annex to address the concerns on source code separation - this will satisfy the concern expressed by Japan.
- b. N1428 - Revised text for Clause 26 - is accepted as proposed. There is some concern of overlap between current DAM8 ballot and the new proposed pDAM on Annex S. Documents N1428, N1429 and N1434 -- to be processed as a single pDAM.  
Mr. Mao Gang: Clarification - will this be an amendment to an amendment?? Response: Yes.
- c. Accept documents N1427, N1428, N1429, N1434 on Internal Supplementation - to process as a new proposed pDAM for inclusion in 10646. Editor will have assistance from the IRG editor, Mr. Takayuki Sato and Dr. Glenn Adams.

**Relevant resolution:**

**M31.9 (Internal Supplementation / Horizontal Supplementation):**

**Unanimous**

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 SC2 secretariat for an SC2 ballot.

## 9.6 Ideographic Structure Characters

Item 10 of document N1421 - contains four separate subjects. The discussion is documented in this section and the three following sections.

**Input Document:**

N1430 Proposal Summary Form: Ideographic Structure Characters (IRG N 365); IRG; 1996-08-01

**Presentation:**

Mr. Zhang Zhoucai introduced document N1430 Ideographic Structure Characters - updated document N1348 based on comments from previous meeting. Changed terminology from Control etc. to Ideographic Structure Characters. 12 Ideographic Structure characters are proposed with examples. There were some comments received from Copenhagen meeting - Ideographic Structure Characters - is the new name chosen The justification, the initial proposal etc. were all tabled with WG 2. In document N1431 - the Resemble character has changed to Ideographic Variation Mark (see discussion under section 9.7 on page 39). I have a concern that other than from IRG members - no national body feedback has been received.

**Discussion:**

- a) Mr. Mike Ksar: Some members of WG 2 would like to review the input from IRG and feedback. IRG has requested to be a little more patience - give the national bodies one more chance to give feedback. So far we have not set any deadline on any request for proposals

- b) Dr. Glenn Adams: We generally support the four documents in principle - we have not had a chance to study these in detail. We would support discussing these at the next meeting. The new structure characters and their use needs to be studied - we need to understand these better. These characters are control like in nature. How would these interact with non-Han characters? The explanatory text has to address several such aspects. I would encourage IRG to provide text on the use of these characters.

An additional set of questions need to be added to the proposal summary form - I will work with Mr. Sven Thygesen and come up with suggested additions.

The small number of exceptions may have lead to Outside to Inside Encompassing characters - why not use a single one. The alternative will be not to compose or will be very complicated. Some structures can be overloaded - if we want to reduce the number of structure characters. Unification of 5 through B should be looked at. Unicode consortium will take a look into it.

- c) Mr. Zhang Zhoucai: If we reduce the number of structure characters the combining sequences will be larger. There were many more. This is a trade off. For a linguist, they need more - for computer person we would like less. Document N1348 had some. Hong Kong IRG meeting reduced it.
- d) Professor Kohji Shibano: The examples shown between CODED and NOT Coded - do not seem to be corresponding to each other.
- e) Mr. Takayuki Sato: A description similar to how control functions are described in 6429 would be useful for our evaluation. Can we use 2 to create examples shown in 4. There are multiple ways to represent the same. If I use symbol 6 with other characters - is it valid / invalid? We need to understand the rules - especially if these are to be used for Level 2.
- f) Mr. Zhang Zhoucai: For the symbol target ideograph, there can be many combining sequences, but the target ideograph is the same. The objective is to replace the fully coded ideograph with structure character and combinations. As to the validity of a particular sequence, it is outside the scope of IRG work. The examples shown are only to illustrate the Structure characters.
- g) Dr. Glenn Adams: We have not in the past defined In any validation - restrictions are provided in Level 2. The question will arise whether such Structure Characters are or would be applicable to other categories of the characters etc. My current feeling is that these should be restricted to be used with ideographs only. The current definition of Combined Sequence may not be able to cover the structured sequences - a new sequence definition may be needed. Unicode consortium had investigated a similar technique with conjoining Jamo components for Hangul. We have not settled the question of whether Conjoining Jamo Sequences are combined sequences or not.
- h) Mr. Bruce Paterson: Do we have a time table by when we may be go towards a pDAM (with this as well as the next three proposals under item 10)?  
Is there any intention that the ideographic structure characters can be used with other than the Han component characters? Do we have to put restrictions in the standard? I would like to propose that Ideographic Structure Characters should be made to apply only to some specific set of characters that could be contained within such a sequence. Document N1348 has the beginning of a description. The sequences produced in this manner also deserve equivalent detail to the composite sequences in the text. We should have greater details of text to describe use of these structure symbols.
- i) Professor Kohji Shibano: Some of the structure characters - such as 3 - the semantics of the symbol is not clear. Technical reports from Unicode were available for combining sequences - we need similar information on these Ideographic Structure Characters.
- j) Mr. Mike Ksar: The composition method may be use to represent already coded fully composed ideographic elements. Unicode consortium had developed an equivalency algorithm for example to aid users in processing such as searching etc. to treat multiple coding equivalencies.

- k) Dr. Glenn Adams: Part of the reason is because of Unicode's view was that the natural representation is the decomposed ones. Whereas for the Ideographs the natural representation is fully composed. Is there a requirement for an equivalence of Fully Composed and Decomposed - for the Ideographic Characters? How many characters can be generated using this method?
- l) Mr. Zhang Zhoucai: The composition method is intended for new characters only.
- m) Dr. Glenn Adams: Assuming the existing CJK set, and the proposed Ideographic Structure Characters - how many from the Vertical Extension A - how many cannot be represented using composition technique?
- n) Mr. Zhang Zhoucai: Yes.
- o) Mr. Mao Gang: Any ideographic character can certainly be represented by using the composition method. There are no restrictions placed on these characters. Japanese WG 2 delegates should be encouraged to contact their IRG representatives.
- p) Mr. Takayuki Sato: The purpose of this sequence is to code only those that are NOT encoded in the CJK or Extension A. However, they can also be used to represent the existing Ideograph. How can the user differentiate between these -- this is why an equivalency table is very important. If it does not appear in the equivalence table - user may be confused.
- q) Professor Kohji Shibano: SC24 is responsible for shapes and strokes etc. Should we be doing it here in SC2?
- r) Mr. Keld Simonsen: We are responsible for encoding characters - equivalency is not within SC2 scope. The Unicode equivalency information may not be accurate.
- s) Dr. Glenn Adams: These could be used to decompose down to the stroke level. Is there an intention to decompose down to the level of being able to promote character recognition. No nesting is allowed etc. If nesting is to be allowed - we may have a problem.
- t) Mr. Zhang Zhoucai In our original proposal one can nest.
- u) Mr. Bruce Paterson: We would like to know in a descriptive way - when does a sequence end?
- v) Mr. Zhang Zhoucai: Each symbol describes the number of following components.
- w) Dr. Glenn Adams: IRG perhaps should be given the full responsibility.
- x) Dr. Umamaheswaran: Structure symbols was asked to be within the domain of WG 2. IRG was requested to assist in the work of WG 2 related to the Ideographic Structure Symbols.
- y) Professor Kohji Shibano: These characters are like control functions and should be dealt within WG 2.
- z) Mr. Mike Ksar: The IRG is requested to address the comments received at this meeting. If IRG does not want to continue working on this item, we would understand that it is not part of the Ideographic Work.
- aa) Mr. Zhang Zhoucai: Is it a control function or not? IRG spent a lot of time on it. We came back with changed terminology. We would need clear instruction.

**Following questions were submitted to the meeting secretary for inclusion in the minutes and for IRG consideration:**

- bb) Questions from Mr. Takayuki Sato on document N1430 to be addressed by IRG:
  - Is "nesting" allowed?
  - Is this applicable for any UCS character like level-3, or selected set like level-2
  - Is multiple definition for one CJK character allowed?
  - Some combination may be NOT LOGICALLY POSSIBLE, is this invalid sequence?
  - Is equivalency table needed?
  - Can IRG provide equivalent table between the sequence?
  - Provide much precise text for each character at same level as 6429 control functions
  - Can this method define differences between similar shapes precisely?

cc) Questions from Dr. Glenn Adams on document N1430 (Ideographic Structure Characters) to be addressed by IRG:

*Note: In the following, a structure character is referred to as a structure operator, and the arguments to the operator as structure operands.*

- (1) What is the scope of a structure operator? That is, how does one determine the operands of an operator? Does it apply only to individual characters or may it apply to an entire CC-data-element (a sequence of characters)?
- (2) May a structure operator apply to only Unified CJK Ideographs or may it apply to any character?
- (3) If it can apply to a CC-data-element, may that CC-data-element contain a structure operator? In other words, is *nesting* allowed?
- (4) If nesting is allowed, is there a mechanism for grouping a CC-data-element so as to interpret it as a single operand to a structure operator?
- (5) If nesting is allowed, are structure operators prioritized so as to determine operand scope in the absence of grouping?
- (6) Is a CC-data-element consisting of a structure operator along with its operands constitute a composite character sequence, or does it represent something else? If not, then is there a proposed designation for such a sequence? Perhaps *structured ideograph sequence*?

*Note: In the following, a CC-data-element consisting of a structure operator and its operands is referred to as a structured ideograph sequence.*

- (7) May a structured ideograph sequence be used to represent a coded ideograph (i.e., an ideograph already coded in the standard)?
- (8) If coded ideographs may be alternately represented in this fashion, are alternate representation(s) considered to represent the same information (i.e., construed as *equivalent*)? Is more than one alternate representation possible? Will equivalence tables be provided for coded ideographs in order to indicate their alternate equivalent representation(s)?
- (9) Is another implementation level needed which admits structured ideograph sequences?
- (10) Some structured ideograph sequences may be graphically impossible according to the conventions of ideograph formation; for example, structure operators #5 through #B require that the operand representing the *outer* component be of a certain type. If the outer component is not of the required type, then does such a structured ideograph sequence constitute an illegal CC-data-element? How should applications respond to such illegal CC-data-elements?
- (11) Given the apparent restrictions on the possible operands of each structure operator, is a table provided enumerating each permissible operand for each operator?
- (12) It appears that structure operators #5 through #B may be unified into a single *outside-to-inside* operator? This is strongly indicated given the implicit graphical properties of possible outside components. If they are not unified only due to a small number of exceptions, are there other ways of representing the exceptions or may the exceptions simply be excluded from representation?

**Action Item:** Dr. Glenn Adams is invited to work with Mr. Sven Thygesen on his proposal for an additional set of questions to be added to the proposal summary form -- A new question was drafted for the proposal summary form and was presented by Mr. Sven Thygesen - see section 12.4 on page 48

**Action Item:** National bodies and liaison organizations are encouraged to review the documents from IRG and provide feedback to IRG rapporteur, to assist the IRG with a meaningful view from outside the IRG.

**Relevant Resolution:**

See resolution M31.12 in section 9.2 on page 29.

## 9.7 Ideographic Variation Mark

Input Document:

N1431 Proposal Summary Form: Ideographic Variation Mark (IRG N 366); IRG; 1996-08-01

The ideographic variation mark - is the new name to avoid the confusion with 'Resemble'.

### Discussion:

- a) Mr. Takayuki Sato: A Han character has three aspects - Appearance, Meaning or Pronunciation. Which aspect is the Variation is intended. In the standard we should probably be more precise.
- b) Mr. Zhang Zhoucai: This is not defined as yet - it is only a mark. A higher level editor or other process can decide whatever is appropriate for presentation or shape. Current intention is only for Appearance, and Simplified versus Complex. Currently Pronunciation is not included.
- c) Mr. Mike Ksar: It may be a simple matter of identification which aspect of the Ideographic character - Appearance, Meaning and pronunciation. If these aspects are mutually exclusive, then it may be possible to have separate 'Variance' character.
- d) Mr. Takayuki Sato: There may be also several Variances associated with a single character. Which variance will be picked?
- e) Mr. Zhang Zhoucai: It is similar to but not equal to - is the only definition that is possible. So far there is no intent to specify what these variants are.
- f) Professor Kohji Shibano: The resolution of the Mark followed by a character - is heavily application dependent. Resolving such application dependency has to be somehow addressed.
- g) Mr. Takayuki Sato: How can we decide the processing related properties - Mark Character -- something that is a variant of this.

### Following questions were submitted to the meeting secretary for inclusion in the minutes and for IRG consideration:

- h) Questions from Mr. Takayuki Sato on document N1431 to be addressed by IRG:
  - There are three kinds of nature of character (shape, meaning and pronunciation), Which nature to be addressed?
  - If multiple nature to be addressed? then how to address one kind selected?
  - What if there are more than one similar for one of the kind?
  - CJK character has associated data with the character (e.g. radical, number of strokes) for processing,
    - When un-coded character is defined, how to get the data for the character? Use data of original data?
- i) Question from Professor Kohji Shibano re: document N1431 to be addressed by IRG:
  - What is the semantic of this character?
    - Is similar in shape, similar in meaning or similar in pronunciation. Need a description.
- j) Questions from Dr. Glenn Adams on document N1431 (Ideographic Variation Mark) to be addressed by IRG:

*Note: In the following, a variation mark character is referred to as a variation operator, and the argument to the operator as the variation operand.*

- (1) Similarity of ideographs may occur along one or more axes: X (meaning), Y (abstract shape), or Z (glyph image). To which one or more of these axes does this variation mark apply?
- (2) Is there a requirement to distinguish between different axes of variation? If so, should more than one variation mark be proposed?

- (3) May this variation operator apply only to ideographs or may it apply to other characters? May it apply to CC-data-elements, such as a structured ideograph sequence (see above comments on document N1430)?
- (4) Is a CC-data-element consisting of a variation operator and its operand designated in a special manner? Perhaps *structured ideograph sequence*?

*Note: In the following, a CC-data-element consisting of a variation operator and its operand is referred to as a variation ideograph sequence.*

- (5) What properties (sorting, lexical, etc.) obtain for a variation ideograph sequence? Is it to be identical to the properties of the variation operand?

**Relevant Resolution:**

See resolution M31.12 in section 9.2 on page 29.

## 9.8 Ideographic Radical Supplement

**Input Document:**

N1432      Proposal Summary Form: Ideographic Radical Supplement (IRG N 367); IRG; 1996-08-01

31 characters that are used in dictionaries etc. are proposed in document N1432 - these are different from Kang Xi from TCA.

**Discussion:**

- a) Professor Kohji Shibano: Some of these characters are variants. Dictionaries use these variants. There are some editorial comments on the document. There are several radicals scattered around in the Unified CJK area.
- b) Mr. Takayuki Sato: These radicals are not part of the Unification rules. Therefore we need separate Radicals -- we have to agree on it. If these are separate radicals there are some editorial comments.
- c) Mr. Mike Ksar: We should request IRG to take back these comments and provide response.
- d) Dr. Glenn Adams: Part of these radicals are already in the unified collection - now variants are being proposed subject to be outside the unification rules. This collection is by itself not complete -- may or may not be subject to the same unification rules. Would it be prudent to expand to a complete set of Radicals - including the Kang Xi etc. (see document N1178).
- e) Mr. Zhang Zhoucai: For resolution item 10 - Japan did abstain in IRG on items a and b, but not c and d. Most of them can be considered as variants of CJK. These have to be considered as separate radicals.

**Following questions were submitted to the meeting secretary for inclusion in the minutes and for IRG consideration:**

- f) Questions from Mr. Takayuki Sato on document N1432 to be addressed by IRG:  
N 1432 Is this requesting all of available radicals (out of unification)?  
The original request is just for supplemental radical (rests are in CJK), is this better than to make single but full set collection of radical as separated COLLECTION?  
If yes, provide rationale. Get approval of this principle by WG 2.  
The table is incomplete, is this an intention? or just an error?  
Is this to be used for compound CJK?
- g) Questions from Professor Kohji Shibano - for response by IRG:
  - i. Is 'Unification rule' different from CJK-UI?  
If the answer is YES, how to use this supplement with already coded radicals, since document N1432 only proposes to add some variants of already coded radicals?  
If the answer is NO, then we should remove most graphic characters from the proposal.



- ii For example, U+6708 and variant of U+8089 found in Daikanwa (DKW) and DJW has significantly different but proposal does not differentiate between these variants (difference). Certainly needs careful study.
- h) Questions from Dr. Glenn Adams on document N1432 (Ideographic Radical Supplement) to be addressed by IRG:
  - (1) This request addresses only a portion of the full radical set, relying on previously coded ideographs to serve as the remainder of the radical set. Given that a request is outstanding for a full KangXi radical set (N1182), is it better to encode a complete radical set, including the radicals proposed by this supplement, as a separate set of characters independent from the Unified CJK Ideograph repertoire?
  - (2) If a separate, complete radical set is not to be encoded, what is the rationale for encoding some radicals as Unified CJK Ideographs and others as radical characters which are considered to be distinct from the unified ideograph repertoire?
  - (3) What unification principles were applied in selecting these radicals?
  - (4) May radicals proposed by this supplement be used with ideograph structure characters or with ideograph variation mark?

**Relevant Resolution:**

See resolution M31.12 in section 9.2 on page 29.

## 9.9 Ideographic Component Supplement

**Input Document:**

N1433 Proposal Summary Form: Ideographic Component Supplement (IRG N 368); IRG; 1996-08-01

Document N1433 contains a request for 148 characters - those shown in Dark background were originally agreed. The light background added later.

**Discussion:**

- a) Dr. Glenn Adams: Which of the complete set of 398 are being proposed. The Dark and Grey background parts are requested for the proposal.
- b) Mr. Zhang Zhoucai: The draft request came in Seoul - question asked was - do these exist in current edition, in the extension A, or in the Radical Supplement, or is rarely used. The filtered result is the 148.
- c) Mr. Bruce Paterson: What does the column code mean?
- d) Mr. Zhang Zhoucai It is an internal documentation to pick the correct font from the Gaiji code.
- e) Mr. Mike Ksar: An explanatory text - how to read the proposed collection would be useful.
- f) Mr. Zhang Zhoucai will provide document N1433R - correcting the table.

**Following questions were submitted to the meeting secretary for inclusion in the minutes and for IRG consideration:**

- g) Questions on document N1433 from Mr. Takayuki Sato to be addressed by IRG:
  - Is this requesting all of possible components (out of unification)?
  - The original request is just for supplemental components (rests are in CJK), is this better than to make single but full set collection of components as separated COLLECTION?
  - If yes, provide rationale. Get approval of this principle by WG 2.
  - Is table complete from this view point?
  - Is this to be used for non-compound CJK?
- h) Questions from Dr. Glenn Adams on document N1433 (Ideographic Component Supplement) to be addressed by IRG:
  - (1) This request addresses only a portion of a potentially larger component set, relying on previously coded ideographs to serve as the remainder of the component set. Is it better to encode a complete component set, including the components proposed by this supplement, as a separate set of characters independent from the Unified CJK Ideograph repertoire?

- (2) If a separate, complete component set is not to be encoded, what is the rationale for encoding some components as Unified CJK Ideographs and others as component characters which are considered to be distinct from the unified ideograph repertoire?
- (3) What unification principles were applied in selecting these components?
- (4) May components proposed by this supplement be used *only* with ideograph structure characters or may they be used independently, apart from structure characters?

**Relevant Resolution:**

See resolution M31.12 in section 9.2 on page 29.

## 10. Defect reports status

### 10.1 Arabic names in Annex B - Mis-spelling Letter Heh

**Discussion:**

- a) Mr. Mike Ksar: A defect report was not submitted - only an e-mail message was sent around by Mr. Johan van Wingen. Netherlands is requested to submit a defect report - without a formal defect report we cannot take an action at the meeting.
- b) Mr. Johan van Wingen: I discovered the error. I sent out the e mail.

**Action Item:** Mr. Johan van Wingen is invited to submit a defect report.

### 10.2 Indic Scripts

**Input Document:**

N1406 Defect Report - Indic Script problems; Hugh Ross & Bruce Paterson; 1996-05-28

See discussion under section 8.2.1 on page 16.

### 10.3 Defect Report Index No. 2 for 10646

**Input Document:**

N1414 Defect Report Index No.2 for ISO/IEC 10646-1; Bruce Paterson; 1996-07-09

**Presentation:**

Mr. Bruce Paterson: Per JTC1 procedure the project editor is required to provide immediately before each plenary, an index of defect reports and their dispositions. This list has been mailed to SC 2 secretariat. We do not know what the SC 2 secretariat is supposed to do with it - I believe it is used for cross checking at the time of the next edition of the standard. Document N1414 contains this index - is only for information to WG 2 members.

**Discussion:**

Dr. Glenn Adams: Regarding the entry on Indic script problems - do we need to change the entry.  
Mr. Bruce Paterson: NO. This document is not a standing document. It has already been submitted.

## 11. Liaison reports

### 11.1 Unicode Consortium

**Input Document:**

N1410 Unicode Liaison Report; Unicode Consortium, Glenn Adams; 1996-06-14

**Presentation:**

Dr. Glenn Adams presented document N1410. The primary activity of the Unicode consortium has been publishing of Version 2.0 of the Unicode Standard. It has gone to Addison Wesley - availability expected by September 1996, will be a single volume, will contain a CD ROM. Includes 10646 amendments 1 through 7 - identical repertoire. Of significance is the inclusion of UTF-16 which is a significant structural change.

The ninth international Unicode conference is from Sept. 4--6 in San Jose, CA. A number of copies of the brochures on the conference is available with Dr. Glenn Adams. The interest in Web Technology has been increasing of late. Of the three tracks of the conference, the web technology occupies one track.

Several new corporate members have joined the consortium. Undoubtedly the largest implementers of the UCS are the members of the consortium. We would like to maintain synchronization with 10646.

UTC experts have participated with the IETF on the topic of Internationalization. UCS is proposed as the document character set for HTML. A number of companies like Spyglass, Netscape etc. are participating in IETF. Unicode is involved in getting IETF to promote the UCS in all the protocols on the Internet. In the past Internet had pushed off the character set handling to the back burner -- but now it is coming to the forefront -- to be able to serve the global community. A lot of work has to be done on the ftp, smtp etc.

#### **Discussion:**

- a) Mr. Sven Thygesen: What are the kinds of problems that are being addressed?
- b) Dr. Glenn Adams: In the context of Web, there are two principal issues - http - that uses Latin-1 as the default character set, Got enhanced with 'charset =' (RFC 1522?). Along with that http client can now specify the character set and the language(s) that it likes to be served in. In HTML - it also used Latin-1 as the default -- used SGML. I18N extension expanded the character set to UCS from Latin-1. It is not sufficient - the clients have to expand their support capability to interpret beyond the 8-bit limitation. URLs for example used by the web, was not designed with non-Roman characters in mind. It has methods of using non-Latin characters but no mechanism to advertise what it has used. The assumption is that the client and servers are using Like Character Sets - there is no tagging mechanism. This remains the largest stumbling block. One of the options is to use UTF-8 - being considered by the Internet Advisory Board. Part of the problem is that when information is returned from filling a form, it returns the information in the URL encoding. Partly addressed by the HTML i18n draft.
- c) Mr. Mike Ksar: I encourage everyone to participate in conferences such as Unicode conference to address problems such as those described by Dr. Glenn Adams on UCS applications on the web, and elsewhere. I am also on the agenda to inform of the latest developments on UCS - reflecting WG 2 work.
- d) Mr. Keld Simonsen: I am also participating in I18n related aspects of the web. EC has a funded project to deal with multilingual aspects of the web - we may be able to use the solutions developed for WG 2's own work.

## **11.2 AFII**

### **Input Document:**

**N1459 AFII Liaison Report; Al Griffee, AFII; 1996-08-15**

Mr. Alan Griffee, President, Association for Font Information Interchange (AFII) - presented the liaison report in document N1459. The AFII database is available on CD for limited distribution for ISO related character coding and document processing standards development. AFII has extracted the glyph shapes - imbedded in a Microsoft Access Data base - as an embedded OLE object. We have sent letters requesting clarification and their opinions on the distribution of these glyph shapes to a wider audience - based on the concerns expressed at the previous WG 2 meeting. If there are any royalty related issues related to a wider distribution, we have to deal with them at that time. I have a copy of the data base and can present a demo of it for WG 2 audience interested in it.

(A separate presentation session was arranged for Mr. Alan Griffee to show the contents and use of the AFII CD-ROM.)

AFII was also asked if the glyph collection registration process under ISO/IEC 10036 for registering repertoire collections etc. for ISO/IEC 2022, registered sub repertoires etc. As the registrar, AFII does not see any problem, in being able to do it, if requested to do so. The AFII board of directors will look at the cost recovery to see how a free registration would be possible.

**Discussion:**

- a) Mr. Bruce Paterson: Does this data base contain glyphs for all the characters from the first edition of 10646. Response: Almost 95 to 99 percent are there. Some are missing. The intention is to give a full coverage for all of the 10646 characters. In the previous meetings we heard the bit maps are not suitable for good reproduction. The shapes on the data base can be scaled.
- b) Mr. Keld Simonsen: I heard that you are willing to register glyph shapes etc. What would be the conditions for such registrations. Response: Registration process document ISO/IEC 10036 was developed in conjunction with the RA of JTC1. The process permits the cost recovery mechanisms to be put in place by the RA. AFII has the position - currently - that if it comes in a soft copy form from an ISO committee there will be no charge for registration. 100 USD - for a 500 page registry of glyphs. Organization requests would be about 10 USD each for registering shapes.
- c) Professor Kohji Shibano: ECMA will be relinquishing the ISO Registry responsibility. Japan has offered to pick up the RA. There are shapes in it which are not quite good. Will you be able to assist? Response: The quality of the alphabetic scripts are not as good as the Far East ideographs. The glyph register is only representative shapes - low quality. For the purposes of registration work, this quality may be acceptable. AFII is willing to work with you.
- d) Mr. Zhang Zhoucai: You mentioned that you sent out a letter to the font providers. CCID has not received it yet Response: It was sent about a 3 weeks ago.
- e) Mr. Takayuki Sato: Japan would like to know who did you sent the letters? To the font suppliers - it does not involve the national bodies. It looks like the CD ROM contains the fonts that was used for 10646 printing - is that correct? Response: The fonts that were received were transferred to the common Xerox format to print the 1993 edition of 10646. Several mapping tables etc. were developed to extract the Glyph information. Since then Xerox has obsoleted that equipment. Xerox has transferred all that font information into PDF. AFII has extracted from these the bit-mapped format for the shapes - these were then embedded into the Microsoft data base. The data does not exist as fonts any more. The data base cannot be used to create a text, edit etc. the information from there. The font manufacturers should not have any concern about font use without royalty etc. because of such use. Japan compared the shapes on the CD ROM with originals - look so different - so we concluded that there is no problem.
- f) Mr. Keld Simonsen: Your fonts can they be put on the web? Response: We do not have any current plans to put it on the web.
- g) Mr. Mike Ksar: Would you be able to print the 10646 with the same quality as the first edition using the CD-ROM information? Response: Probably NOT.  
Does AFII have plans to acquire Truetype fonts etc. from vendors etc. so that the quality of the shapes can be improved? There is a technical problem with Access Data base - dealing with the Outline Fonts. Found that the bit map worked better. Response: AFII is not actively soliciting fonts at this time.  
WG 2 would be looking forward to AFII for help in printing the next edition of the standard. The first edition's quality would be required as a minimum for the second edition. Response: I can alert the AFII board of directors.  
Offers from other organizations using different true type and outline fonts have been made to WG 2.
- h) Dr. Glenn Adams: The offer to assist WG 2 with the next publication using the True Type fonts like what was done for Unicode 2.0 is there.
- i) Mr. Alan Griffiee: The CD ROM fonts are available for use of WG 2 work - and not for its members. It is also available for other ISO Working Groups. If there are any problems with the glyph shape on CD ROM - then AFII should be contacted. If it is not an error - it would be a judgmental call.

## 11.3 ITU

### Input Document:

N1457 ITU TS SG8 liaison update, Stefan Fuchs, 1996-08-14

#### Presentation:

Mr. Stefan Fuchs presented the liaison report in document N1457. The work of SG8 of ITU TS for the next four year period will be determined at the WTSC-96 meeting in October 1996. Migration to multiple-octet coding will be part of character coding work of SG8 for the next period.

#### Discussion:

- a) Mr. Mike Ksar: Is ITU going to adopt 10646? Are you looking at the status of current implementations and nothing gets done? Response: At the current time, implementations of multiple octet coding is being looked at. For example, pager manufacturers are coming to ITU - and are using Latin-1 since most of the manufacturers are situated in Latin-1 countries. In the future we are recommending 10646. However, there are technical difficulties in implementing 10646 on small devices - and may end up in using 7 and 8 bit codes.
- b) Mr. Keld Simonsen: Several X.nnn standards are calling for UCS and several market leading products are implementing UCS with the X.nnn. MAITS Consortium - for example.
- c) Mr. Johan van Wingen: Why is sorting mentioned in this report - it is not an SC 2 work item.

**Action Item:** Mr. Keld Simonsen and anybody else who has information, is invited to prepare reports indicating who is implementing UCS under the auspices of ITU services.

## 11.4 Response from X-Consortium

### Input Document:

N1388 Response to letter from X Consortium on 10646 "versions"; Mike Ksar; 1996-05-08

#### Presentation:

Mr. Mike Ksar introduced document N1388. It contains a set of correspondences between Mr. Mike Ksar and the X-consortium. There was a perception that there are versions of 10646. After discussion and consultation, what was really needed was to be able to identify the repertoires. Annex A of the standard could be used to deal with the problem of identifying additional repertoires. See document N1388 for further information.

#### Discussion:

- a) Mr. Bruce Paterson: The 10646 standard as it is published, has a series of amendments. Up to amendment 4 there is no change in the repertoire. Amendment 5 involves change in repertoire, amendments 6 and 7 further changes etc. The ITTF procedures state that all it takes is to call for the latest amendment number - and it will automatically involves all the amendments prior to it. There are already many methods to identify the different aspects of 10646. There are already sub repertoire identifications - but for the whole BMP collection - a new one will have to be identified each time an amendment increases the repertoire. It may not be right way to satisfy the stated requirement. Collection Identifier 300 would be for the 1993 version of the standard, may be 305 would be Amendment 5, 307 for amendment 7 etc. Some one should explain to them that the amendments are cumulative and not independent. An editorial note can be added to avoid the confusion.
- b) Mr. Michel Suignard: There are not many pre-DAM-5 Korean implementations and it does not satisfy the needs for Korean processing. There should not be any effort to identify the previous versions. The current range numbers will not be changed to prevent previous implementation.
- c) Mr. Keld Simonsen: May be this issue should be looked at in conjunction with the 7350 registration review / revision proposal. The current 2022 mechanism do provide for revision numbers. There is 7350 registration review proposal I would also support the use of collection identifiers. We could make the identification using 300, 305 etc. We should investigate other mechanisms also. The collection identifiers is to identify sub repertoires for new scripts, and may be identify small additions separately.

- d) Dr. Glenn Adams: The X consortium should have in its own protocols a means to distinguish between the different repertoires for the entire BMP collection, corresponding to each amendment. SGML has a similar requirement - the current mechanism does not address the different character collections. Personally, I would support the concept of having different collection numbers - would not subscribe to 305, 307 etc. prefer the sequential numbers. Will take this back to Unicode consortium for the feedback. We may end up in using the same amendment numbers in the future on future full editions of the standard. A special note may be needed to ensure that the Hangul reallocation is not confused. Collection identifiers -- for Tibetan? Tibetan has not yet gone through the ballot. Current collection ids refer to a range of code position range.
- e) Mr. Takayuki Sato: The collection identifiers should not restrict itself to the BMP. In the future it should address extended planes as well.
- f) Mr. Mike Ksar: The X Consortium's preference is not to have version numbers. The collection identifiers is preferred by them. Suggestion is for collection identifier number 301 - that would accommodate up to and including amendment number 7.
- g) Dr. Umamaheswaran: The use of collection identifiers is a natural way to identify any specific collection of characters, whether it is a sub repertoire or complete collection of BMP at any given instance of time. This is the only mechanism under WG 2's control. Let us record the concerns, possible number allocations and points to keep in mind from these discussions.

**Action Item:** Editor to prepare an entry for collection identifier number 301. National Bodies have the option of commenting on Amendment -6, -7 ballot - to avoid a new ballot on the topic. Also a note to the effect that collection identifiers 56 through 59 related to Korean Hangul in the Annex refer to the 1993 edition of the standard.

**Relevant resolution:**

**M31.13 (Collection Identifier):**

**Unanimous**

WG 2 instructs its editor to assign collection number 301 to identify the repertoire of the BMP up to and including Draft Amendment 7, in accordance with document N1388, for inclusion in a future amendment to the standard.

## 11.5 CEN/TC304

**Input Document:**

**N1458** Liaison Report from TC304 to SC2; CEN/TC304; 1996-08-15

**Presentation:**

Mr. Keld Simonsen presented document N1458. This report completes action item M30-13 on the CEN/TC 304 liaison representative. This is a document directed to SC 2. The document lists a number of areas for possible cooperation with WG 2 to consider - work on Short Identifiers. On European missing characters - CEN/TC304 will provide input. Volunteering to work with WG 2 in maintaining the current standards. They already have some work items in place - for example maintenance of 10646 balloted according to Vienna agreement. Registration of minimum and extended subsets registration. A response has been requested of SC 2. In Slovenia on 11 and 12 November 96 - CEN/TC304 is holding a workshop on UCS. All WG 2 members are invited to attend. Meeting details will be made available via a link on the WG 2 home page.

## 11.6 SC18/WG9

Mr. Alain LaBonté presented a verbal report. ISO/IEC 14755 DIS on input methods for 10646 is under ballot. CD-1 did not pass, CD-2 passed unanimously after resolving all the comments.

## 12. Other business:

### 12.1 Second Part of 10646

During the discussion on different scripts - especially on Runic and on IRG Vertical Extension A discussion - it became clear that WG 2 has to start the preparation of work for the additional parts of 10646.

#### Discussion:

- a) Dr. Glenn Adams: Currently, WG 2 can provide pDAMs on BMP in order to progress new scripts that are accepted for the BMP. However, if we accept them to be encoded in extended planes, we cannot process them. We need to open up Part 2 - and process new scripts as soon as possible.
- b) Professor Kohji Shibano: I agree with Dr. Glenn Adams that there is some activity needed to start Part 2. It could be started as a pDAM - to start a new part. SC 2 has to support the sub division to start the work on Part 2 10646 - to cover one or more planes outside BMP.

**Action Item:** National Bodies and Liaison organizations - encouraged to contribute towards a new part.

#### Relevant resolution:

##### **M31.14 (Additional parts of 10646):**

**Unanimous**

WG 2 requests SC2 to create a sub-division of its project to create Part 2 of ISO/IEC 10646, to enable it to populate supplementary planes of UCS.

### 12.2 Working with IETF

Mr. Mike Ksar: How should WG 2 interact with IETF? How do we communicate our work to them? They are an extremely important users of the standards. I would like to have a discussion in WG 2 on this topic.

#### Discussion:

- a) Dr. Glenn Adams: I attend many of the IETF groups, the HTTP and HTML groups. The way these groups work is very different from the way ISO standards WG etc. work. IETF is itself an ad hoc organization - came out of the Internet Steering Group. There is an Internet Advisory Board which keeps an informative control over the activities of IETF / ISG. There is NO Formal Voting or membership In the IETF. Decisions are based on Consensus - based on whether something has been addressed satisfactorily within any group. Any contention raised would cause some item to drop immediately.

There is no formal liaison mechanism in place - it will be difficult to work in any formal way. In the past non-ASCII characters were ignored. However, several ad hoc groups and expert participation forced some activities. Request for comments - RFCs are their equivalent of working papers and eventually get implemented. There is a process as a Draft, Working Standard etc. till Internet Standard stage.

- b) Mr. Mike Ksar: How can we keep them informed.?
- c) Mr. Keld Simonsen: A formal liaison agreement could perhaps be worked out. SC 6 and IETF have a formal inter-working agreement in place. It is not critical for IETF to work with SC 2 as much as SC 6. JTC 1 is also working with IETF in being able to take some of the Internet standards towards making them ISO standards.

- d) Mr. Bruce Paterson: There was an RFC with some identifiers that were not adequately describing the different 10646 variations.
- e) Professor Kohji Shibano: We have had problems in the past in not properly interpreting SC 2 standards - for example the 2022 based documents.
- f) Dr. Umamaheswaran: It is not clear how any liaison relationship could help the work of WG 2 or vice versa. Our work is used by them after we have standardized them. There were also RFCs on UTF-8, UTF-16 etc. WG 2 experts could review such RFCs on the Internet on their own.

**Action Item:** Mr. Keld Simonsen and Dr. Glenn Adams are invited to interact with the principal authors of RFCs in IETF on 10646. Some collection identifier such as 301 - once finalized in 10646 - could be registered with IANA registration authority also for use with Internet protocols.

### 12.3 Web Site Review

Mr. Mike Ksar: We have been using the web site for some time - would like to have feedback. I asked Mr. Keld Simonsen to create a restricted web site for WG 2 use. We can post there ISO documents for WG 2 members' use. Mr. Keld Simonsen will assign a password - WG 2 experts can approach Mr. Keld Simonsen to get the password.

**Action Item:** All WG 2 members who are interested in accessing soft copies of WG 2 documents from WG 2's web site should contact Mr. Keld Simonsen for getting a password to access the site.

### 12.4 Principles and Procedures Document - Update

**Input Documents:**

- N1402 Updated (post meeting 31) Principles and Procedures for Allocation of New Characters and Scripts (replaces N1352); Sven Thygesen; 1996-08-19
- N1460 Changes to Proposal Summary Form; Umamaheswaran, Thygesen, Adams; 1996-08-15

**Presentation:**

Mr. Sven Thygesen presented the updates to the principles and procedures document N1402. This document is in response to two action items on the ad hoc on procedures (Mr. Sven Thygesen, Dr. Umamaheswaran, Mr. Keld Simonsen and Mr. Mike Ksar worked in Copenhagen on the subject). The document contains diagrams of the different types of document and the different stages a document goes through during its processing in WG 2 till its publications in SC2. The Annex E mentioned here is the working document of collected names maintained at the ftp site.

Mr. Sven Thygesen also presented document N1460 - the revised proposal summary form. An additional question 10 was added to the Technical justification section in the Proposal Summary Form. Any special property should be explained in detail. Based on further feedback - it will be refined.

**Discussion:**

- a) Hold for Publication means Hold for Ballot.
- b) Add IRG as an input and IRG site as a reference.
- c) Font - Computerized Font is not mandatory for the hold for ballot stage - may be for future publication date. The fonts - the requirements vary depending on the different stages - it also depends on the single character or full code table etc. Some more discussion is required on the Font question.
- d) S - (Stopped) - needs explanation.
- e) The Names column could be a little bit more specific - for example Latin characters - what kind?

**Action Item:** The ad hoc group on principles and procedures is to take comments into account and revise document N1402.



**Action Item:** National bodies and liaison organizations are to review and feedback on the proposed revised Proposal Summary Form in document N1460.

## 12.5 Status of Collections of Accepted Characters

Symbols collection - was discussed under section 8.7.1 Updated Cumulative List of Symbols, on page 23.

## 12.6 Alphabetic Rapporteur Group - a proposal

**Input Document:**

N1442 Proposal for a new Alphabetic Rapporteur Group; Everson; 1996-07-22

Document contains an individual contribution for creation of an Alphabetic Rapporteur's Group.

### **Discussion:**

- a) Mr. Alain LaBonté: I would support this - because there are requirements for extensions to Latin script. There is a problem in getting attention to various problems that are brought to the attention of the working group. Speedier progression of the documents is not happening.
- b) Mr. Keld Simonsen: We believe there is a need to focus on the Latin extensions and there is a need for a separate group to address the issues. From the European point of view - there is similarity to the IRG scene. By having the group under the control of WG 2 it may be beneficial to WG 2 rather than other splinter groups or other European groups taking it up. Another way of doing it would be to create a lightweight ad hoc group on specific subjects. We can make an ad hoc group with a leader and assign the task. I do not think it is required that the SC 2 has to approve the document distribution methods of each WG etc. -- that is not how other WGs are working. If you think that we have to meet from time to time to discuss and agree on items - rather than doing it electronically etc.
- c) Mr. Michel Suignard: There is sufficient interest and membership within WG 2 on the subject that it stays at the WG level. There may be a need for ad hoc groups on specific items - but should not be relegated to a separate Rapporteur's group. The Pinyin example that was quoted here is not the correct one - US had done some work on it, and the interested parties were asked to participate in it. They did not all do it.
- d) Dr. Glenn Adams: The Unicode consortium will strongly oppose any Rapporteur's groups. Additional costs and efforts involved. There is sufficient interests in the subject within WG 2 that we do not need another group. The Unicode technical committee is available as a forum if people choose to bring these topics for discussion. The Danish analogy of Europe only focus is certainly not appropriate for the Alphabetic world which extends far beyond the European boundaries.
- e) Mr. Johan van Wingen: We should not support another group like as it is proposed. There is already too many groups - would like to concentrate the resources and effort in one group - would not support this.
- f) Mr. Mao Gang: Personally I do not know whether the ARG is a right thing to do or not. The comparison with IRG is probably not quite right. The IRG membership was based on the common interests of using Ideographs, there is considerable amount of work on the specific area, the member countries are all co-located to reduce the cost etc.
- g) Professor Kohji Shibano: Japan is also opposed to creating such Rapporteur groups - the idea should be to unify the world and not splinter the effort. Ad hoc groups could be created on specific topics from time to time - but not on a permanent basis. There are some procedures using Internet etc. to conduct the business of JTC1 - but none of them are completely satisfactory. There are groups experimenting with it - but requires far more work.
- h) Mr. Arnold Winkler: From the success we have had so far with WG 2 there does not seem to be a need for a separate rapporteur's group. I do not see what we cannot do within this group what cannot be done with the existing method.

- i) Mr. Bruce Paterson: UK is interested in all the topics on WG 2. If more resources are needed to travel etc. we are not interested - costs become a factor. If individuals want to discuss on any particular topic, they are free to do what they want to do on the network.
- j) Mr. Mike Ksar: From the CEN point of view - CEN is already focused only on Europe - their voting procedures is different from the ISO procedures. WG 2 must use the ISO procedures - and we have the charter in ISO to do the work. I am puzzled at the suggestion that we are not doing the work on Latin / Alphabetical characters in our work. Why should we even commission another Rapporteur's group to do what is being done by WG 2. There are also alphabetic scripts used worldwide geographically. WG 2 is the right place to work. As a convener I would oppose any such activity. The suggestion is to reject the proposal based on the opinions I have heard at this meeting.

Mr. Alain LaBonté (as an individual WG 2 expert) was opposed to the convener's concluding suggestion, and requested for a Straw Vote of the delegates. The results were:

Opposed: 11 - against setting up an ARG.

For: 3 (France, Poland, Mr. Alain LaBonté) - to support an ARG.

**Disposition:**

WG 2 rejected the proposal for creating a new Alphabetic Rapporteur's group - most of the work on Alphabetic scripts is the main work of WG 2, and ad hoc groups can be created on specific items as needed if specific expertise is warranted.

## 13. Closing

### 13.1 Future Meetings

**Meeting No. 32 January 1997, Singapore:**

Mr. Wilson Lee, on behalf of the Singapore national body addressed the meeting. Singapore is pleased to invite WG 2 to the next meeting. We will send the formal invitation to the convener for distribution to WG 2 - on the Web. Singapore is also hosting the IRG meeting the week before.

The convener requested the IRG rapporteur to be realistic about the volume of documents to be given to WG 2 at the next meeting.

**Future meetings:**

Vietnam: Will be happy to host the WG 2 meeting - next available slot. Prospective countries for future meetings: Vietnam, Israel, Ireland.

**Relevant resolution:**

**M31.15 (Future Meetings):**

WG 2 confirms the following future meeting schedule:

Meeting 32: 20 to 24 January 1997, in Singapore

Meeting 33: 23 to 27 June 1997, in Cyprus (backup Greece)

Meeting 34: January 1998, in North America (location to be decided)

Future hosts: Ireland, Israel, Vietnam, Netherlands, China

**Unanimous**

## 13.2 Approval of Resolutions

Output Document:  
N1404 Resolutions of meeting 31

The editing committee had prepared the draft resolutions document N1404-draft for discussion and agreement by the meeting. Several editorial changes were made. Some draft resolutions were also reworded towards getting a consensus. The final approved wordings of the resolutions are to be found in document N1404 and inserted at the relevant sections earlier in this document.

### Appreciation:

#### Relevant resolution:

#### M31.16 (Appreciation):

by Acclamation

WG 2 thanks its hosts the Conseil du trésor, Gouvernement du Québec and the Standard Council of Canada, and their staff, especially Mr. Alain LaBonté for hosting the meeting, providing secretarial and administrative support and especially for their outstanding hospitality.

(Note: Please note that the list of sponsors / supporters for hosting this meeting to be found in section 1.1. Some of these names were inadvertently missed in the wording of the above resolution -- Umamaheswaran.)

## 14. Adjournment

The meeting adjourned at approximately 11:30h on Friday, 1992-08-16.

## 15. Action Items

### 15.1 Outstanding items from WG 2 meeting 25 Antalya, Turkey

Item	Assigned to / action (Reference document N1034 - resolutions, and document N1033 - minutes of Antalya meeting WG 2-25, and corrections to these minutes in Section 3 of document N1117)	Status
<b>AI-25-6 Korean member body</b>		
	is requested to forward the set of bit maps, and or the outline of the corrected shapes of the characters in defects in document N975, along with a blown-up (96x96 bits) hard copy is needed by the editor. M26, M27: M28, M29: In progress; Korea will attempt to speed up the availability of fonts. M30: Of the 6 characters that had the defective shapes, four have been over-ridden by pDAM-5 on Korean. Professor Kim will investigate the fonts for two remaining shapes in defect.	<b>M31: Still in progress.</b>
<b>AI-25-10 Chinese member body</b>		
<b>a</b>	is requested to study this possibility of composition to reduce the number of characters of the Yi script in document N965 that needs coding in the BMP. M26, 27, 28, 29, 30: Under study.	<b>M31: Still under study; Target M32.</b>

## 15.2 Outstanding items from WG 2 meeting 26, San Francisco, CA, USA

Item	Assigned to / action (Reference document N1118 - resolutions, and document N1117 - minutes of San Francisco meeting WG 2-26, and corrections to these minutes noted in Section 3 of document N1203)	Status
<b>AI-26-8</b>	<b>Ms. Joan Aliprand - Liaison to TC 46</b>	
	to take parts related to TC 46 in document N1071 for formal submission as liaison document by TC 46 along with the completed Proposal Summary Form. M27, M28: In progress. M29: Mr. Arnold Winkler tried to reach Ms. Aliprand - no success. M30: Mr. Mike Ksar will pursue the item with Ms. Aliprand - target M31.	<b>M31: Still Outstanding.</b>

## 15.3 Outstanding items from WG 2 meeting 27, Geneva, Switzerland

Item	Assigned to / action (Reference Meeting 27 Resolutions document N1204, Unconfirmed Meeting 27 Minutes in Document N1203, and corrections noted in document N1253)	Status
<b>AI-27-12</b>	<b>Mr. Johan van Wingen, Netherlands</b>	
	is invited to examine the standard for the need for any statements regarding conventions used for naming characters such as 'digits', 'letters', etc. and propose clarification texts -- see minutes item 6.1.2.2. M28, M29, M30 - No new progress.	<b>M31: In progress.</b>

## 15.4 Outstanding items from WG 2 meeting 28, Helsinki, Finland

NONE

## 15.5 Outstanding Action items from WG 2 meeting 29, Tokyo, Japan

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

## 15.6 Outstanding Action items from WG 2 meeting 30, Copenhagen, Denmark

Item	Assigned to / action (Reference Meeting 30 Resolutions document N1354 and Unconfirmed Meeting 30 minutes in document N1353 and corrections to these minutes in section 3 of document N1453 -this document you are reading)	Status
<b>AI-30-9</b>	<b>Ireland (Mr. Michael Everson)</b>	
	<b>b</b> To prepare Proposal Summary Forms and proposals for Sinhala, Burmese and Khmer scripts, based on contribution N1321 and N1376 from Mr. Hugh Ross.	<b>M31: In progress; Mr. Everson has these on his web page - he is requested to submit them in hardcopy form to the convener.</b>
<b>AI-30-12</b>	<b>Ad Hoc Group on Principles and Procedures (Mr. Sven Thygesen - lead)</b>	
	<b>a</b> To work with Mr. Hugh Ross and document the guidelines / criteria that were used in the creation of the first edition of the standard, for deciding when a pre-composed character was considered for inclusion directly versus when it would be left as Level 3 composition encoding.	<b>M31: Outstanding.</b>
	<b>b</b> To provide some guidelines on when provisional code positions could / should be assigned for new character proposals.	<b>M31: Outstanding.</b>
<b>AI-30-13</b>	<b>CEN/TC 304 Liaison (Mr. Evangelos Melagrakis)</b>	

Item	Assigned to / action (Reference Meeting 30 Resolutions document N1354 and Unconfirmed Meeting 30 minutes in document N1353 and corrections to these minutes in section 3 of document N1453 -this document you are reading)	Status
	<p><b>a</b> To provide a more detailed liaison report on CEN /TC 304 activities or projects which are supposed to be joint with WG 2 per the Vienna agreement -- towards avoiding duplication of work in CEN/TC 304 and to communicate the same message to CEN/TC 304.</p>	<b>M31: In progress.</b>
<b>AI-30-16</b>	<p><b>Latvia, Ireland and Finland</b>  <b>a</b> to provide additional supporting documents to address the various concerns expressed on proposal for Livonian characters in document N1322 at this meeting to permit WG 2 to better evaluate the proposal.</p>	<b>M31: Outstanding.</b>
<b>AI-30-17</b>	<p><b>All member bodies and liaison organizations</b>  <b>d</b> to feedback to Mr. Michael Everson on document N1329 on several questions raised on character naming principles.  <b>e</b> To submit contributions on ' collection identifiers' - how these should be treated in the standard with each pDAM, repertoire enhancements etc.  <b>g</b> to feedback on contributions N1320 and N1373 on Level 2 support for Indic &amp; other scripts from Mr. Hugh Ross.</p>	<p><b>M31: Noted. No feedback.</b>  <b>M31: Outstanding. No feedback.</b>  <b>M31: Noted. Some feedback from Unicode consortium in document N1462.</b></p>
<p><b>NOTE: RENUMBERED DUPLICATED AI-30-6 as AI-30-18 and moved to the end of this table -- Uma</b></p>		
<b>AI-30-18</b>	<p><b>Greece</b>  <b>a</b> To prepare a revised proposal on Byzantine Musical Symbols addressing the concerns expressed during the discussion at meeting 30, for consideration at meeting 31.</p>	<b>M31: In progress.</b>

## 15.7 New 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 -this document you are reading)	
<b>AI-31-1</b>	<p><b>Meeting Secretary - Dr. V.S. UMAmaheswaran</b>  <b>a</b> To finalize the document N1454 containing the adopted meeting resolutions and send a plain text and word processor source to the convener as soon as possible, for electronic distribution by the convener to the WG 2 membership and to SC 2.  <b>b</b> To finalize the document N1354 containing the adopted meeting resolutions and send a plain text and word processor source to the convener as soon as possible, for electronic distribution by the convener to the WG 2 membership and to SC 2.</p>	
<b>AI-31-2</b>	<p><b>Convener - Mr. Mike Ksar</b>  <b>a</b> to send with assistance from Mr. Takayuki Sato, a cover letter to TC 134, with the message that WG 2 has agreed to accept the Braille as symbols - we take a preferred choice - for example, 256 symbols. Attach both 256 and 512 proposals - feedback by November 1 1996 or earlier.  <b>b</b> to revise the WG 2 report to SC 2 in document N1394 - prepare N1394R. Dr. Umamaheswaran iwas delegated to present this to SC 2 plenary next week on behalf of WG 2. The report should capture the messages to be conveyed to SC 2 in the following resolutions:  <b>RESOLUTION M31.1 (Character Glyph Model):</b>  With reference to document N1411 on the Character Glyph Model:  a) WG 2 requests that SC 2 assign NP 15285 to WG 2.  b) WG 2 requests that SC 2 appoint Messrs. Edwin Hart and Alan Griffie as co-editors of the TR.  c) WG 2 requests that SC 2 distribute the current working draft (an updated document N1411) of the TR to SC 2 members and liaisons, for comments to be returned to the convener of WG 2 and to the co-editors prior to 30 November, 1996, to enable preparation of a draft PDTR for consideration at the WG 2 meeting 32 in January, 1997.  d) WG 2 requests that SC 2 approve a concurrent ballot on registration and approval of the PDTR that will be prepared by WG 2.</p>	

Item	<p><b>Assigned to / action (Reference Meeting 31 Resolutions document N1454 and Unconfirmed Meeting 31 minutes in document N1453 -this document you are reading)</b></p> <p><b>RESOLUTION M31.11 (CJK Unified Ideograph Extension A Version 1.1):</b>  WG 2 requests SC 2 to forward the following question to national bodies and liaisons for a response by 15 November 1996:  "Do you agree with the IRG recommendation to encode the 6585 characters of the CJK Unified Ideograph Extension A Version 1.1, in the Basic Multilingual Plane, with the understanding that IRG will not request any more unified Ideographs to be encoded in the BMP?"</p> <p><b>RESOLUTION M31.14 (Additional parts of 10646):</b>  WG 2 requests SC2 to create a sub-division of its project to create Part 2 of ISO/IEC 10646, to enable it to populate supplementary planes of UCS.</p>	
	<p><b>RESOLUTION M31.12 (IRG related):</b></p> <ul style="list-style-type: none"> <li>• WG 2 accepts the nomination of Mr. Zhang Zhoucai to continue as the IRG rapporteur.</li> </ul>	
	<ul style="list-style-type: none"> <li>c to communicate to the Asian Classics Input Project (ACIP) that DAM6 is for ballot, and that ACIP should communicate through the appropriate NB to get their feedback in.</li> <li>d to inform SC 22 WG 3 that their proposal for APL Function Symbol Quad has been accepted and will be processed along with other symbols in the Symbols collection. (See also note from the editor on allocating a different code position to the symbol than in the resolution M31.5 (... "So I have put QUAD in the next available place - x2395" -- Mr. Paterson).</li> <li>e to send the feedback on documents to Armenia / ASEA for their consideration and response prior to attending the Singapore meeting.</li> <li>f to prepare a document, with assistance of Mr. Sven Thygesen, extracting a summary of current allocations, space to be used by all the accepted characters for inclusion, space expected to be used by characters that are still under consideration, and the remaining space in the BMP. This summary document is to accompany the question to national bodies on whether or not they agree with the IRG recommendation to encode the characters of IRG Vertical Extension A version 1.1, all in the BMP.</li> </ul>	
AI-31-3	<p><b>Editor - Mr. Bruce Paterson</b></p> <p>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 WG2 resolutions:</p> <p><b>a RESOLUTION M31.3 (Additional Cyrillic characters):</b>  WG 2 provisionally accepts the proposed code positions for the following four Cyrillic characters:  a) x0400 for CYRILLIC CAPITAL LETTER IE WITH GRAVE  b) x0450 for CYRILLIC SMALL LETTER IE WITH GRAVE  c) x040D for CYRILLIC CAPITAL LETTER I WITH GRAVE  d) x045D for CYRILLIC SMALL LETTER I WITH GRAVE  in accordance with document N1407, and instructs its editor to add these characters along with their previously accepted shapes (at WG 2 meeting 30), to the cumulative list of characters for future inclusion in ISO/IEC 10646-1.</p> <p><b>b RESOLUTION M31.4 (Ethiopic script):</b>  WG 2 accepts the set of 346 characters of the Ethiopic script, their shapes and code positions in the range x1200 to x137F, in accordance with document N1420, and instructs its editor to prepare the pDAM text, with assistance from the US national body and the Unicode Consortium, and forward it to SC2 secretariat for an SC2 ballot.</p> <p><b>c RESOLUTION M31.4 (Ethiopic script):</b>  WG 2 accepts the set of 346 characters of the Ethiopic script, their shapes and code positions in the range x1200 to x137F, in accordance with document N1420, and instructs its editor to prepare the pDAM text, with assistance from the US national body and the Unicode Consortium, and forward it to SC2 secretariat for an SC2 ballot.</p> <p><b>d RESOLUTION M31.5 (APL Function Symbol Quad):</b>  WG 2 accepts the name - APL FUNCTIONAL SYMBOL QUAD, its proposed code position x237B and its proposed shape, in accordance with document N1419, and instructs its editor to add it to the cumulative list of symbols for future inclusion in ISO/IEC 10646-1.</p> <p><b>e RESOLUTION M31.6 (Canadian Aboriginal Syllabics):</b>  WG 2 accepts the set of 623 characters for the Canadian Syllabics script, their names (as revised at meeting 31), and their shapes, for allocation in the range x1400 through x167F, in accordance with document N1441. WG 2 further instructs its editor to prepare the pDAM text, with assistance from the Canadian national body, and forward it to SC2 secretariat for an SC2 ballot.</p>	

Item	<p><b>Assigned to / action (Reference Meeting 31 Resolutions document N1454 and Unconfirmed Meeting 31 minutes in document N1453 -this document you are reading)</b></p> <p><b>f RESOLUTION M31.7 (Cherokee script):</b> WG 2 accepts the proposed code positions in the range x13A0 through x13FF, for the previously accepted (at meeting 30) 85 characters of the Cherokee script, in accordance with document N1362, and instructs its editor to prepare the pDAM text, with assistance from the US national body and the Unicode consortium, and forward it to SC2 secretariat for an SC2 ballot.</p> <p><b>g RESOLUTION M31.8 (Pinyin):</b> WG 2 accepts the following two characters: a. x01F8 LATIN CAPITAL LETTER N WITH GRAVE b. x01F9 LATIN SMALL LETTER N WITH GRAVE in accordance with document N1461, and instructs its editor to add them (with shapes similar to x0143 LATIN CAPITAL LETTER N WITH ACUTE and x0144 LATIN SMALL LETTER N WITH ACUTE, with the ACUTE accent replaced with a GRAVE accent) to the cumulative list of characters for future inclusion in ISO/IEC 10646-1.</p> <p><b>h RESOLUTION M31.9 (Internal Supplementation / Horizontal Supplementation):</b> WG 2 accepts documents N 1427, 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 SC2 secretariat for an SC2 ballot.</p> <p><b>i RESOLUTION M31.13 (Collection Identifier):</b> WG 2 instructs its editor to assign collection number 301 to identify the repertoire of the BMP up to and including Draft Amendment 7, in accordance with document N1388, for inclusion in a future amendment to the standard.</p>	
AI-31-4	<p><b>IRG - Rapporteur, Mr. Zhang Zhoucai</b></p> <p><b>a</b> The current ITTF practice is to use Arial or Helvetica style for the numbers and non ideographic characters. IRG convener is to work with Mr. Bruce Paterson to follow the style used by ITTF for the standard publications, in time for transmission of the pDAM text by the editor - target Singapore meeting.</p> <p><b>b</b> WG 2 encourages the IRG to refine the proposals for Ideographic Structure Characters, the Ideographic Variation Mark, the Ideographic Component Supplement and the Ideographic Radical Supplement based on the comments received at WG 2 meeting 31.</p> <p><b>c</b> With reference to M31.9 (Internal Supplementation / Horizontal Supplementation), to prepare the camera ready copy for inclusion in the pDAM text, and forward to the editor Mr. Bruce Paterson to enable him to prepare the pDAM and forward it to SC2 secretariat for an SC2 ballot.</p>	
AI-31-5	<p><b>All member bodies and liaison organizations</b></p> <p><b>a</b> To take note of resolution M31.15 (Future Meetings): WG 2 confirms the following future meeting schedule: a) Meeting 32: 20 to 24 January 1997, in Singapore b) Meeting 33: 23 to 27 June 1997, in Cyprus (backup Greece) c) Meeting 34: January 1998, in North America (location to be decided) d) Future hosts: Ireland, Israel, Vietnam, Netherlands, China</p> <p><b>b</b> to take note of the attached message from the editor - on having to reassign APL QUAD symbol to another position than in resolution M31.5: Dear Uma 16th October 1996 "I have just noticed a problem with WG2 Resolution 31.5, which accepts APL QUAD into the symbols bucket for 10646. The code position <b>x237B</b> was approved for it on the day BEFORE WG2 reviewed the symbols bucket paper N1416. So, surprise, surprise, <b>that position is already allocated</b> (at the Geneva meeting actually, and was already subject to conflict there - it must be a specially cosy spot). <b>So I have put QUAD in the next available place - x2395.</b> ..... I thought you should know asap for the record." Regards - Bruce.</p> <p><b>c</b> to take note of and use document N1396 as the standing reference document for the textual content of the latest 10646, and to inform the editor if there are any errors.</p> <p><b>d</b> to review and feedback on documents N1143 and N1390 on the subject of additional Latin characters for Nigerian Yoruba.</p> <p><b>e</b> are invited to write contributions on 'Guidelines on what sort of information can be included in Annex P - Additional information on characters'. The accepted text of such contributions would be included in the Principles and Procedures document.</p> <p><b>f</b> to review document N1416 - cumulative list of symbols, and provide feedback as to how this collection could be further progressed.</p>	

<b>Item</b>	<b>Assigned to / action (Reference Meeting 31 Resolutions document N1454 and Unconfirmed Meeting 31 minutes in document N1453 -this document you are reading)</b>	
<b>g</b>	to review the contributions (several - see minutes) from IRG and provide feedback to IRG rapporteur, to assist the IRG with a meaningful view from outside the IRG.	
<b>h</b>	if interested in the French version of 10646, to review document N1448 and feedback to Mr. Alain LaBonté.	
<b>l</b>	with reference to resolution M31.1, to review the draft WD for TR 15285 that will be circulated by SC 2 for NB comments to enable WG 2 to further progress it at its January 1997 meeting.	
<b>j</b>	to review documents N1437 and N1438 on the Mongolian script and inform Chinese national body if they wish to participate in the ad hoc group on Mongolian. Chinese national body is requested to inform all interested parties of the ad hoc meeting as much in advance as possible.	
<b>k</b>	to take note of, and to inform the editor if there are any errors in the information in document N1385 - the cumulative list no. 3 of additional characters.	
<b>l</b>	to review and feedback on the proposed revised proposal summary form in document N1460.	
<b>m</b>	to inform their WG2 experts that if they are interested in accessing soft copies of WG2 documents from WG2's web site they should contact Mr. Keld Simonsen for getting a password to access the site.	
<b>n</b>	are invited to contribute towards a new part of 10646, per resolution M31.14.	
<b>AI-31-6</b>	<b>Ad Hoc Group on Principles and Procedures (Mr. Sven Thygesen - lead)</b>	
<b>a</b>	to take comments into account and revise document N1402.	
<b>AI-31-7</b>	<b>US national body (Mr. Michel Suignard) and The Unicode Consortium (Dr. Glenn Adams)</b>	
<b>a</b>	to prepare the camera ready code table on the Ethiopic script, in accordance with document N1420, and resolution M31.4, and send to the editor.	
<b>b</b>	to prepare the camera ready code table on the Cherokee script, in accordance with document N1362, and resolution M31.7, and send to the editor.	
<b>AI-31-8</b>	<b>UK national body (Mr. Bruce Paterson) and The Unicode Consortium (Dr. Glenn Adams)</b>	
<b>a</b>	to come to some agreement / proposal for some clarification text to resolve the ambiguity regarding Level 2 and Indic scripts. Using document N1406 as the base, to address the issues raised by UK and to encapsulate the issues in a simple way.	
<b>AI-31-9</b>	<b>Japanese national body (Mr. Takayuki Sato) and The Unicode Consortium (Dr. Glenn Adams)</b>	
<b>a</b>	to provide the IRG Rapporteur the text of the note to be included in Annex S to address their concerns on the source code separation.	
<b>AI-31-10</b>	<b>Dr. Glenn Adams and Mr. Keld Simonsen</b>	
<b>a</b>	are invited to interact with the principal authors of RFCs in IETF on 10646. Some collection identifier such as the proposed 301 - once finalized in 10646 - could be registered with IANA registration authority also for use with Internet protocols.	
<b>AI-31-11</b>	<b>Danish national body - Mr. Keld Simonsen</b>	
<b>a</b>	to prepare reports, with assistance of anyone else who is interested, indicating who is implementing UCS under the auspices of ITU services.	
<b>AI-31-12</b>	<b>Swedish national body - Mr. Olle Järnefors</b>	
<b>a</b>	to consider the discussion on the Runic script proposal at this meeting and feedback to WG2.	
<b>AI-31-13</b>	<b>Netherlands national body - Mr. Johan van Wingen</b>	
<b>a</b>	to submit a defect report on his finding of the mis-spelling Arabic letter Heh from the names in Annex B.	
<b>AI-31-14</b>	<b>Romanian national body - Ms. Alexandrina Statescu</b>	
<b>a</b>	to provide more information, with input from other interested parties, including consideration for the various points raised on the proposed characters - s,S,t, and T with Comma below, and in the Copenhagen meeting, for further consideration at the Singapore meeting	
<b>AI-31-15</b>	<b>Japanese member body - Mr. Takayuki Sato</b>	
<b>a</b>	to assist the convener in preparing a cover letter to TC 134, with the message that WG 2 has agreed to accept the Braille as symbols - we take a preferred choice - for example, 256 symbols. Attach both 256 and 512 proposals - feedback by November 1 1996 or earlier.	
<b>AI-31-16</b>	<b>Mr. Sven Thygesen</b>	



<b>Item</b>	<b>Assigned to / action (Reference Meeting 31 Resolutions document N1454 and Unconfirmed Meeting 31 minutes in document N1453 -this document you are reading)</b>	
	a to prepare a document, with assistance of the convener, extracting a summary of current allocations, space to be used by all the accepted characters for inclusion, space expected to be used by characters that are still under consideration, and the remaining space in the BMP. This summary document is to accompany the question to national bodies on whether or not they agree with the IRG recommendation to encode the characters of IRG Vertical Extension A version 1.1, all in the BMP.	
<b>AI-31-17</b>	<b>Chinese member body - Mr. Mao Gang</b>	
	a to provide a refined proposal on the Yi script, based on document N1415, and other earlier contributions.	
<b>AI-31-18</b>	<b>Chinese and Mongolian member bodies - Mr. Mao Gang and Mr. Chilkasuren</b>	
	a to convene another ad hoc meeting to further progress the proposal in document N1438, and to give interested parties sufficient advance notice to enable to attend the meeting.	
<b>AI-31-19</b>	<b>Canadian member body - Dr. V.S. Umamaheswaran/ Mr. Dirk Vermeulen</b>	
	a to prepare the camera ready code table on the Unified Canadian Aboriginal Syllabics script, in accordance with document N1441, and resolution M31.6, and send to the editor.	

===== END OF MEETING 31 MINUTES =====