ISO/IEC JTC 1/SC 2

CODED CHARACTER SETS

SECRETARIAT: JAPAN (JISC)

DOC TYPE: Summary of Voting/Table of Replies

TITLE: Summary of Voting on SC 2 N 3503, ISO/IEC 10646-1: 2000/PDAM 1, Information technology -- Universal Coded Character Set (UCS) -- Part 1: Architecture and Basic Multilingual Plane AMENDMENT 1: Mathematical Symbols and Other Characters

SOURCE: Secretariat, ISO/IEC JTC 1/SC 2

PROJECT: JTC 1.02.18.01.00.00.02

STATUS: This document is forwarded to WG 2 for consideration. WG 2 is asked to prepare a disposition of comments report, revised text, and a recommendation to SC 2 for further processing.

ACTION ID: FYI

DUE DATE:

DISTRIBUTION: P, O and L Members of ISO/IEC JTC 1/SC 2
WG Conveners and Secretariats
Secretariat, ISO/IEC JTC 1
ISO/IEC ITTF

NO. OF PAGES: 26

ACCESS LEVEL: Defined

Summary of Voting on SC 2 N 3503

	Approve	Approve with comments	Disapprove	Abstain	No Response	Comments
P-Member						
Armenia					X	
Austria					X	
Belgium	X					
Canada		X				Attachment 1
China	X					
Denmark	X					
Egypt					X	
Finland	X					
France					X	
Germany		X				Attachment 2
Greece	X					
Iceland					X	
India					X	
Iran, Islamic Republic of					X	
Ireland			X			Attachment 3
Israel	X					
Italy	X					
Japan			X			Attachment 4
Korea, Dem. P. Rep. Of					X	
Korea, Rep. of	X					
Mongolia					X	
Morocco					X	
Netherlands	X					
Norway	X					
Poland	X					
Romania	X					
Russian Federation					X	
Singapore					X	
Slovenia					X	
Sweden		X				Attachment 5
Thailand					X	
Tunisia					X	
Turkey					X	
USA		X				Attachment 6
Yugoslavia					X	
	12	4	2	0	17	
Total (35)	**16**		**2**	**0**	**17**	
O-Member (if responding)						
Czech Republic	X					

Attachment 1 - Canada

Technical Comments:

Comment 1 - Corrupted Keyboard Symbols in Table 67, Row 23, page 134.

The following symbols have lost their fidelity between Amendment 22 - keyboard symbols and in its consolidation into the second edition of the standard (to be checked) as reflected in the character shapes shown in Table 67 (Row 23), at the following positions:

> 2383 (shape is italicized!!)
> 2385 (gap between vertical line and the square are missing)
> 2387 (arrowhead is now shown filled, instead of being white)
> 2389 and 238A (Outer circle has more thickness than lines inside)
> 238C (arrowhead is now filled)
> 2397 (arrow should be unfilled and straight - not black curved, the rectangle at the back should have dashed outline)
> 2398 (arrow should be straight and unfilled, rectangle in front should have dashed outline instead of continuous line)

Fidelity of Symbols was carefully maintained when these were provided for Amendment 22 from the corresponding Keyboard Symbols standard. Looks like the editor has used some font which does not reproduce these symbols faithfully.

There are also other inconsistencies, such as the relative shapes of Arrowheads in other symbols. WG2 has to ensure that fidelity, especially of SYMBOLS is important and should not change from Approved Amendments which could have been corrupted in consolidating into the 2nd edition of the standard.

Comment 2 - Pieces of Large Symbols in Table 67, Row 23, page 134

The miscellaneous technical symbols like those in 239B to 23BD, are pure GLYPHS to create other glyphs by joining together glyphs. All such symbols are not characters in accordance with the Character Glyph Model. Canada would like to see these removed unless WG2 can find strong justification for them.

Comment 3 - FE00   Variation Selector-1

Some explanatory text on usage of Variation Selector characters is needed. A list of specific variants so encoded should also be included in the standard.

Comment 3 - Missing replacement chart for Row FF

To reflect the change in annotation of characters at FFFE and FFFF according to item 6 on page 3, the list of character names (and the associated chart) that repalces the existing Row FF chart in 10646-1: 2000, should be included.

Editorial Comments:

Comment 1:
Page 3, Item 6 - Characters eserved ..." should be "Characters Reserved ..."

Attachment 2 - Germany

Germany vote : " YES" with comment:

Germany is pleased to note that two of its key concerns, support for combining letter diacritics (U0363-U036F) and the UCS Sequence identifiers, are addressed in the FDAM. Especially the new diacritics allow the encoding of texts which are central to our cultural heritage.

Major comments:
Item 8, A.4.3: Add the following note from the CWA on the MESes:
"NOTE: Implementors may wish to exclude the Hebrews characters in the range FB18*FB4F in collection 63."

Item 9: Collection "10646 Unicode": rename to "UTF-16 encoding space" (or similar). This collection by itself is neither identical to 10646 nor to Unicode.

Item 13 and Table 9: GREEK LETTER ARCHAIC KOPPA and GREEK SMALL LETTER ARCHAIC KOPPA
These are only typographical variants of 03DE and 03DF (Greek letter koppa) with which they can at least in principle be interchanged. For this reason they should not be encoded. However, Germany only asks for their removal if the Greek National Body also does so.

Table 12: Germany understands and fully supports the encoding of the Komi letters (0500 to 050F in the PDAM) in the UCS. However, since none of these letters is at present in use (cf. WG2/N2224) and since there are a considerable number of Cyrillic letters which were created primarily in the late 1920s, 30s and early 40s and subsequently not retained (more than are likely to fit in the two remaining colums of table 12), there should be a Cyillic Supplement block in Plane 1 in which all these letters are encoded together.

Editorial comments:
Item 6: eserved --reserved

Irish comments on PDAM 1 for ISO/IEC 10646-1:2000

Reference: SC2 N3503
Closes: 2001-03-07
Date: 2001-03-03

Ireland **disapproves** the draft with the technical and editorial comments given below. Acceptance of these comments and appropriate changes to the text will change our vote to approval.

Technical comments
Item 1.1
In the last line of the Note, for "FA30-FA<u>68</u>", read "FA30-FA<u>5F</u>".

Item 1.2
Change the editing instruction to: "*Insert the following additional tables.*"
For "Table 144 - Row <u>04</u>: CYRILLIC SUPPLEMENTARY" read "Table 144 - Row <u>05</u>: CYRILLIC SUPPLEMENTARY".
Note however, that Ireland objects to the addition of this separate table for Cyrillic. The Cyrillic block runs from U+0400..U+04FF. We believe that it would be much more sensible simply to *extend* the existing Cyrillic block from U+0400..U+052F. Compare Latin Extended-B, which runs from U+0180..U+024F; there is no reason that the Cyrillic block cannot cross the 128-byte boundary here. With regard to the content of the CYRILLIC SUPPLEMENTARY block, there is no reason to think that it will contain *only* archaic or disused characters, though the characters now being encoded have no been part of official Komi orthography for some decades.
For "Table 154 - Row <u>AF</u>: CJK COMPATIBILITY IDEOGRAPHS" read "Table 154 - Row <u>FA</u>: CJK COMPATIBILITY IDEOGRAPHS".
In the list of code positions indicating the new characters to be added in the new tables, add after 31FF the range FA60-FA6F.
Delete the note at the end of 1.2 which refers to new characters in the new tables. All the characters in the new tables are new.

Item 2
On p. v, change
— *Part 2: Secondary Multilingual Plane for scripts and symbols, Supplementary Plane for CJK Ideographs, Special Purpose Plane*
to
— *Part 2: Supplementary Planes*

Item 3, Page 881, annex A
Comment "Under Note 1" belongs to Item 9 not Item 3.

Item 6
The first sentence of the new clause 6.6 seems confusing to the reader as to its real purpose, and also seems to mix up the definition of the new term "UCS Sequence" with the definition of the syntax of an identifier for such sequences.
Here is a suggested rewording, based on 6.5 etc., and carefully avoiding the nebulous term "entity": "ISO/IEC 10646 defines an identifier for any sequence of characters taken from the standard. Such an identifier is known as a UCS Sequence Identifier (USI). For a sequence of n characters it has the following form:

1

<center><UID1, UID2, UID3,.. UIDn></center>

where UID1, UID2, UID3, etc. represent the short identifiers [not "unique identifiers identifiers"] of the corresponding characters, in the same order as those characters appear in the sequence."

Add an additional editing instruction to say: "Replace Table 136 - Row FD with new table (see Item 15)."

Item 6. Page 8, clause 8:

The new last paragraph states that certain code positions are reserved. However the annotations for those positions in the Tables of characters state: "(This position is permanently reserved)" The reader can reasonably ask what is the difference between "reserved" and "permanently reserved". Perhaps the new paragraph should also say "permanently reserved", with a Note to explain the context of permanence, i.e. that "permanently" means no change if the standard is amended in future.

Item 7

Add text to the end of the paragraph, thus: "… Alternate Format Characters <u>(see annex F)</u>."

Item 8

WG2 should note that while the MES-1 and the MES-2 are intended to remain unchanged, the MES-3A and MES-3B are intended to be expanded when relevant new characters are added to the UCS. MES-3 was *designed* to contain all the characters in certain collections, so when characters are added the holes should be filled in explicitly. One new collection should be added, however: CYRILLIC SUPPLEMENTARY (because the MES-3A was designed to include all the characters of the Latin, Greek, Cyrillic, Armenian, and Georgian scripts).

In **A.4.3 283 MES-3A**, after

> 70   SPECIALS

add

> 92   CYRILLIC SUPPLEMENTARY

In **A.4.4 284 MES-3B**, make the following changes

03	00-4E 60-~~62~~<u>6F</u> 74-75 7A 7E 84-8A 8C 8E-A1 A3-CE D0-~~D7 DA F3~~<u>F6</u>
04	00-86 88-~~89 8C C4 C7 C8 CB CC~~<u>CE</u> D0-F5 F8-F9
05	<u>00-0F</u> 31-56 59-5F 61-87 89-8A
20	00-~~46 48 4D~~<u>51</u> 57 <u>5F-62</u> 6A-~~70~~<u>71</u> 74-8E A0-~~AF~~<u>B1</u> D0-~~E3~~<u>E8</u>
21	00-3A <u>3D-4B</u> 53-83 90-F3 <u>F5-FF</u>
22	00-~~F4~~<u>FF</u>
23	00-~~7B 7D 9A~~<u>CE</u>
26	00-13 <u>16-17</u> 19-~~74~~<u>79</u> *(or <u>7F</u> if new characters are added as suggested below.)*
FE	20-23

Item 9

In the new collection 10646 UNICODE, the first code position range 0000 - FDCF has an asterisk, indicating that it is a fixed collection. This seems to be an error.

For '*Add collection* "<u>93</u>" *to the entry* "Cyrillic"' the correct collection number is "<u>92</u>".

Item 12

Please give the full citation with title and other details for JIS X 0213:2000.

Item 15
[Table references here refer to the real table numbers, with the pDAM table number in parentheses. It is important that correct page and table numbers be given in the DAM text.]

Table 70 (74)- Row 26: Miscellaneous Symbols
Six additional characters should be added to the standard at this time to fill out the set of recycling symbols, as discussed in N2310R. Proposed names, glyphs, and code positions are as follows:

267A   RECYCLING SYMBOL FOR GENERIC MATERIALS

267B   BLACK UNIVERSAL RECYCLING SYMBOL

267C   RECYCLED CONTENT SYMBOL

267D   PARTIALLY-RECYCLED CONTENT SYMBOL

267E   DO NOT LITTER SYMBOL

267F   RECYCLING SYMBOL FOR GLASS

Table 149 (79) - Row 29: Supplemental Arrows
The character name at 2933 includes the term "TO THE" which is superfluous and inconsistent with other character names, such as 29AC-29AF. Delete the words "TO THE".

Table 150 (80) - Row 29: Miscellaneous Mathematical Symbols
The character names at positions 29A8-29AB include the term "TO THE" which is superfluous and inconsistent with the names in the next four positions, 29AC-29AF. Delete the words "TO THE".

Table 152 (82) - Row 2A: Supplemental Mathematical Operators
The glyphs for positions 2ADC and 2ADD seem to have been swapped. The glyph at 2ADC has an extra diagonal stroke compared with 2ADD, which implies a negative, yet the name at 2ADD is the negative NONFORKING. In addition, the name should be NON-FORKING with a hyphen, as you would not find the word in a dictionary as presently spelled.

Table 144 (12) - Row 05: Cyrillic Supplementary
In the title, for "Cyrillic Supplement" read "Cyrillic Supplementary".

Editorial comments
Item 3
For "2nd" read "second" in the italicized text

Item 6
For "eserved" read "reserved" in the title of the Item.

Item 8
For "**A4.3**" and "**A4.4**" in the section headings read "**A.4.3**" and "**A.4.4**".

Item 15
[Table references here refer to the real table numbers, with the pDAM table number in parentheses. It is important that correct page and table numbers be given in the DAM text.]

Table 18 - Row 07: Thaana
The diacritics have shifted right and should centre over the dotted circles in 07A6-07B0.

Table 54 (58) - Row 20: Superscripts and subscripts
The glyph at 2071 should be set at the same scale as the glyph at 207F. As an editorial comment on Part 1 in general, the superscript characters in the MODIFIER LETTER block should also be set at the same scale (50%) as the characters in this block. The list of glyphs below shows superscript and subscript characters with this ratio. In the printed standard, only the SUPERSCRIPT LATIN SMALL LETTER N and the super- and subscript digits are printed with the correct ratio; the glyphs in the MODIFIER LETTER block are not.

$$t^h \; p^j \; p^i \; n^n \; \pi^2 \; H_2O$$

Table 56 (60) - Row 20: Combining Diacritical Marks for Symbols
The glyph for 20E6 should be centred in its box.

Table 57 (61) - Row 21: Letterlike Symbols
The script font for all characters with "SCRIPT" in their name (except for 2118) should use the same font as is used for the mathematical alphanumeric symbols in the FDIS for part 2. This would affect the following glyphs in the block:

$$g \, \mathcal{H} \, \mathcal{I} \, \mathcal{L} \, l \, \mathcal{R} \, \mathcal{B} \, e \, \mathcal{E} \, \mathcal{F} \, \mathcal{M} \, o$$

WG2 should investigate the glyphs of the characters at 2113 and 2133:

$$l \; \mathcal{M} \; \text{(compare } \ell \text{)}$$

Currently, these characters do double duty as mathematical script characters and as ordinary symbols for "litre/folio" and "Deutsche Mark". Those entities, however, have rather specific glyph representations (especially the looped *l* for litre) and may not enjoy the same variety which mathematical script characters do. If this is the case, it would be best to disunify these characters and to add SMALL LOOPED SCRIPT L to this block and to add a DEUTSCHE MARK SIGN to the CURRENCY SYMBOLS block.

Note also that the glyph at 212E should be *identical* the the EU-specified ESTIMATED SYMBOL. Ireland can provide the editor with the correct glyph.

We also note that the position of the *o* in the glyph for the NUMERO SIGN is not what is generally found. Typically it is superscripted or centred; normally it does not sit on the baseline. We prefer the second of the two glyphs shown below (taken from Apple's Latinskij font).

$$N\underline{\circ} \quad N\underline{\circ}$$

Table 63 (67) - Row 23: Miscellaneous Technical

The Japanese remarked in Athens that the glyphs for the dentistry symbols 23C0-23CC should fill a notional square. We have provided the editor with corrected glyphs.

The foot prime in 23CD should be raised to be centred along the horizontal of the box, and should be optically spaced between the two arms of the box.

Table 70 (74) - Row 26: Miscellaneous Symbols

2672 UNIVERSAL RECYCLING SYMBOL must have a white glyph (that is, be an outlined character). See N2310R.

2672   UNIVERSAL RECYCLING SYMBOL

2673-2679. These glyphs should be modified to include the shorthand notation for the resin into the glyph to match legislative requirements and usage by the sponsoring authority and industry. We have added comments suitable for the Unicode standard below each but do not suggest that these be added to the UCS.

2673   RECYCLING SYMBOL FOR TYPE-1 PLASTICS
polyethylene terephthalate
PETE, PET

2674   RECYCLING SYMBOL FOR TYPE-2 PLASTICS
high-density polyethylene
HDPE

2675   RECYCLING SYMBOL FOR TYPE-3 PLASTICS
polyvinyl chloride
V, PVC, Vinyl

2676   RECYCLING SYMBOL FOR TYPE-4 PLASTICS
low-density polyethylene
LDPE

2677   RECYCLING SYMBOL FOR TYPE-5 PLASTICS
polypropylene
PP

2678   RECYCLING SYMBOL FOR TYPE-6 PLASTICS
polystyrene
PS

2679   RECYCLING SYMBOL FOR TYPE-7 PLASTICS
other plastics

Alternatively, the glyphs could be kept unchanged, but informative notes in parentheses should
   be added, thus:

2673   RECYCLING SYMBOL FOR TYPE-1 PLASTICS (polyethylene terephthalate, PETE, PET)
2674   RECYCLING SYMBOL FOR TYPE-2 PLASTICS (high-density polyethylene, HDPE)
2675   RECYCLING SYMBOL FOR TYPE-3 PLASTICS (polyvinyl chloride, V, PVC, Vinyl)
2676   RECYCLING SYMBOL FOR TYPE-4 PLASTICS (low-density polyethylene, LDPE)
2677   RECYCLING SYMBOL FOR TYPE-5 PLASTICS (polypropylene, PP)
2678   RECYCLING SYMBOL FOR TYPE-6 PLASTICS (polystyrene, PS)
2679   RECYCLING SYMBOL FOR TYPE-7 PLASTICS (other plastics)

Table 136 (146) - Row FD: Arabic Presentation Forms-A
The glyphs in column FDC are all wrong. They have been taken from 0640-0647 in the 2nd
   Edition.

Title: Vote on ISO/IEC 10646-1:2000/PDAM.1 (SC2N3503)
Source: SC2 Japanese National Body
Date: 2001-03-06

Japan disapproves the PDAM (SC2N3503) with the following comments. If the comments are sufficiently accommodated, Japan will change its vote to approval.

Comments:

1. Item 2, subitem "Page v, Foreword", Delete this item.

- It is questionable for an amendment to try to modify contents in Foreword, since it is not a part of an integral part of the standard. (To be verified against JTC1 Directives.)
- Even if it is appropriate, removal of the text "Additional parts will specify other planes" is not what we need to do. WG2 will define additional planes when plane 0/1/2/14 were overflowed.

2. Item 2, new subitem, Add an insertion of a normative reference to the ISO/IEC 10646-2:2001.

- We need to put a reference to the ISO/IEC 10646-2:2001 in clause 3, since it is now referred to by several normative clauses.
- Add the following subitem before subitem "Page 9, clause 14"

    Page 2, clause 3,

    After the end of the list, insert the following text:

    ISO/IEC 10646-2:2001, *Information technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 2: Supplementary Planes.*

3. Item 3, subitem "Page 8, clause 9", Need clarification.

- The proposed text is ambiguous and will make a wrong impression to users. The proposed text for a new NOTE should be replaced as follows:

    NOTE - To ensure continued interoperability between the UTF-16 form and other coded representations of the UCS as much as possible, it is intended that no characters will be allocated to code position in Planes 11 to FF in Group 00 and all planes in all other groups, unless it is recognized that code positions in Planes 00 to 10 in Group 00 are insufficient to satisfy users' requirements.

4. Item 3, subitem "Page 881, annex A", Retain the collection 400 and create another collection.

- The proposed change makes an incompatible change to the definition of some existing collection. It is not a good practice. Instead, we should define new collection with appropriate range in the amended standard under a new number and name. Keep the collection number 400, and make a new collection, e.g., 401 PRIVATE USE PLANES EDTION-2 AMENDMENT-1 for the new range.
- Replace the first paragraph for this subitem with following:

Replace the entry for the collection 400 as follows:

400 (This collection number shall not be used.)

Insert the following entry after the entry for the collection 400:

401   PRIVATE   USE   PLANES   EDITION-2 AMENDMENT-1 G=00, P=0F and 10

5. Item 4, Change the item title.

- The Item title must be more formal, e.g., "Modification to Short Identifier"

6. Item 4, subitem "page 7, clause 6", Postpone the introduction of 4 to 6 digit form.

- Although the proposed amendment is exactly what we agreed on the WG2 meeting, Japan national body has received some concern from SC22 experts in Japan. The concern is about its variable length nature. Many programming languages have adopted the short identifier notation as part of their definition, but in most cases, their syntaxes assume that a short identifier has a fixed number of hex-digits. For example, the 1999 version of ISO C Language defines two syntaxes: \uxxxx for four-digit form and \Uxxxxxxxx for eight-digit form. It is important for the C syntax that the number of digits is fixed; otherwise the language grammar will be ambiguous.
- We need some official communication between SC22 about this issue, and, depending on the result, we shall drop this change. As an option, we can introduce the variable-length form as the third choice, instead of replacing four-digit form, to compromise requirements for fixed four-digit form and variable length form. However, why we don't just say it is a two to eight digit form, in that case?

7. Item 5, subitem "page 8, clause 6", Add sufficient background information.

- We need to give clear background information about this new feature, e.g., who uses it in what context, what is the difference between this new notation and, say, simple sequence of short identifiers.
- Also, "identifiers identifiers" in the text should be corrected to "identifiers".
- Japan also has some concern about the relationship with the conformance terms to the standard. Don't we need to amend conformance terms based on this new notation, e.g., by allowing a new type of subset (c.f. Clause 12) based on UCS Sequence Identifiers, as well as existing collection-based (selected subset) and code position-based (limited subset)? The general feeling is that we need more discussion about this.

8. Item 6, Correct the item title.

- "eserved" should be "Reserved".

9. Item 6, subitem "page 8, clause 8", Modify the amendment content.

- For 0000 FFFF, we decided to exclude the code value from the UCS code space, when we wrote the 1993 version. Japan doesn't see any reason to change definition for it.
- For 0000 FDD0 to 0000 FDEF, we need some clear explanation why these particular 32 contiguous code positions are reserved, probably as an example (which requires several contiguous code points.)
- For the "(This position is permanently reserved)", the list of names attached to detailed code table is intended to be a definition of each code positions. They are not intended to be explanations of background or hint about implementer. Those kinds of information should be given separately, e.g., as NOTEs. In this sense, the definitions of those code positions are not changed; those positions should be marked as "(This position shall not be used)". Adding NOTEs is suffient.
- Change the subitem as follows:

    Page 8, clause 8

    Insert the following text before the last paragraph:

    Code positions 0000 FDD0 to 0000 FDEF are reserved to be used for internal processing.

NOTE 1 - *[Background information to be supplied.]*

Insert the following NOTE after the last paragraph:

NOTE 2 - Code position 0000 FFFE is reserved for "signature" (see Annex H). Code position 0000 FFFF can be used for internal processing requiring numeric values that are guaranteed not to be coded characters, such as terminating tables or signaling end of text. Furthermore, since 0000 FFFF is the largest BMP value, it may also be used as the final value in binary or sequential searching index within the context of the BMP.

10. Item 7, subitem "Page 8, clause 8", Delete (or modify) proposed NOTE.

- The proposed NOTE looks conflicting with existing requirement specified in the second paragraph of item c) of clause 2.3, "Any corresponding characters that are not within the adopted subset shall be indicated to the user." Ignoring those characters by "processing" might be OK, but "display" is a typical example of receiving device, so a conforming "display" must not ignore them. A conforming display shall give its user some indication of (existence of) those characters. We need more discussion about this issue.

11. Item 9, subitem "Page 880, Annex A.1", Modify the new collections

- Annex A.1 lists collections in order of their number. So, the proposed position to insert collection 180 looks inappropriate.
- The name of the collection 180 looks inappropriate. IRG is about to start the discussion for Extension-C, and it is expected that more unified ideographs will be added in near future. What will be the name for ALL plus Ext-C? (CJK UNIFIED IDEOGRAPHS MORE THAN ALL?) Japan proposes to modify the name as "180 CJK UNIFIED IDEOGRAPHS AS OF YEAR-2001".
- Put an asterisk to the right of the range of the collection 180, since it is a fixed-collection.
- An asterisk for the collection 10646 UNICODE should be removed, since it is not a fixed collection.
- Japan is not sure why the name "UNICODE" is selected for the collection, but it is acceptable. The number 10646 is considered very confusing and misleading, however. The collection number has no logical relationship between its contents, but the number gives an impression that the collection is for all characters in ISO/IEC 10646. If we need such a collection, the range must contain all legal positions in UCS-4. If we need the collection for the proposed range, the number must be changed to an ordinary one, say, 800.

12. Item 14, Modify the proposed NOTE,

- Mentioning only to "supplementary planes" is insufficient; replace it with "CJK UNIFIED IDEOGRAPHS EXTENSION-A block and supplementary planes".

13. Item-15, Improve JIS X 0213 character shapes.

- Character shapes of the following JIS X 0213 derived characters are inappropriate. Change them to more user-friendly, natural shapes. Japan is willing to provide fonts for those characters.
  - 2616 WHITE SHOGI PIECE
  - 2617 BLACK SHOGI PIECE
  - 323C MASU MARK
  - 30FF KATAKANA DIGRAPH KOTO
  - 303D PART ALTERNATION MARK
  - FE46 WHITE SESAME DOT
  - FE45 SESAME DOT
  - 309F HIRAGANA DIGRAPH YORI
  - 29FA DOUBLE PLUS
  - 29FB TRIPLE PLUS
  - 23BE DENTIST SYMBOL LIGHT VERTICAL AND TOP RIGHT
  - 23BF DENTIST SYMBOL LIGHT VERTICAL AND BOTTOM RIGHT
  - 23C0 DENTIST SYMBOL LIGHT VERTICAL WITH CIRCLE
  - 23C1 DENTIST SYMBOL LIGHT DOWN AND HORIZONTAL WITH CIRCLE
  - 23C2 DENTIST SYMBOL LIGHT UP AND HORIZONTAL WITH CIRCLE

23C3   DENTIST SYMBOL LIGHT VERTICAL WITH TRIANGLE
23C4   DENTIST SYMBOL LIGHT DOWN AND HORIZONTAL WITH TRIANGLE
23C5   DENTIST SYMBOL LIGHT UP AND HORIZONTAL WITH TRIANGLE
23C6   DENTIST SYMBOL LIGHT VERTICAL AND WAVE
23C7   DENTIST SYMBOL LIGHT DOWN AND HORIZONTAL WITH WAVE
23C8   DENTIST SYMBOL LIGHT UP AND HORIZONTAL WITH WAVE
23C9   DENTIST SYMBOL LIGHT DOWN AND HORIZONTAL
23CA   DENTIST SYMBOL LIGHT UP AND HORIZONTAL
23CB   DENTIST SYMBOL LIGHT VERTICAL AND TOP LEFT
23CC   DENTIST SYMBOL LIGHT VERTICAL AND BOTTOM LEFT
3095   HIRAGANA LETTER SMALL KA
3096   HIRAGANA LETTER SMALL KE
30A0   KATAKANA-HIRAGANA DOUBLE HYPHEN
303B   VERTICAL IDEOGRAPHIC ITERATION MARK
31F0   KATAKANA LETTER SMALL KU
31F1   KATAKANA LETTER SMALL SI
31F2   KATAKANA LETTER SMALL SU
31F3   KATAKANA LETTER SMALL TO
31F4   KATAKANA LETTER SMALL NU
31F5   KATAKANA LETTER SMALL HA
31F6   KATAKANA LETTER SMALL HI
31F7   KATAKANA LETTER SMALL HU
31F8   KATAKANA LETTER SMALL HE
31F9   KATAKANA LETTER SMALL HO
31FA   KATAKANA LETTER SMALL MU
31FB   KATAKANA LETTER SMALL RA
31FC   KATAKANA LETTER SMALL RI
31FD   KATAKANA LETTER SMALL RU
31FE   KATAKANA LETTER SMALL RE
31FF   KATAKANA LETTER SMALL RO

14. New Item, Add explanatory text for JIS X 0213 related characters in Annex-P.

- Add the following text as a new item:

    Item 16, Additional character clarification

    Page 963, Annex P

    Insert the following paragraphs between the paragraphs for "2361 APL FUNCTIONAL SYMBOL UP TACK DIAERESIS" *and* "FA1F CJK COMPATIBILITY IDEOGRAPH-FA1F":

    25C9 FISHEYE

    >   Information for 29BF CIRCLED BULLET applies.

    2985 LEFT WHITE PARENTHESIS

    >   This character is also used as a double left parenthesis.

    2986 RIGHT WHITE PARENTHESIS

    >   This character is also used as a double right parenthesis

    29BF CIRCLED BULLET

    >   Graphic symbols for three characters 25C9 FISHEYE, 29BF CIRCLED BULLET and 2A00 N-ARY CIRCLED DOT OPERATOR are

intended to have enclosed black circle of different sizes; 25C9 FISHEYE has the largest, 29BF CIRCLED BULLET medium and 2A00 N-ARY CIRCLED DOT OPERATOR smallest

2A00 N-ARY CIRCLED DOT OPERATOR

Information for 29BF CIRCLED BULLET applies."

15. New item, Add new annex on the compatibility ideographs.

- Add the following text as a new item:

Item 17, Compatibility Ideographs

After page 992

Insert the following new annex after Annex S:

Annex T
(informative)
Compatibility Ideographs

T.1 Compatibility Ideographs

Each of compatibility ideographs (characters in CJK COMPATIBILITY IDEOGRAPHS block) is an ideograph which should have been unified with one of unified ideographs (characters in CJK UNIFIED IDEOGRAPHS block, CJK UNIFIED IDEOGRAPHS EXTENSION-A and CJK UNIFIED IDEOGRAPHS EXTENSION-B block) per the unification rule described in Annex S of this International Standard, although it is included in this International Standard as a separate character from unified ideographs, because, based on various national, cultural and/or historical reason for some specific country and/or region, some national and/or regional standards assign separate code position for it.

For this reason, compatibility ideographs are used for only maintaining and guaranteeing a round trip conversion with the specific national/regional/other standard. It is strongly recommended that the CJK Compatibility Ideographs to be used only for the above described purpose and not used for any other purpose.

T.2 Relation with Source code separation rule

Clause S.1.6 of annex S of this international standard specifies the source code separation rule, which is similar to the CJK Compatibility Ideographs. Difference between two is as follows:

a) Source Code Separation: Two CJK Ideographs separated by the source code separation rule are exclusive each other. One should not include another as a character shape variation.

b) Compatibility Ideograph: The CJK Compatibility Ideograph is a part of the corresponding CJK Unified Ideograph (inclusive). The CJK Compatibility Ideograph is special use case of the corresponding CJK Unified Ideograph.

T.3 Mapping Information

T.3.1 KS C 5601 compatibility ideographs (F900-FA0D)

[To be supplied by responsible party]

T.3.2 Microsoft/IBM compatibility ideographs (FA0E-FA2D)

[To be supplied by responsible party]

T.3.3 JIS X 0213 compatibility ideographs (FA30-FA6B)

The mapping information for JIS X 0213 Compatibility Ideographs is as follows. The list is organized as, from left to right, code position in this International Standard of JIS X 0213 Compatibility Ideograph, a corresponding source code position in JIS X 0213:2000, and a code position of a character in CJK Unified Ideographs block to which the character is compatible.

FA30	3-2E38	4FAE
FA31	3-2E49	50E7
FA32	3-2E50	514D
FA33	3-2E63	52C9
FA34	3-2E68	52E4
FA35	3-2E6E	5351
FA36	3-2F2C	559D
FA37	3-2F2F	5606
FA38	3-2F36	5668
FA39	3-2F5A	5840
FA3A	3-2F5E	58A8
FA3B	3-4F61	5C64
FA3C	3-4F62	5C6E
FA3D	3-7450	6094
FA3E	3-745C	6168
FA3F	3-745E	618E
FA40	3-7461	61F2
FA41	3-7528	654F
FA42	3-752B	65E2
FA43	3-7543	6691
FA44	3-7565	6885
FA45	3-7624	6982
FA46	3-7669	6D77
FA47	3-7677	6E1A
FA48	3-7725	6F22
FA49	3-7755	716E
FA4A	4-7029	722B
FA4B	3-7825	7422
FA4C	3-7927	7891
FA4D	3-7933	793E
FA4E	3-7934	7949
FA4F	3-7937	7948
FA50	3-7938	7950
FA51	3-7939	7956
FA52	3-793B	795D
FA53	3-793F	798D
FA54	3-7940	798E
FA55	3-794D	7A40
FA56	3-7951	7A81
FA57	3-7964	7BC0
FA58	3-7A2E	7DF4
FA59	4-7450	7E09

```
FA5A    3-7A33    7E41
FA5B    3-7A3A    7F72
FA5C    3-7A44    8005
FA5D    3-7A58    81ED
FA5E    4-7574    8279
FA5F    4-7575    8279
FA60    3-7B27    8457
FA61    3-7B6F    8910
FA62    3-7B79    8996
FA63    3-7C2F    8B01
FA64    3-7C30    8B39
FA65    3-7C38    8CD3
FA66    3-7C3D    8D08
FA67    4-7969    8FB6
FA68    3-7C59    9038
FA69    3-7D63    96E3
FA6A    3-7D76    97FF
FA6B    3-7D7B    983B
```

NOTE - In the above list, prefixes in the second column is as follows:

– "3-" is for level 3 (plane 1) of JIS X 0213:2000

– "4-" is for level 4 (pnale 2) of JIS X 0213:2000

- Japan also has an intention to add similar informative text for characters in CJK COMPATIBILITY IDEOGRAPHS SUPPLEMENT, but is not sure whether it should be included here. Japan wants WG2 to discuss it.

16. Reminder

- There has been following additional character proposed by Japan. Those characters are not yet encoded in this PDAM. This does not mean that Japan withdrew the requirement. Japan reserves a right to open the discussion on those characters in future for the future amendment(s).

  WG2N2092:

  Voiced katakana for Ainu (14 characters)

  WG2N2094:

  RISING SYMBOL

  FALLING SYMBOL

  Latin characters with combining marks (9 characters)

Attachment 5 - Sweden

SE 1.

Change in the text of the definition of "character": Change
"data" to "textual data". The current formulation is a remnant
from the time when almost all computerised data was textual.
These days many other kinds of data is represented in computers,
but 10646 is only for textual data. Even further improvements
on this definition would be welcome.

SE 2.

Missing definition:
There is no definition of the term "alternate format character".
It is unclear what that term means from its usages in 10646.
It is also unclear what it should mean, so no suggested
definition text is provided here.

SE 3.

Change text regarding UIDs (clause 6.5):
  OLD TEXT:
    6.5 Short identifiers for characters

    ISO/IEC 10646 defines a short identifier for each
    character. The short identifier for any character is
    distinct from the short identifier for any other
    character.

  SUGGESTED NEW TEXT:
    6.5 Short identifiers for code positions and characters (UIDs)

    ISO/IEC 10646 defines short identifiers for each
    code position, including code positions that are
    reserved. A short identifier for any code position is
    distinct from a short identifier for any other code position.

    If a character is allocated at a code position, a short
    identifier for that code position can be used to refer
    to the character allocated at that code position.

        NOTE 1 -- For instance, U+DC00 identifies a
        code position that is permanently reserved
        for UTF-16, and U+FFFF identifies a code
        position that is permanently reserved. U+0025
        identifies a code position to which a character
        is allocated; U+0025 also identifies that
        character (named PERCENT SIGN).

SE 4.

Further changes regarding UIDs:
  CHANGE POINT b (by amendment proposed new sentence):
    Old new text: "Leading zeroes are suppressed for values

greater than U-0000 FFFF." Suggested newer text:
"Leading zeroes beyond four digits are suppressed."
Reason: old new text allowed e.g. U+000xx.

ADD AS POINT f UNDER 6.5:
"f. For the 5 to 6 digit forms, the character "-"
(HYPHEN-MINUS) may optionally be inserted before
the four last digits. For the 8 digit forms, the
character SPACE may optionally be inserted before
the four last digits."

REASON: This allows xxxx xxxx, which is already used,
and x-xxxx which is also already used (in the Han
mapping tables for part 2), though neither has hitherto
been formally allowed.

SE 5.

RELATED CHANGE TO USI (UCS Sequence Identifier) TEXT:
Add text (similar to): "A USI identifies a sequence of
code positions. If each of the code positions in such a
sequence has a character allocated to it, the USI can
be used to identify the sequence of characters allocated
at those code positions."

SE 6.

Suggested character name changes:
. DOUBLE-STRUCK CAPITAL SIGMA:
Change the name to DOUBLE-STRUCK N-ARY SUMMATION.

. DOUBLE-STRUCK CAPITAL PI:
Change the name to DOUBLE-STRUCK N-ARY PRODUCT.

Alternatively, remove double-struck pi/sigma. It is not
clear whether they are double-struck letters or
double-struck sum/product symbols. They should not be
encoded until this matter is fully clarified.

. DENTIST symbols:
Rename all the "DENTIST .." symbols to "DENTISTRY " symbols.

. HORIZONTAL SCAN LINEs: the numbers originally may have
referred to "scan line sequence number" (within a line that
would display text) on the terminal. Since this is misleading
with current technology, the names should be changed to not
have numbers in them (e.g. HORIZONTAL SCAN LINE TOP, ... ABOVE
MIDDLE, ... BELOW MIDDLE, ... BOTTOM).

Alternatively, remove the SCAN LINEs. They appear to have
been used only by one manufacturer of terminals, and were not
generally accepted even in bloom time of terminals.

. 2144 INVERTED SANS-SERIF CAPITAL Y: is it *TURNED* SANS-SERIF
   CAPITAL Y? Seems more consistent with the name of 028E
   LATIN SMALL LETTER TURNED Y.

SE 7.

Move SUPERSCRIPT SMALL I to another code position. The position
U+2071 should be regarded as permanently reserved, just as the "gaps"
in the math alphanumeric block should be regarded as permanently
reserved (for transient mappings). The sample glyph for SUPERSCRIPT
SMALL I should be smaller (compare the sample glyph for superscript
small n).

SE 8.

Permanently reserve U+2071-U+2073, all of the "gaps" in the math
alphanum range, and possibly also U+11A7, for internal algorithmic
purposes (transient mappings).

SE 9.

Move "GREEK REVERSED LUNATE EPSILON" to the "letter-like" block
and rename it to "REVERSED [or TURNED?] GREEK SMALL
[LETTER] LUNATE EPSILON" to be more in line with several other
names of letter-like characters.

SE 10.

Move TURNED AMPERSAND to the math operators block, since this
character represents a binary mathematical operator in linear
logic. It is not a general punctuation symbol.

SE 11.

Similarly the "invisible" math operators are not general
punctuation, and should not be in the general punctuation block.

SE 12.

Comments on sample glyphs:
. The typographic similarity between the LUNATE SIGMA and the
   LUNATE EPSILON should be much greater.
. The sample glyph for the EURO SIGN should be closer to the official
   logo (sans-serif, and wider, also for Times-like fonts).
. The sample glyph for the ESTIMATED SIGN glyph should be of at
   least cap height and be shaped exactly like the official shape.
. The sample glyph for the L B BAR should be a ligated swash glyph,
   as it looked when this character was used (pre-computer era).
. The glyphs for knot arrows have too tiny gaps; they will not show in
   smaller sizes.
. underlined [and]; the underline will not show in smaller sizes.
. n-ary sums: use consistent sample glyph sizes.
. integrals: use consistent sample glyph sizes.
. The example glyph for 20E6 should be placed in the centre
   of the chart cell.

SE 13.

Add to annex F

SPACE (0020): SPACE (SP) is a graphic character that has a visual representation consisting of the absence of a graphic symbol.

NO-BREAK SPACE (00A0): NO-BREAK SPACE (NBSP) is a graphic character, the visual representation of which is identical to that of SPACE, for use when an automatic line-break just before or just after it is to be prevented.

NON-BREAKING HYPHEN (2011): NON-BREAKING HYPHEN is a graphic character, the visual representation of which is identical to that of HYPHEN, for use when an automatic line-break just before or just after it is to be prevented.

Add to annex F.1.1
(Change "word boundary" to "word or hyphenation boundary".)

SOFT HYPHEN (00AD): SOFT HYPHEN (SHY) is a graphic character, the visual representation of which is identical to that of HYPHEN, for use when an allowable automatic hyphenation line-break after it is to be indicated. Unless the SOFT HYPHEN occurs at the very end of a rendered line, the SOFT HYPHEN normally has zero width and no visible representation, and may also suppress the rendering of the following character.

NOTE - For example, for Swedish, "biljett<SHY>tång" should be rendered as "biljettång" when there is no line-break after the SHY.

MONGOLIAN TODO SOFT HYPHEN (1806): MONGOLIAN TODO SOFT HYPHEN
is a graphic character, the visual representation of which is identical to that of HYPHEN, for use when an allowable automatic hyphenation line break before it is to be indicated. Unless the MONGOLIAN TODO SOFT HYPHEN occurs at the very beginning of a rendered line, the MONGOLIAN TODO SOFT HYPHEN normally has zero width and no visible representation.

SE 14.

Annex S.3, heading
Change "Source code separation examples" to "Source code separation exceptions". Rationale: given that several pages of corresponding characters are given, it does not appear to be just examples, but a complete list. This has to be double-checked with the IRG, of course.

SE 15.

For clarity, 1) say that the * markings of 'collections' are informative, and 2) let the *-marking apply to the name of a collection, otherwise for the collections that have multiple ranges, the*-marking may be misread as saying only that the first range describing the collection is 'fixed'.

SE 16.

Collection 10646 UNICODE is noted as 'fixed', which it is not.

SE 17.

For collections 97 SUPPLEMENTAL ARROWS and 100 KATAKANA PHONETIC
EXTENSIONS all code positions are assigned (if accepted) and these collections should therefore be marked with a star.

SE 18.

If all proposed new characters are accepted the last unassigned code positions in the collections 39 MATHEMATICAL OPERATORS, 45 BLOCK ELEMENTS, 46 GEOMETRIC SHAPES, 49 CJK SYMBOLS AND PUNCTUATION and 51 KATAKANA will become assigned. These collections should therefore be marked with a star.

SE 19.

Is LOWER RIGHT TRIANGLE unified with is 22BF RIGHT TRIANGLE? The latter is a mathematical operator denoting a right (i.e. non-skew) triangle. It is usually placed with its lower edge on the baseline and given the height of a capital letter. The LOWER RIGHT TRIANGLE and its cousins (25F8-25FA) on the other hand are geometric shapes that are normally placed centrally in a square character cell. The differences in use and appearance between the two symbols may call for a disunification.

SE 20.

Typos(?):
    Item 6: Change "eserved" to "reserved"
    Item 7, the note: Change "that range" to "those ranges"
    Item 2, referring to page 881, note 2: what about collection 299?

    EDITORIAL CHANGES to clause 6.5:
        "NOTE -" -> "NOTE 2 -"
        "NOTE 1 -" -> "NOTE 3 -"
        "NOTE 2 -" -> "NOTE 4 -"

    USI TEXT: "unique identifiers identifiers"
            -> "UCS short identifiers";
        "corresponding characters from the standards" ->
            "the code positions in the UCS"

Title: Comments accompanying the US positive vote on the PDAM1 to
               ISO/IEC 10646-1:2000

The US is voting YES on the PDAM1 to ISO/IEC 10646-1:2000 with the following comments:

Technical Comments:

T.1 Item 1. Mathematical and other characters
Khmer block

The US National body requests the removal of 17DD KHMER SIGN LAAK as duplicate of 17D8 KHMER SIGN BEYYAL.

The Khmer character proposed for encoding at U+17DD is, to the best of our knowledge, merely a glyph variant of the already encoded character, U+17D8. Feedback from a Khmer-encoding expert indicates this. See also the exhibit, in Khmer, which shows not 2 but 3 glyphic alternates of this same sign, including the glyph proposed for encoding at U+17DD. The U.S. therefore requests that U+17DD KHMER SIGN LAAK be removed from the PDAM, pending provision of any information to indicate that there is some functional distinction involved and that U+17DD is not merely a glyphic variant of the already encoded U+17D8.

T.2 Item 1. Mathematical and other characters
Letterlike Symbols block

The US requests that the name of proposed character name at the position 2140 should be changed from DOUBLE-STRUCK CAPITAL SIGMA to DOUBLE-STRUCK N-ARY SUMMATION.

The context (Letterlike Symbols block) would suggest a 'letter' nature, while it is in fact a mathematical operator. The new name will make clear that it is an operator. Nevertheless the US doesn't want to move the character as it would impact without benefit early math implementation and some nearby symbols may have operator aspects.

T.3 Item 1. Mathematical and other characters
Miscellaneous symbols block

The US asks for a glyph change for the code position 2672 UNIVERSAL RECYCLING SYMBOL. The glyph should be reversed from black to a white glyph with black outline. The glyph is shown on page 6 of the document WG2 N2310.

In addition, the US requests for the sake of completeness of the recycling symbol repertoire to add the following characters at the corresponding code positions:

U+267A RECYCLING SYMBOL FOR GENERIC MATERIALS
U+267B BLACK UNIVERSAL RECYCLING SYMBOL
U+267C RECYCLED PAPER
U+267D PARTIALLY RECYCLED PAPER

The glyph for these symbols is described in page 6 of the document WG2 N2310.

Finally the US is asking to retain the reference names, glyphs and annotation for the characters from 2673 to 2679. It has been suggested to add shorthand notation to the glyph. This could create localization issue and can be better addressed by adding textual annotation to these characters.

T.4 Item 1. Mathematical and other characters
Miscellaneous Mathematical Symbols block, Supplemental Mathematical Operators
The US requests that the character names of the mathematical symbols in the amendment should be changed to consistently use 'BLACK' instead of 'FILLED, and 'WHITE' should be added to characters to character names that are complementary characters to those with 'BLACK' in their names.

The first part applies to the following code positions: 291D, 291E, 291F, 2920, 29D1, 29D2, 29D3, 29D4, 29D5, 29D7, 29EA, 29EB, 29ED, 29EF, 29F1, 29F3 and 2A28.
The second part applies to the following code position: 29EC WHITE CIRCLE WITH DOWN ARROW.

T.5 Item 1. Mathematical and other characters
CJK Compatibility Ideographs block
The U.S. requests the removal of four radicals proposed for encoding in the CJK Compatibility Ideographs block:

U+FA4A CJK COMPATIBILITY CHARACTER-FA4A (duplicate of U+2EA4)
U+FA5E CJK COMPATIBILITY CHARACTER-FA5E (duplicate of U+2EC0)
U+FA5F CJK COMPATIBILITY CHARACTER-FA5F (duplicate of U+2EBF)
U+FA67 CJK COMPATIBILITY CHARACTER-FA67 (duplicate of U+2ECC)

The four characters in question are variant glyphs of radicals, encoded in the new Japanese standard, JIS X 0213. They cannot be unified with the radicals included among the unified CJK characters, since they are explicitly intended as particular glyphs, rather than as unified forms. So they must be considered compatibility characters. However, since appropriate characters already exist among the U+2EXX CJK Radicals Supplement block in 10646, and since those characters are not otherwise mapped to JIS X 0213 characters, the appropriate answer is simply to map the four JIS X 0213 characters to the CJK radicals already encoded in the standard, rather than to encode yet *another* duplicate set of radicals among the CJK compatibility characters, merely to have a transcoding for these four characters.

T.6 Item 15. Characters reserved for internal processing uses
The new last paragraph states that certain code positions are reserved. However the annotations for those positions in the Tables of characters state:
      "(This position is permanently reserved)"
The reader can reasonably ask what is the difference between "reserved" and "permanently reserved". Perhaps the new paragraph should also say "permanently reserved', with a Note to explain the context of permanence, i.e. that "permanently" means no change if the standard is amended in future.

T.7 Item 15. Code tables and name lists
Miscellaneous Mathematical Symbols block
In Table 79 - Row 29 the name at 2933 has a superfluous "TO THE" in it.

T.8 Item 15. Code tables and name lists
Miscellaneous Mathematical Symbols block
In Table 80 - Row 29 the character names at positions 29A8- 29AB also include terms "TO THE" which are superfluous, and inconsistent with the names in the next four positions, 29AC-29AF.

T.9 Item 15. Code tables and name lists
Miscellaneous Mathematical Symbols block
In Table 82 - Row 2A the glyphs for positions 2ADC and 2ADD seem to have been swapped. The glyph at 2ADC has an extra diagonal stroke compared with 2ADD, which implies a negative, yet the name at 2ADD is the negative NONFORKING.

Editorial Comments:

E.1 Item 1. Mathematical and other characters

The range FA30-FA68 in the last line of the note should have read FA30-FA5F. The rest FA60-FA6B (not FA68) is covered by a new table.

Concerning new tables, the instruction to the editor are erroneous, the new characters are not replacing existing entries as these are new tables.

Amend the first entry of the list to table 144 – Row 5 (not 04)

Amend the last entry of the list to table 154 – Row FA (not AF)

E.2 Item 2. Reference to Part 2

The part *'2: Supplementary Planes'* is replacing an existing text in Part 1, not just an insertion. The replaced text is the following: *'Part 2: Secondary Multilingual Plane for scripts and symbols, Supplementary Plane for CJK ideographs, Special Purpose Plane'*.

E.3 Item 3. Restriction of code position

The instruction about Note 2 needs to be rewritten differently. The collection 500 exists in the 2nd edition (unlike 57 and 58 which were only specified in the first edition). So the change to note 2 should be as following:

Add the following sentence to Note 2: "The collection numbered 500 was specified in the First and Second Editions of this standard but has now been deleted."

E.4 Item 5. UCS Sequence Identifiers

The new clause 6.6 is unclear as stated; the following wording is suggested:

"ISO/IEC 10646 defines an identifier for any sequence of characters taken from the standard. Such an identifier is known as a UCS Sequence Identifier (USI). For a sequence of n characters it has the following form:

      <UID1, UID2, UID3, .. UIDn>

where UID1, UID2, UID3, etc. represent the short identifiers of the corresponding characters, in the same order as those characters appear in the sequence."

E.5 Item 6. Characters reserved for internal processing uses

The 'r' is missing in the title

E.6 Item 7. Alternate format characters

Add a reference to Annex F, otherwise the reader will not know what an Alternate Format Character is.

E.7 Item 9. Annex A.1

Remove the '*' at the end of the 10646 collection. It is not a fixed collection.

Add collection '93' to the entry Cyrillic. (not 92).

E.8 Item 15. Code tables and name lists

In Table 144 (aka 12) - Row 05, the title should be Cyrillic Supplementary [not Supplement].

In Table 146 - Row FD, the glyphs in column FDC are all wrong. They have been taken from 0640-0647 in 2nd Edition.

Other comment

In the interest of furthering the synchronization between ISO/IEC 10646 and Unicode, the US National Body welcomes the addition as expeditiously as possible of those characters that have been approved by the UTC for addition to the Unicode Standard.

Exhibit: Khmer text for comment T.1

១៦-	វង់ តាប ឬ ឃ្នាប	(់) ឬ({})
១៧-	រជ្ជុសញ្ញា ឬ គូសមួយ	(-) សរសេរស្មើនឹងព្យញ្ជនៈ
១៨-	មច្ឆណ្ឌសញ្ញា ពងត្រី ឬ ទំណុច	(....)
១៩-	យេប្រាល ឬ លៈ	(។ល។) ឬ (។ល។) ឬ(-ល-)
២០-	យុគលពិន្ទុ	(ៈ)
២១-	វិរាម	(⌐) ដាក់លើព្យញ្ជនៈប្រភម ឧ. សក៏
២២-	វង់ក្រចកជ្រុង ឬ តង្កៀប	(I I)
២៣-	វង់ក្រចក	(( ))
២៤-	សហសញ្ញា ឬ យតិភង្គ	(-) សំរាប់បញ្ជាក់ពាក្យផ្ដើមួយគ្នា ឧ.ក្រា-
		(ក្នុងពាក្យក្រាក)
២៥-	វិញ្ញាបើក វិញ្ញាបិទ	(" ")
២៦-	អព្ភន្តរៈបើក អព្ភន្តរៈបិទ	(« »)
២៧-	ពន្ទុសង្រេតមួយ	(/) ឧ. ១ គោរ/១ ហិកតា(ឧ. ១ត./១ ហ.)
២៨-	ពន្ទុសង្រេតពីរ	(//)
២៩-	ពន្ទុស្របច្រែង	(#)
៣០-	ភាគរយ	(%)
៣១-	ដុំពីរ	(÷)

ក. ២- សញ្ញាវណ្ណយុត្តិផ្សេងៗទៀតដែលមានប្រើជាលក្ខណៈអន្តរជាតិ និង ក្នុងមុខវិជ្ជាបច្ចេកទេសផ្សេងៗ

ទៀតមាន (.)(,)(:)(:)?! = < > ÷ ‚‚ „‚ « »,→,←,↔,⇒,

≃,≅, *......។

សេចក្ដីបញ្ជាក់ :

អ្នកឯកទេសអាចពិនិត្យលក្ខភាពលក្ខណៈសញ្ញាអន្តរជាតិដែលមានប្រើក្នុងបច្ចេកវិទ្យា ដើម្បីធ្វើយនិង
ស្ដុរការប្រើប្រាស់ចាំផ្ចាច់ទាំងឡាយ ។

២- ការរៀបសញ្ញាអក្សរខ្មែរតាមលំដាប់:

ក- សញ្ញាព្យញ្ជនៈយកតាមលំដាប់ភូតបានសរសេរនៅផ្ទេកទី ១ នាងលើ ក.១ ។ ឯសញ្ញាជើងព្យញ្ជនៈ
យកតាមលំដាប់ផ្ទេកទី ២ ក.២ ។

ក្នុងការសរសេរភាសាខ្មែរ គេសង្កេតឃើញមានប្រើពាក្យដែលឡើងដោយ :

- សញ្ញាព្យញ្ជនៈ និង សញ្ញាជើងព្យញ្ជនៈមួយជាន់ ឧ. ស្ក

- សញ្ញាព្យញ្ជនៈ ត្រូតជាមួយសញ្ញាជើងព្យញ្ជនៈពីរជាន់ ឧ. ច្រ្ក

3

End of US comments