**ISO/IEC JTC1/SC2/WG2
Coded Character Set
Secretariat: Japan (JISC)**

Doc. Type: Disposition of comments

Title: **Disposition of comments on PDAM1.2 to ISO/IEC 10646 5th edition**

Source: Michel Suignard (project editor)
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Comments were received from the following members: China, Ireland, Japan, Mongolia, UK, and USA. The following document is the disposition of those comments. The disposition is organized per country.

> Note – With some minor exceptions, the full content of the ballot comments has been included in this document to facilitate the reading. The dispositions are inserted in between these comments and are marked in **Underlined Bold Serif text,** *with explanatory text in italicized serif*.

As a result of this disposition, a new PDAM1.3 ballot will be initiated. It is expected to be the last PDAM ballot for Amendment 1 before a DAM ballot is initiated.

Following these dispositions, the following changes were done to the Amendment repertoire:

Xiangqi game symbols

30 characters removed (U+1F270..U+1F28D) from the Enclose Ideographic Supplement block (U+1F200..U+1F2FF) and replaced by 14 characters (U+1FA60..U+1FA6D) in a new block: Chess Symbols (U+1FA00..U+1FA6F) with names and code points as follows:

1FA60	RED XIANGQI GENERAL
1FA61	RED XIANGQI MANDARIN
1FA62	RED XIANGQI ELEPHANT
1FA63	RED XIANGQI HORSE
1FA64	RED XIANGQI CHARIOT
1FA65	RED XIANGQI CANNON
1FA66	RED XIANGQI SOLDIER
1FA67	BLACK XIANGQI GENERAL
1FA68	BLACK XIANGQI MANDARIN
1FA69	BLACK XIANGQI ELEPHANT
1FA6A	BLACK XIANGQI HORSE
1FA6B	BLACK XIANGQI CHARIOT
1FA6C	BLACK XIANGQI CANNON
1FA6D	BLACK XIANGQI SOLDIER

Small Historic Kana

The characters proposed at 1B127..1B12F are removed from this amendment. There may be proposed in a new block with room for all the missing small kanas in a future amendment.

Glyph changes

The following code points (newly proposed or existing) have new glyphs:

1F301	FOGGY		1F61D	FACE WITH STUCK-OUT TONGUE AND TIGHTLY-CLOSED EYES
1F308	RAINBOW			
1F3B5	MUSICAL NOTE *		1F61E	DISAPPOINTED FACE
1F3B6	MULTIPLE MUSICAL NOTES *		1F61F	WORRIED FACE *
1F409	DRAGON		1F621	POUTING FACE
1F40B	WHALE		1F622	CRYING FACE
1F450	OPEN HANDS		1F623	PERSEVERING FACE
1F478	GHOST		1F624	FACE WITH LOOK OF TRIUMPH
1F4A9	PILE OF POO		1F625	DISAPPOINTED BUT RELIEVED FACE
1F4AA	FLEXED BICEPS		1F626	FROWNING FACE WITH OPEN MOUTH
1F536	LARGE ORANGE DIAMOND **		1F627	ANGUISHED FACE
1F537	LARGE BLUE DIAMOND **		1F628	FEARFUL FACE *
1F538	SMALL ORANGE DIAMOND **		1F629	WEARY FACE
1F539	SMALL BLUE DIAMOND **		1F62A	SLEEPY FACE
1F602	FACE WITH TEARS OF JOY		1F62B	TIRED FACE
1F605	SMILING FACE WITH OPEN MOUTH AND COLD SWEAT	1F62C	GRIMACING FACE
1F607	SMILING FACE WITH HALO		1F62D	LOUDLY CRYING FACE
1F609	WINKING FACE		1F630	FACE WITH OPEN MOUTH AND COLD SWEAT
1F60C	RELIEVED FACE		1F631	FACE SCREAMING IN FEAR
1F60F	SMIRKING FACE		1F632	ASTONISHED FACE
1F612	UNAMUSED FACE		1F633	FLUSHED FACE *
1F613	FACE WITH COLD SWEAT		1F634	SLEEPING FACE
1F614	PENSIVE FACE *		1F635	DIZZY FACE
1F615	CONFUSED FACE		1F637	FACE WITH MEDICAL MASK
1F616	CONFOUNDED FACE		1F639	CAT FACE WITH TEARS OF JOY
1F618	FACE THROWING A KISS		1F63C	CAT FACE WITH WRY SMILE
1F61A	KISSING FACE WITH CLOSED EYES		1F63D	KISSING CAT FACE WITH CLOSED EYES
1F61B	FACE WITH STUCK-OUT TONGUE		1F63F	CRYING CAT FACE
1F61C	FACE WITH STUCK-OUT TONGUE AND WINKING EYE	1F644	FACE WITH ROLLING EYES *
			1F64C	PERSON RAISING BOTH HANDS IN CELEBRATION *

1F64F	PERSON WITH FOLDED HANDS *	1F93E	HANDBALL
1F6F6	CANOE *	1F95C	PEANUTS
1F6F8	FLYING SAUCER	1F965	COCONUTS
1F912	FACE WITH THERMOMETER	1F985	EAGLE
1F914	THINKING FACE	1F986	DUCK
1F915	FACE WITH HEAD-BANDAGE	1F987	BAT *
1F917	HUGGING FACE *	1F98E	LIZARD *
1F920	FACE WITH COWBOY HAT	1F98F	RHINOCEROS *
1F921	CLOWN FACE	1F990	SHRIMP
1F922	NAUSEATED FACE *	1F991	SQUID
1F923	ROLLING ON THE FLOOR LAUGHING	1F9D1	ADULT
1F924	DROOLING FACE *	1F9D2	CHILD
1F926	FACE PALM *	1F9D3	OLDER ADULT
1F932	PALMS UP *	1F9D4	BEARDED PERSON
1F933	SELFIE **	1F9D5	PERSON WITH HEADSCARF
1F934	PRINCE **	1F9D6	PERSON IN STEAMY ROOM
1F935	MAN IN TUXEDO **	1F9D8	PERSON IN LOTUS POSITION
1F936	MOTHER CHRISTMAS **	1F9D9	MAGE
1F937	SHRUG **	1F9DA	FAIRY
1F938	PERSON DOING CARTWHEEL	1F9DB	VAMPIRE
1F939	JUGGLING	1F9DC	MERPERSON
1F93A	FENCER	1F9DD	ELF
1F93B	MODERN PENTATHLON *	1F9DE	GENIE
1F93C	WRESTLERS	1F9E0	BRAIN
1F93D	WATER POLO	1F9E1	ORANGE HEART

* These entries have suggested fixes that are not yet provided to the editor, or need additional work. They will only be updated if a new glyph is received by the editor in due time.
** These entries are changes that will reverse the glyphs back to what they were in the 5th edition of ISO/IEC 10646.

Given the negative votes, it seems wiser to run another pdam phase on Amendment 1, which will allow its disposition to take place in a face to face at the next WG2 meeting (#66 in Hohot, China September 25-29 2017). This also allows to include additional repertoire in PDAM 1.3 that were approved by the Unicode UTC in January 2017. In addition, a new PDAM 2 will be initiated shortly with ballot also concluding before that meeting. Based on the comments and dispositions, experts will be able to decide which elements of the two amendments can go into DAM1 that can be initiated immediately after that meeting, with the remaining elements going for further refinement through issuance of additional PDAM ballot(s) on Amendment 2. This will offer the maximum flexibility on repertoire control and will also offer experts and NBs present at the WG2 and SC2 meetings a good opportunity to express a consensus position.

Because PDAM2 is proposing a larger and reordered list of Egyptian Hieroglyphs Format Controls, including the two code points that were part of PDAM 1.2, it is easier to remove these two code points from PDAM1.3 and move them to PDAM2. These were the following:

    13430   EGYPTIAN HIEROGLYPH VERTICAL JOINER
    13431   EGYPTIAN HIEROGLYPH HORIZONTAL JOINER

The following list describes the additional repertoire added to PDAM 1.3 with corresponding supporting document numbers:

- Proposal to encode Armenian Phonetic Characters (N4806)
    - 058B   ARMENIAN SMALL LETTER TURNED AYB
    - 058C   ARMENIAN SMALL LETTER YI WITH STROKE
- Proposal to add Hebrew YOD TRIANGLE (N4807)
    - 05EF   HEBREW YOD TRIANGLE
- Proposal to encode the SANDHI MARK for Bengali (N4808)
    - 09FE   BENGALI SANDHI MARK

- Proposal to encode one historical Mongolian letter for Buryat (N4781)
  - 1878   MONGOLIAN LETTER CHA WITH TWO DOTS
- Proposal to encode symbols for chess notation (N4783R2)
  - 2BBA   INTERLOCKED WHITE SQUARES
  - 2BBB   INTERLOCKED WHITE AND BLACK SQUARES
  - 2BBC   INTERLOCKED BLACK SQUARES
  - 2BF9   EQUALS SIGN WITH INFINITY BELOW
  - 2BFA   UNITED SYMBOL
  - 2BFB   SEPARATED SYMBOL
  - 2BFC   DOUBLED SYMBOL
  - 2BFD   PASSED SYMBOL
  - 2BFE   REVERSED RIGHT ANGLE
- Feedback on Extra Aspect Symbols for Astrology (N4811)
  - 2BF3   RUSSIAN ASTROLOGICAL SYMBOL VIGINTILE
  - 2BF4   RUSSIAN ASTROLOGICAL SYMBOL NOVILE
  - 2BF5   RUSSIAN ASTROLOGICAL SYMBOL QUINTILE
  - 2BF6   RUSSIAN ASTROLOGICAL SYMBOL BINOVILE
  - 2BF7   RUSSIAN ASTROLOGICAL SYMBOL SENTAGON
  - 2BF8   RUSSIAN ASTROLOGICAL SYMBOL TREDECILE
- Additional Characters for Kharoṣṭhī Script (N4812)
  - 10A34   KHAROSHTHI LETTER TTTA
  - 10A35   KHAROSHTHI LETTER VHA
  - 10A48   KHAROSHTHI FRACTION ONE HALF
- Revised proposal to encode Hanifi Rohingya (N4813), new block 10D00-10D3F

10D00	HANIFI ROHINGYA LETTER A	10D19	HANIFI ROHINGYA LETTER KINNA YA
10D01	HANIFI ROHINGYA LETTER BA	10D1A	HANIFI ROHINGYA LETTER NGA
10D02	HANIFI ROHINGYA LETTER PA	10D1B	HANIFI ROHINGYA LETTER NYA
10D03	HANIFI ROHINGYA LETTER TA	10D1C	HANIFI ROHINGYA LETTER VA
10D04	HANIFI ROHINGYA LETTER TTA	10D1D	HANIFI ROHINGYA VOWEL MARK A
10D05	HANIFI ROHINGYA LETTER JA	10D1E	HANIFI ROHINGYA VOWEL MARK I
10D06	HANIFI ROHINGYA LETTER CA	10D1F	HANIFI ROHINGYA VOWEL MARK U
10D07	HANIFI ROHINGYA LETTER HA	10D20	HANIFI ROHINGYA VOWEL MARK E
10D08	HANIFI ROHINGYA LETTER KHA	10D21	HANIFI ROHINGYA VOWEL MARK O
10D09	HANIFI ROHINGYA LETTER FA	10D22	HANIFI ROHINGYA MARK SAKIN
10D0A	HANIFI ROHINGYA LETTER DA	10D23	HANIFI ROHINGYA MARK NA KHANNA
10D0B	HANIFI ROHINGYA LETTER DDA	10D24	HANIFI ROHINGYA SIGN HARBAHAY
10D0C	HANIFI ROHINGYA LETTER RA	10D25	HANIFI ROHINGYA SIGN TAHALA
10D0D	HANIFI ROHINGYA LETTER RRA	10D26	HANIFI ROHINGYA SIGN TANA
10D0E	HANIFI ROHINGYA LETTER ZA	10D27	HANIFI ROHINGYA SIGN TASSI
10D0F	HANIFI ROHINGYA LETTER SA	10D30	HANIFI ROHINGYA DIGIT ZERO
10D10	HANIFI ROHINGYA LETTER SHA	10D31	HANIFI ROHINGYA DIGIT ONE
10D11	HANIFI ROHINGYA LETTER KA	10D32	HANIFI ROHINGYA DIGIT TWO
10D12	HANIFI ROHINGYA LETTER GA	10D33	HANIFI ROHINGYA DIGIT THREE
10D13	HANIFI ROHINGYA LETTER LA	10D34	HANIFI ROHINGYA DIGIT FOUR
10D14	HANIFI ROHINGYA LETTER MA	10D35	HANIFI ROHINGYA DIGIT FIVE
10D15	HANIFI ROHINGYA LETTER NA	10D36	HANIFI ROHINGYA DIGIT SIX
10D16	HANIFI ROHINGYA LETTER WA	10D37	HANIFI ROHINGYA DIGIT SEVEN
10D17	HANIFI ROHINGYA LETTER KINNA WA	10D38	HANIFI ROHINGYA DIGIT EIGHT
10D18	HANIFI ROHINGYA LETTER YA	10D39	HANIFI ROHINGYA DIGIT NINE

- Proposal to encode the Old Sogdian script (N4814), new block at 10F00-10F2F

10F00	OLD SOGDIAN LETTER ALEPH	10F09	OLD SOGDIAN LETTER HETH
10F01	OLD SOGDIAN LETTER FINAL ALEPH	10F0A	OLD SOGDIAN LETTER YODH
10F02	OLD SOGDIAN LETTER BETH	10F0B	OLD SOGDIAN LETTER KAPH
10F03	OLD SOGDIAN LETTER FINAL BETH	10F0C	OLD SOGDIAN LETTER LAMEDH
10F04	OLD SOGDIAN LETTER GIMEL	10F0D	OLD SOGDIAN LETTER MEM
10F05	OLD SOGDIAN LETTER HE	10F0E	OLD SOGDIAN LETTER NUN
10F06	OLD SOGDIAN LETTER FINAL HE	10F0F	OLD SOGDIAN LETTER FINAL NUN
10F07	OLD SOGDIAN LETTER WAW	10F10	OLD SOGDIAN LETTER FINAL NUN WITH
10F08	OLD SOGDIAN LETTER ZAYIN		VERTICAL TAIL

10F11	OLD SOGDIAN LETTER SAMEKH	10F1C	OLD SOGDIAN LETTER FINAL TAW WITH VERTICAL TAIL
10F12	OLD SOGDIAN LETTER AYIN	10F1D	OLD SOGDIAN NUMBER ONE
10F13	OLD SOGDIAN LETTER ALTERNATE AYIN	10F1E	OLD SOGDIAN NUMBER TWO
10F14	OLD SOGDIAN LETTER PE	10F1F	OLD SOGDIAN NUMBER THREE
10F15	OLD SOGDIAN LETTER SADHE	10F20	OLD SOGDIAN NUMBER FOUR
10F16	OLD SOGDIAN LETTER FINAL SADHE	10F21	OLD SOGDIAN NUMBER FIVE
10F17	OLD SOGDIAN LETTER FINAL SADHE WITH VERTICAL TAIL	10F22	OLD SOGDIAN NUMBER TEN
10F18	OLD SOGDIAN LETTER RESH-AYIN-DALETH	10F23	OLD SOGDIAN NUMBER TWENTY
		10F24	OLD SOGDIAN NUMBER THIRTY
10F19	OLD SOGDIAN LETTER SHIN	10F25	OLD SOGDIAN NUMBER ONE HUNDRED
10F1A	OLD SOGDIAN LETTER TAW	10F26	OLD SOGDIAN FRACTION ONE HALF
10F1B	OLD SOGDIAN LETTER FINAL TAW	10F27	OLD SOGDIAN HETEROGRAM AYIN-DALETH

- Revised proposal to encode the Sogdian script (N4815), new block at 10F30-10F6F

10F30	SOGDIAN LETTER ALEPH	10F48	SOGDIAN COMBINING DOT ABOVE
10F31	SOGDIAN LETTER BETH	10F49	SOGDIAN COMBINING TWO DOTS ABOVE
10F32	SOGDIAN LETTER GIMEL		
10F33	SOGDIAN LETTER HE	10F4A	SOGDIAN COMBINING CURVE ABOVE
10F34	SOGDIAN LETTER WAW	10F4B	SOGDIAN COMBINING CURVE BELOW
10F35	SOGDIAN LETTER ZAYIN	10F4C	SOGDIAN COMBINING HOOK ABOVE
10F36	SOGDIAN LETTER HETH	10F4D	SOGDIAN COMBINING HOOK BELOW
10F37	SOGDIAN LETTER YODH	10F4E	SOGDIAN COMBINING LONG HOOK BELOW
10F38	SOGDIAN LETTER KAPH		
10F39	SOGDIAN LETTER LAMEDH	10F4F	SOGDIAN COMBINING RESH BELOW
10F3A	SOGDIAN LETTER MEM	10F50	SOGDIAN COMBINING STROKE BELOW
10F3B	SOGDIAN LETTER NUN	10F51	SOGDIAN NUMBER ONE
10F3C	SOGDIAN LETTER SAMEKH	10F52	SOGDIAN NUMBER TEN
10F3D	SOGDIAN LETTER AYIN	10F53	SOGDIAN NUMBER TWENTY
10F3E	SOGDIAN LETTER PE	10F54	SOGDIAN NUMBER ONE HUNDRED
10F3F	SOGDIAN LETTER SADHE	10F55	SOGDIAN PUNCTUATION TWO VERTICAL BARS
10F40	SOGDIAN LETTER RESH-AYIN		
10F41	SOGDIAN LETTER SHIN	10F56	SOGDIAN PUNCTUATION TWO VERTICAL BARS WITH DOTS
10F42	SOGDIAN LETTER TAW		
10F43	SOGDIAN LETTER FETH	10F57	SOGDIAN PUNCTUATION CIRCLE WITH DOT
10F44	SOGDIAN LETTER LESH		
10F45	SODGIAN PHONOGRAM SHIN	10F58	SOGDIAN PUNCTUATION CIRCLES WITH DOTS
10F46	SOGDIAN COMBINING DOT BELOW		
10F47	SOGDIAN COMBINING TWO DOTS BELOW	10F59	SOGDIAN PUNCTUATION HALF CIRCLE WITH DOT

- Proposal to encode the SANDHI MARK for Newa (N4816)
  - 1145E   NEWA SANDHI MARK

The type of characters included in these new additions are typically not controversial, and in all cases, experts and NBs can provide further comment in a PDAM before they may be considered for an enquiry phase (DAM ballot).

China: Positive with comments

Technical comments:

T1. Zanabazar Square and Soyombo
We have no comments on these because we have not found appropriate expert yet.

Noted

T2. Khitan Small Script
We know that the clustering model of the Khitan Small Script is still controversial, thus we request the removal of 18CFE KHITAN SMALL SCRIPT HORIZONTAL JOINER and 18CFF KHITAN SMALL SCRIPT VERTICAL JOINER from the PDAM pending further study and consensus.

Accepted

See also comment T5 from UK and T1 from Ireland.

See disposition of the UK comment.

T3. Xiangqi game symbols (Enclosed Ideographic Supplement)
a) 3 spelling mistakes:

1F28B: The description "= hei pa" should be "= hei pao". 炮 is pronounced "pao".

1F281: The description "= hong bing" should be "= hong zu". 卒 is prounced "zu".

1F28D: The description "= hei zu" should be "hei bing". 兵 is pronounced "bing".

Accepted in principle

See also comment T7 from UK and T2 from Ireland.

The comment from Ireland shows the pinyin annotation with diacritical marks. With the semantic based presentation now chosen for these symbols as a result of the disposition of the Irish comment, these annotation refers to the exact ideographs used in the presentation, not the alternative ideographs.

b) We also recommend encoding Xiangqi game symbols as "Symbols" like Chess symbols and Japanese Chess symbols, or in a block "Game Symbols".

Accepted in principle

See also comment T7 from UK and T2 from Ireland.

The block name is simply 'Chess Symbols'.

T4. Supplemental Symbols and Pictographs
We request information and analysis estimate how many dinosaur symbols we need, thus we suggest postponing 1F995 SAUROPOD and 1F996 T-REX.

Not accepted

Synchronization with Unicode 10.0 makes this request unadvisable. These were added following broad request from the Emoji Sub-Committee. See document N4805 for further information.

Ireland: Negative

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

Technical comments:

T1. Page 75, Row 18B0: Khitan Small Script

While the encoded characters for the Khitan Small Script are not controversial, the appropriate encoding model for constructing syllable clusters has not been agreed. The characters under ballot were apparently approved by the UTC, but the utility of those characters, their advantages and disadvantages, and the need for any formatting characters, or for these formatting characters, or for other formatting characters is not agreed by the user community. Ireland requests the removal of 18CFE KHITAN SMALL SCRIPT HORIZONTAL JOINER and 18CFF KHITAN SMALL SCRIPT VERTICAL JOINER from the PDAM pending further study and consensus.
Accepted
See also comment T2 from China, T5 from UK.

See disposition of UK comment.

T2. Page 93, Row 1F20: Enclosed Ideographic Supplement, Xiàngqí game pieces

Ireland requests that all of the characters from 1F270..1F28D be removed from the PDAM. There are two models for representation of Xiàngqí game pieces in the UCS: one is by representing each of the CJK glyph variants as a unique circled ideograph to represent different piece glyphs, and the other would be by representing only 14 characters based on piece semantics. The current ballot represents the first of these two models. Feedback on this has suggested that, for purposes of interchange of xiàngqí game data, a glyph-based encoding is not advantageous. We recommend the following characters be encoded, in a block "Game symbols" which we would expect to also include the "Fairy Chess" characters of N4728R2 [*ed. should be N4784R2*] should those characters be accepted for eventual encoding.

Symbols used in Chinese chess (xiàngqí) notation

帥 1FA60   RED XIANGQI GENERAL

         = hóng shuài

         • design typically shows 5E25 帥 or 5E05 帅

         • design sometimes shows 5C07 將 (Yuan dynasty)

仕 1FA61   RED XIANGQI MANDARIN

         = hóng shì

         • design typically shows 4ED5 仕

         • design sometimes shows 58EB 士

相 1FA62   RED XIANGQI ELEPHANT

         = hóng xiàng

         • design typically shows 76F8 相

         • design sometimes shows 8C61 象 (Yuan dynasty)

馬 1FA63 RED XIANGQI HORSE

= hóng mǎ

• design typically shows 99AC 馬 or 9A6C 马

• design sometimes shows 508C 傌

車 1FA64 RED XIANGQI CHARIOT

= hóng jū

• design typically shows 8ECA 車 or 8F66 车

• design sometimes shows 4FE5 俥

炮 1FA65 RED XIANGQI CANNON

= hóng pào

• design typically shows 70AE 炮 or 792E 礮

• design sometimes shows 7832 砲

• design sometimes shows 5352 包 (Ming dynasty)

兵 1FA66 RED XIANGQI SOLDIER

= hóng bīng

• design typically shows 5175 兵

• design sometimes shows 5352 卒 (Yuan and Ming dynasties)

將 1FA67 BLACK XIANGQI GENERAL

= hēi jiāng

• design typically shows 5C07 將 or 5C06 将

士 1FA68 BLACK XIANGQI MANDARIN

= hēi shì

• design typically shows 58EB 士

象 1FA69 BLACK XIANGQI ELEPHANT

= hēi xiàng

• design typically shows 8C61 象

馬 1FA6A BLACK XIANGQI HORSE

= hēi mǎ

• design typically shows 99AC 馬 or 9A6C 马

車 1FA6B BLACK XIANGQI CHARIOT

= hēi ju

• design typically shows 8ECA 車 or 8F66 车

砲 1FA6C BLACK XIANGQI CANNON

= hēi pào

• design typically shows 7832 砲

• design sometimes shows 70AE 炮

卒 1FA6D BLACK XIANGQI SOLDIER

= hēi zú

• design typically shows 5352 卒

• design sometimes shows 5175 兵 (Yuan and Ming dynasties)

See also comment T3 from China and T7 from UK. The second model was the one originally proposed in document WG2 N4748 where the encoding was based on piece semantics. After discussion, the first model based on glyph representation was adopted following document WG2N4766.

After further discussion with experts, it was decided to go back to the second model. Note that the annotation shows the full Pinyin annotation with diacritical marks which go beyond the Latin-1 subset, therefore showing mixed style fonts in the name list. This may not be maintained in a future version of these annotations.

T3. Page 77, Row 1B00: Kana Supplement

Ireland believes that the character names used to describe the Hentaigana are confusing and not particularly useful: they have been named with simple serial numbers which don't mean anything, while the actual identifying characteristic has been shunted to an informative note. This departs from the precedent set by other UCS characters which are identified by reference to a base CJK character. In the block "Enclosed Ideographic Supplement" for example, characters are named according to the pattern 1F217 图 SQUARED CJK UNIFIED IDEOGRAPH-5929, with an informative note "≈ <square> 5929 天". We do not believe that names like HENTAIGANA LETTER SU-1, SU-2, SU-3, SU-4, SU-5, SU-6, SU-7, and SU-8 properly identify the characters in question. We believe that the naming convention detailed below is more accurate, more useful to users for the identification of characters, and more in keeping with the UCS naming conventions. Where a single source has more than one reflex, -A, -B, etc can be added to the character name.

The advantage to this naming system is clear: if someone wants to find the hentaigana that is derived from a particular kanji then it will be easy to find in a list of character names if the character names include the code point for the source kanji. Otherwise other sources would have to be consulted, which is not advantageous for a relatively small set of characters like this one. An example range of these characters is given below. Ireland has a corrected names list available for use by the editor.

亭	1B06E	HENTAIGANA LETTER TE-4EAD
		• derived from 4EAD 亭
低	1B06F	HENTAIGANA LETTER TE-4F4E
		• derived from 4F4E 低
傳	1B070	HENTAIGANA LETTER TE-50B3
		• derived from 50B3 傳
天	1B071	HENTAIGANA LETTER TE-5929
		• derived from 5929 天
乁	1B072	HENTAIGANA LETTER TE-5929-A
		• derived from 5929 天
飞	1B073	HENTAIGANA LETTER TE-5929-B
		• derived from 5929 天
帝	1B074	HENTAIGANA LETTER TE-5E1D
		• derived from 5E1D 帝
弓	1B075	HENTAIGANA LETTER TE-5F16
		• derived from 5F16 弓
轉	1B076	HENTAIGANA LETTER TE-8F49
		• derived from 8F49 轉

T4. Page 97, Row 1F30: Miscellaneous Symbols and Pictographs, JTC1/SC2 UTC synchronization issues

Ireland is concerned that the balance between JTC1/SC2 and the UTC has become unstable with regard to the invention and maintenance of symbol characters, some of which are used as emoji in coloured fonts. A variety of glyph changes has been proposed in this PDAM, but there has been no SC2 or WG2 document giving rational for these changes, and while some of them can be considered reasonable, in several cases either the glyph proposed seems simply to be wrong, or is inappropriate for one or more reasons. We do not oppose such improvements in principle, but we do believe that there should be an obligation for the UTC to provide sufficient information to SC2 regarding such non-trivial changes, just as SC2 National Bodies and appointed experts are expected to do so for the UTC. A large number of new symbols has also been added in the PDAM, without attestation; some of these are clearly members of sets which would be seriously incomplete were only the proposed subset to be encoded. Again, Ireland is concerned with coherent sets of symbols, and realizes that the status of any character as an emoji is a different matter. But it is symbol characters, not emoji, that are being requested in the PDAM.

Ireland believes that if the Emoji Subcommittee of the UTC has the right to invent characters with little or no attestation because they judge that there is some potential use for them based on recommendations from the general public, then members of SC2 have the right to ensure that the characters proposed be subject to the same scrutiny to which the original Japanese telephone company symbols were when they were proposed for encoding. In that case, for example, a number of animals were proposed because they were a part of one or more of the source character sets. Ireland and Germany in particular noticed, for instance, that the set of animals used to define the Asian Zodiac in various countries was incomplete, and proposed additions in ballot comments to complete the set. This was accepted by SC2 and the UTC, and the additions were published in the standard in 2010.

This precedent was a good one, and we believe that since the process for creation of symbol characters to be used as emoji is just as subjective now as it was when the staff of SoftBank, KDDI, and DoCoMo were devising bitmaps in the late 1990s, and since these symbols are to be added to the International Standard, oversight of SC2 should not be subordinate to that of the UTC in this area. Ireland acknowledges that the assignment of the "Emoji Property Value" to any characters is reasonably a matter for the UTC because of industry implementation of these characters. The content of symbol sets, however, belongs to both committees, not just to a subcommittee within the UTC. Regardless of how diligently the Emoji Subcommittee may do their work, it remains the case that the UCS is the responsibility of both SC2 and the UTC, and SC2 shall not be expected to give a rubber-stamp on this category of coded character (pictorial graphic symbols).

Precedent for urgently required characters has been made for currency signs, and in an exceptional case for the Fitzpatrick emoji modifiers. Ordinary symbols are not "urgent"; but if they are to be treated as such, then it is right for the same kind of input for revision and augmentation that SC2 offered the UTC in 2010 be offered and accepted today.

Ireland recognizes that the inclusion of a symbol in the UCS does not automatically ensure the elevation of that character to usage as an emoji. Indeed, while Ireland proposed the inclusion of 1F594 🖔 REVERSED VICTORY HAND, 1F595 🖕 REVERSED HAND WITH MIDDLE FINGER EXTENDED, and 1F596 🖖 RAISED HAND WITH PART BETWEEN MIDDLE AND RING FINGERS, all of which were accepted for encoding, though subsequently the first of these was never given the "Emoji Property Value". Perhaps this was an oversight, or perhaps it was intentional. Ireland does understand that production and implementation of emoji (fonts, input methods, etc.) brings costs with it. Nevertheless, an incomplete set of invented characters is not ideal, and for this reason, in our ballot comments here, we will be proposing to increase the number of symbol characters somewhat. The UTC may wish to review those characters for suitability of use as emoji, but even if they are not used as emoji, they should be encoded in order that the set of pictorial graphic symbols be balanced and relatively complete.

Ireland requests that SC2 acknowledge precedent with regard to proposed symbol additions in this category, and that National Bodies look favourably on the characters proposed to augment the set of characters

proposed here. Failing that, we shall have to protest that these characters have not been formally proposed for inclusion in the standard via SC2 or WG2 documents, which prevents them from being properly evaluated.

We note that "Completeness" is a criterion for emoji. "Does the proposed pictograph fill a gap in existing types of emoji?" is a factor for inclusion. This factor is no less important for National Bodies reviewing proposed UCS symbols than it is for the Emoji Subcommittee.

Noted
See also comment GE1 from Japan.

This is mostly out of scope as a ballot comment and should have been done as a SC2 document because it addresses synchronization between ISO/IEC 10646 and Unicode which should be addressed at the SC2 level. In the recent past, including during WG2 meeting 65, repertoires were accepted without WG2 numbers if another stable reference was provided. Based on the feedback received on this ballot, the editor has added all documents adding repertoire after WG2 meeting #65 in the WG2 document directory. For example, the Emoji repertoire added to PDAM1 after that meeting is described in WG2 N4805.

T5. Page 102, Row 1F30: Miscellaneous Symbols and Pictographs, 1F3B1 BILLIARDS

Ireland objects strenuously to the proposed glyph change for 1F3B1 BILLIARDS. The source for this character in both SoftBank and KDDI is, properly ビリヤード, biriyādo, that is 'billiards'. The reference glyphs for both of those is a green game table with coloured balls, with a cue in the SoftBank glyph. It has always been supposed that this character could be used for pocketed or pocketless billiards, snooker, pool, carom, and other cue games. No indication of the "eight ball" is given in the Japanese sources or the original reference glyph, and indeed, numbered balls are not used in many cue sports, like snooker and carom.

e-80E	U+1F49B proposed	BILLIARDS	[ビリヤード]	#470 ビリヤード 「biriyaado」 U+EADD SJIS-F3B1 JIS-7A33	#159 #old391 ビリヤード 「biriyaado」 U+E42C SJIS-FB6C	U+FE80E

 We understand that some (but not all) vendors have represented this character with an eightball, and we believe that this is not because this is the most representative glyph for "billiards" but because of the "Magic 8 Ball" oracle toy, popular especially in the United States, where it seems to have been introduced in 1950, though a "magic ball" was used in a 1940 Three Stooges short called "You Nazty Spy".

Ireland requests that the original glyph for BILLIARDS be retained unchanged, and requests the addition of a new character, EIGHT BALL, at a suitable place in the Supplemental Symbols and Pictographs block. We believe that vendor replacement of the original reference glyph constitutes a distortion of the intended meaning of the character, and is therefore an error. Any precedent agreeing that vendors may alter the meaning of symbols, would be a very bad precedent, and we do not believe this should be encouraged.

Not accepted
See also comment T8 from UK.

A clear majority of the implementations represents this character with an eight ball. While the original glyphs of the historic sources are a good hint, they do not create an absolute reference concerning the glyph appearance, and more so given the vast growth of the Emoji concept beyond its Japanese root.

T6. Page 119, Row 1F68: Transport and Map Symbols, 1F6F7 SLED

Ireland suggests that the name for 1F6F7 SLED be changed to SLEDGE, which is the European English term for the item this character represents. An informative note can refer to "sled".
Not accepted
See also comment T10 from UK.

Sled seems to be a more common term for the object depicted. Sledge and/or sleight refer more often to larger object like an open-air carriage pulled by horses using runners instead of wheels for use in winter on show/ice. As suggested by UK, an annotation will be added to say '= sledge, toboggan'.

T7. Page 125, Row 1F90: Supplemental Symbols and Pictographs, 1F961 TAKEOUT BOX

Ireland suggests that the name for 1F961 [TAKEOUT BOX] be changed to OYSTER PAIL, with an informative note as shown below. The term "oyster pail" is the original name for the item, and avoids the problem of widely differing international terminology for the container. We do not insist that the parenthesized comments be retained in the informative note. Failing this solution, we request that British terminology be used (as is usual in the UCS), namely the term TAKE-AWAY BOX.

1F961   OYSTER PAIL

            = carry-out box (Scotland, USA)

            = take-away box (Australia, Hong Kong, Ireland, New Zealand, South Africa, UK),

            = take-away parcel (India, Pakistan)

            = take-out box (North America, Philippines)"

Not accepted

While Oyster Pail is the original name, it is now totally eclipsed in usage by the proposed name: TAKEOUT BOX, and having the original name as annotation (as currently done) should be sufficient. Furthermore, the original name is obscure to most current users of the symbol. Concerning terminology, the name list tends to use British spelling, but using British terminology is not a requirement. And we should not make the annotation an encyclopedia for world usage. However, the annotation will be modified to read:

= take-away box, oyster pail

T8. Page 125, Row 1F90: Supplemental Symbols and Pictographs, 1F96B CANNED FOOD

Ireland suggests that the name for 1F96B CANNED FOOD be changed to TIN CAN, with an informative note. The character could be used for any similar container, regardless of the contents. The glyph need not display any particular content (since it could be beans, soup, fruit, or even motor oil).

1F96B   TIN CAN

            = canned food, tinned food

Not accepted

Note that the current proposed glyph is different: . It conveys the concept of canned food by showing the picture of a fruit/vegetable on the container. Making a generic tin container was not the intent of the original submitter. Note that the comment E23 from Ireland asks for the glyph change shown above.

T9. Page 125, Row 1F90: Supplemental Symbols and Pictographs, 1F995 SAUROPAUD and 1F996 T-REX

Ireland objects strenuously to the encoding of 1F995 SAUROPOD and 1F996 T-REX as presented in the PDAM. In the first place, the name SAUROPOD refers to a clade of the suborder of Sauropodomorpha of the order Saurischia, which includes Apatosaurus, Brachiosaurus, Brontosaurus, Diplodocus, and many other species. Such an umbrella is perfectly reasonable, and the UCS has done that even for OCTOPUS (referring to some 300 species). "T-REX" on the other hand refers to a particular species, which is too precise. Moreover, as an abbreviation, the hyphen is never used in scientific names (the correct form would be *T. rex*) and in the context of a UCS name TYRANNOSAURUS REX would be the correct term (however it might be presented to an end user in a format like `:t-rex:` or whatever). A slang abbreviation is not a suitable name for formal standardization. It is, of course, suitable for an informative note (and we have included this in our proposal below).

Beyond this, however, is the fact that a group like Sauropod and an individual species like *Tyrannosaurus rex* do not form anything like a coherent group that epitomizes "dinosaur". Many millions of people admire dinosaurs,

and it's quite common to find that people have had one or more favourite dinosaurs from childhood. "Where's my Ticeratops?" "Why isn't there an Iguanodon?" will surely be some of the first reactions to the standardization of only two pictographs in this block. On the other hand, a properly complete set will certainly be very popular indeed.

Evidently some very basic proposals had been made to encode some "dinosaurs" as emoji, but singling out two simply makes no sense. The UCS includes many mammal symbols, and work seems to be ongoing to identify a larger and larger set of them, based on evident familiarity, metaphor, and desirability indicating some expected use. We understand that many successful emoji proposals, at least in part, have not been based on systematic analysis or even on internet discussions about missing emoji, but rather on Instagram and Google Trends data based on word frequency. This does not seem to be an entirely sufficient criterion, particularly as emoji are often used metaphorically, and outside of metaphor words may be used for all sorts of ordinary reasons. It may be useful to note that the word "cricket" is probably far, far more commonly used on the internet for the sport than for the insect. Do many people use the word "Sauropod" in speech? Quite likely they do not, but the class of "dinosaurs" is comprised of a number of familiar groups, and, in our view, a relatively small number of encoded pictographs would suffice to represent that group.

The set of existing UCS emoji symbols for the kingdom Animalia is not very well balanced. This is nobody's fault. The set began with animals implemented in late-90s Japanese telecom sets. As mentioned above, this was augmented by German and Irish National Body comments adding more animals for, for example, a complete set of characters used in the Asian Zodiac. (That is why there is a crocodile encoded, for instance.) Since then some more animals have been added. The current UCS (including the content of this PDAM) has, in the emoji classification:

> 1 amphibian
> 13 birds
> 11 "bugs" (9 arthropods, 1 mollusc, and 1 architectural device made out of a proteinaceous extrusion)
> 48 mammals (47 mammals and 1 pair of paw prints)
> 12 "marine" creatures (including 4 fish, 3 mammals, 2 arthropods, 2 molluscs, and a mollusc shell)
> 6 reptiles (including 2 dragons).

Where the two dinosaur characters would be classified is uncertain. Perhaps the sauropod would be classed as a reptile, and the tyrannosaur as a bird (both go back to a subgroup Tyrannoraptora).

Levity aside, there are, according to Mammal Species of the World, 5,416 species of mammals identified in 2006. These were grouped into 1,229 genera, 153 families and 29 orders. While it is likely that more mammal pictographs could be added to the UCS, 45 isn't a bad start. It's unlikely that symbols for 1200 genera would be needed. For dinosaurs, however, the number of genera is much smaller (about 500) and there too, it is unlikely that a great many symbols would be needed. But given their popularity, Ireland believes that certainly more than two is necessary.

Described as dragons in the Western Jin Dynasty, dinosaurs have fascinated our culture for a very long time. Modern study of dinosaur has done so no less, and popular culture is permeated by them: noteworthy are Jules Verne's 1864 Journey to the Centre of the Earth (Ichthyosaurs, Plesiosaurs; Dimetrodon was in the 1959 film of this book); Arthur Conan Doyle's 1912 The Lost World (Ichthyosaurs, Iguanodon, Plesiosaurs, Pterosaurs, Sauropods, Stegosaurians, some carnivorous Therapods); the 1933 film King Kong (Ceratopsians, Plesiosaurs, Pterosaurs, Sauropods, Stegosaurians, Tyrannosaurids); many others, until more modern scientific findings about dinosaurs found their way into Michael Crichton's 1990 novel Jurassic Park and the films that were based on it. Some non-dinosaur characters also have high visibility in popular culture. Two of these, the MAMMOTH and DODO, are commonly used in ordinary phrases: "a mammoth sale", "as dead as a dodo".

The character names given below are chosen from the standard scientific taxonomy, and so the most identifiable species in each class of dinosaur are reflected with accurate nomenclature. Thus there are some genera, families, superfamilies, suborders, orders, and clades represented.

Because the characters proposed here represent the most iconic and popularly identifiable dinosaurs, we would not expect further requests to encode additional ones. Ireland believes that a set of 18 symbols representing dinosaurs and some other prehistoric creatures would do well to fill in the gaps implied by SAUROPOD and T-REX. We believe that encoding only those 2 characters at this time would simply lead to calls to fill the gaps, and we think that we have done that here. A species-based nomenclature would be possible but less advantageous. If TRICERATOPS were encoded, the glyph should really not be of a Protoceratops or Styracosaurus. CERATOPSIAN gives glyph designers more choice.

Dinosaurs and other prehistoric reptiles[1]

1F9A0   ANKYLOSAUR
  • a suborder of the order Ornithischia

1F9A1   ARCHAEOPTERYX
  • a genus of the suborder Theropoda of the order Saurischia

1F9A2   CERATOPSIAN
  • a suborder of the order Ornithischia
  • includes Protoceratops, Styracosaurus, Triceratops

1F9A3   DROMAEOSAURID
  • a family of the suborder Theropoda of the order Saurischia
  • includes Deinonychus, Utahraptor, Velociraptor

1F9A4   HARDROSAURID
  • a family of the suborder Ornithopoda of the order Ornithischia
  • includes Edmontosaurus, Hadrosaurus, Parasaurolophus

1F9A5   ICHTHYOSAUR
  • a member of the order Ichthyosauria

1F9A6   IGUANODON
  • a genus of the suborder Ornithopoda of the order Ornithischia

1F9A7   ORNITHOMIMID
  • a family of the suborder Theropoda of the order Saurischia
  • includes Gallimimus, Ornithomimus, Struthiomimus

1F9A8   PACHYCEPHALOSAUR
  • a family of the suborder Pachycephalosauria of the order Ornithischia
  • includes Pachycephalosaurus, Stegoceras

1F9A9   PLESIOSAUR
  • a member of the order Plesiosauria
  • includes Elasmosaurus, Liopleurodon, Plesiosaurus
  • represents Nessie, the Loch Ness Monster

1F9AA   PTEROSAUR
  • a member of the order Pterosauria
  • includes Pteranodon, Pterodactylus, Quetzalcoatlus

1F9AB   SAUROPOD
  • a clade of the suborder of Sauropodomorpha of the order Saurischia
  • includes Apatosaurus, Brachiosaurus, Brontosaurus, Diplodocus

1F9AC   SPHENACODONTID
  • a genus of the family Sphenacodontidae
  • includes Ctenospondylus, Dimetrodon, Secodontosaurus, Sphenacodon

1F9AD   STEGOSAURIAN
  • a suborder of the order Ornithischia
  • includes Huayangosaurus, Kentrosaurus, Stegosaurus

1F9AE   TYRANNOSAURID
  • a superfamily of the suborder of Theropoda of the order Saurischia
  • includes Albertosaurus, Gorgosaurus, Tyrannosaurus (T. rex)

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[1] Dinosaurs are animals which belong to the orders Ornithischia and Saurischia. Ichthyosaurs, Plesiosaurs, and Sphenacodontids are not taxonomically classified as dinosaurs, and in places the term "dinosaurs" has been used loosely here to refer to dinosaurs and other prehistoric reptiles, as indicated by the informative header to the names list.

Page 15

Extinct creatures

🐅	1F9AF	SABRE-TOOTHED CAT
		= Smilodon
🐘	1F9B0	MAMMOTH
		• indicates great size
🦤	1F9B1	DODO
		• indicates extinction

Examples of the glyphs at a larger size
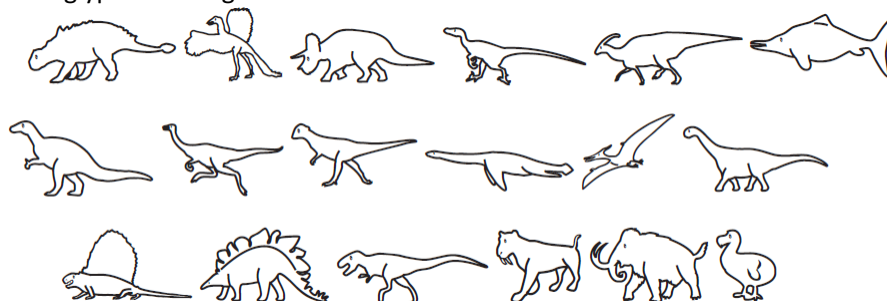
<u>Not accepted</u>
See comments T4 from China, and T12 and T14 from UK.

The two proposed emoji characters are a representation of two popular, if not scientific exact, representation of the historic reptiles: the generic docile dinosaur (named here SAUROPOD) and the generic aggressive version (named here T-REX). Both characters are to be used in an Emoji context, not as part of a Dinosaur taxonomy.

Furthermore, there is no requirement at having a proposal to be comprehensive and the UCS encoding model is additive. It is perfectly possible to create a proposal to create additional symbols dinosaurs and other prehistoric reptiles, but this should be covered by a separate contribution.

Concerning the names, clearly the term 'T-REX is far from optimal and a vast majority of experts, including the editor, would prefer many other alternatives such as TYRANNOSAURID, TYRANNOSAUR, or TYRANNOSAURUS REX, the necessity of the synchronization with Unicode 10.0 is forcing us to keep the name as it is. However, the annotation can be changed to read: '= tyrannosaurid, tyrannosaurus rex'.

T10. Page 125, Row 1F90: Supplemental Symbols and Pictographs, 1F9E2 BILLED CAP
Ireland suggests that the name for 1F9E2 BILLED CAP be changed to BASEBALL CAP. The term "billed cap" is known, but in all varieties of English the term "baseball cap" is the most commonly used.

<u>Not accepted</u>
The terms 'BILLED CAP' indicates a more generic symbol; for example, the bill can be elongated depending on the usage of the cap.

Editorial comments:
(All accepted glyph changes are based on receiving a font from Ireland with the appropriate glyph.)

E1. Page 89, Row 1F10: Enclosed Alphanumeric Supplement, 1F12F COPYLEFT SIGN
Ireland requests that the informative cross-reference for 1F12F COPYLEFT SIGN be changed from 2184 to 2183, since the letterform in the glyph for 1F12F is a capital and not a small letter.

Accepted

E2. Page 97, Row 1F30: Miscellaneous Symbols and Pictographs, 1F301 FOGGY
Ireland agrees with the changes proposed for 1F301 FOGGY, though the glyph needs clean-up.

Accepted

E3. Page 97, Row 1F30: Miscellaneous Symbols and Pictographs, 1F3B5 MUSICAL NOTE and 1F3B6 MULTIPLE MUSICAL NOTES
Ireland requests discussion as to whether the glyphs for the existing characters 1F3B5 MUSICAL NOTE and 1F3B6 MULTIPLE MUSICAL NOTES be altered to conform to most vendor practice (two notes barred, three notes high-low-high. It should be noted that 1F39C BEAMED ASCENDING MUSICAL NOTES and 1F39D BEAMED DESCENDING MUSICAL NOTES, which are not used as emoji, are related to 1F3B5. Also note that in the source Japanese character sets, 1F3B5 is a single eighth-note or quaver. This may be an issue for vendors.

		MUSICAL NOTE = music, being in good mood x (eighth note - 266A) Temporary Notes: Disunified from U+266A due to source separation rule (Shift_JIS).	♪ #146 'Cheerful' るんるん 「runrun」 U+E6F6 SJIS-F99B JIS-7870	♪ #343 八分音符 U+E5BE SJIS-F7EE JIS-7870	🎵 #46 #old62 音符 U+E03E SJIS-F97E	U+FE813
e-813	U+1F4A0 proposed					
e-814	U+1F4A1	MULTIPLE MUSICAL NOTES = dancing notes, mood, melody Temporary Notes: disunified from ♫	♫ #155 'Mood' ムード 「muudo」	♫ #291 メロディ 「merodei」	🎶 #47 #old308 音符(楽しい) 「音符(楽sii)」	U+FE814

Noted

It is true that the glyphs for 1B3B5 and 1B3B6 vary a lot among implementation, but like noted above, there are risks of confusion with U+1F39C ♬ and U+1F39D ♩ as well as U+266A ♪ EIGHTH NOTE, or U+266B ♫ BEAMED EIGHTH NOTE. Note also that the name for U+1F3B5 is singular.

At the same time, a clear majority of vendors use the 'two notes barred' for U+1F3B5 and the three notes high-low-high for U+1F3B6. Therefore, the change suggested by Ireland makes sense.

E4. Page 97, Row 1F30: Miscellaneous Symbols and Pictographs, 1F308 RAINBOW
Ireland recommends that the glyph for the existing character 1F308 RAINBOW be cut in half, as most vendors do not display the entire arc in the glyph for this character.

Accepted

E5. Page 98, Row 1F30: Miscellaneous Symbols and Pictographs, 1F409 DRAGON and 1F432 DRAGON FACE

The new proposed glyphs for the existing characters 1F409 DRAGON and 1F432 DRAGON FACE do not look remarkably more Asian, nor very much more like many of the vendor images. Perhaps further study on an appropriate glyph should be done. In any case we do not think that there is a rationale for the yin-yang symbol to be retained on the first of these. We recommend that the dragon's body be white, for conformity with most of the other animal glyphs in a black-and-white font, and that the yin-yang symbol be removed.

<u>Accepted</u>

Noted that no glyph change for 1F432 🐲 DRAGON FACE is proposed.

E6. Page 98, Row 1F30: Miscellaneous Symbols and Pictographs, 1F40B WHALE

Ireland recommends that the new glyph for the existing character 1F40B WHALE be given as white, to conform to the practice for the other animal symbols in the code charts.

<u>Accepted</u>

E7. Page 98, Row 1F30: Miscellaneous Symbols and Pictographs, 1F450 OPEN HANDS SIGN

Ireland recommends that the glyph for the existing character 1F450 OPEN HANDS SIGN use the base glyph of 270B RAISED HAND for consistency amongst the black and white glyphs in the standard.

<u>Accepted</u>

E8. Page 98, Row 1F30: Miscellaneous Symbols and Pictographs, 1F47B GHOST

Ireland notes that the glyph for the existing character 1F47B GHOST has been changed from the original reference glyph, but the new one does not have arms and does not otherwise look like most vendors' ghosts. We recommend the following compromise:

<u>Accepted</u>

E9. Page 98, Row 1F30: Miscellaneous Symbols and Pictographs, 1F4A9 PILE OF POO

Ireland believes that the proposed glyph for the existing character 1F4A9 PILE OF POO is not really acceptable; the black fill makes it unrecognizable. We propose a white glyph one based on a more common glyph.

<u>Accepted</u>

E10. Page 98, Row 1F30: Miscellaneous Symbols and Pictographs, 1F4AA FLEXED BICEPS

Ireland believes that the glyph for the existing character 1F4AA FLEXED BICEPS does not need a movement mark.

E11. Page 99, Row 1F30: Miscellaneous Symbols and Pictographs, 1F536 LARGE ORANGE DIAMOND, 1F537 LARGE BLUE DIAMOND, 1F538 SMALL ORANGE DIAMOND, 1F539 SMALL BLUE DIAMOND

Ireland does not agree with the proposed glyph changes for the existing characters 1F536 LARGE ORANGE DIAMOND, 1F537 LARGE BLUE DIAMOND, 1F538 SMALL ORANGE DIAMOND, 1F539 SMALL BLUE DIAMOND. In the heraldic system of hatching used for the black and white code chart fonts for the UCS, blue is hatched with horizontal lines, and orange is hatched with horizontal lines crossing top right to bottom left lines. (There are several hatching systems, but this is the one which has previously used in the UCS. Orange and blue are also found in 1F4D8 BLUE BOOK and 1F4D9 ORANGE BOOK. The proposed new glyphs are also taller than they are wide (which is not a feature found in the vendors' glyphs). We think an error has been made, and no change of glyph is needed for these—at least, the patterns proposed are not the right ones. The spacing of the hatching could be re-visited, but the hatching itself is accurate.

E12. Page 114, Row 1F60: Emoticons

Of the 80 characters in this block, the ballot proposes glyph changes to 9% of them, maintaining that vendors' colour emoji glyphs for these differ from the chart glyphs. While this is accurate, we Ireland has found in our review of the glyphs—with attention to eye-shape, position of water droplets, and other features—that in fact 57.5% of the glyphs differ significantly enough from current implementations that they too need to be revised. This is not surprising; when the code chart fonts were designed, much attention was given to the small colour bitmaps of the Japanese sources. Ireland recommends that the glyphs in the code table at the end of this document be used (changed glyphs are in yellow).

(Ed. code table inserted next page)

	1F60	1F61	1F62	1F63	1F64
0	1F600	1F610	1F620	1F630	1F640
1	1F601	1F611	1F621	1F631	1F641
2	1F602	1F612	1F622	1F632	1F642
3	1F603	1F613	1F623	1F633	1F643
4	1F604	1F614	1F624	1F634	1F644
5	1F605	1F615	1F625	1F635	1F645
6	1F606	1F616	1F626	1F636	1F646
7	1F607	1F617	1F627	1F637	1F647
8	1F608	1F618	1F628	1F638	1F648
9	1F609	1F619	1F629	1F639	1F649
A	1F60A	1F61A	1F62A	1F63A	1F64A
B	1F60B	1F61B	1F62B	1F63B	1F64B
C	1F60C	1F61C	1F62C	1F63C	1F64C
D	1F60D	1F61D	1F62D	1F63D	1F64D
E	1F60E	1F61E	1F62E	1F63E	1F64E
F	1F60F	1F61F	1F62F	1F63F	1F64F

Partially accepted

The page was compared to http://unicode.org/emoji/charts/full-emoji-list.html *which shows all vendors implementation and most of these proposed changes were accepted except for the following:*

1F614, eyes to be modified (inverted as original), new eyebrows and mouth are ok

1F61F, remove double chin

1F621, remove double chin

1F628, some shading should be preserved (original is not optimal)

1F633, restore flush on cheeks

1F640, keep original 🙀

1F644, make mouth symmetric (original was also incorrect)

1F64C, new hands are good, but use original design for the rest (new one looks like sweat)

1F64F, improve outline (too thin)

Only one change (U+1F640) is rejected, other could be done with suggestions as above.

E13. Page 117, Row 1F68: Transport and Map Symbols, 1F6F6 CANOE

Ireland believes the glyph for the existing character 1F6F6 CANOE should look a lot more like a canoe.
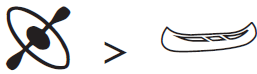
Accepted in principle

The new glyph is an improvement; however, it also should include a paddle as in 🛶.

E14. Page 117, Row 1F68: Transport and Map Symbols, 1F6F8 FLYING SAUCER

Ireland recommends an altered glyph for 1F6F8 FLYING SAUCER that looks a bit more like a space-craft. The current glyph looks rather like an LED light.
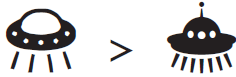
Accepted

E15. Page 123, Row 1F90: Supplemental Symbols and Pictographs, new Emoticons

Ireland has reviewed a number of the emoticons on this page, and recommends glyph alterations for the following existing characters in line with vendor practice in colour emoji fonts:

(ED. existing glyphs added in comment)

1F912		FACE WITH THERMOMETER
1F914		THINKING FACE
1F915		FACE WITH HEAD-BANDAGE
1F917		HUGGING FACE
1F920		FACE WITH COWBOY HAT
1F921		CLOWN FACE
1F922		NAUSEATED FACE
1F923		ROLLING ON THE FLOOR LAUGHING

1F924		DROOLING FACE
1F926		FACE PALM

(Ed. Proposed new glyphs)

Partially accepted

Changes for 1F912, 1F914, 1F915, 1F920, 1F921, and 1F923 (1st, 2nd, 3rd, 5th, 6th, 8th) are OK. Others need improvement:

> *1F917 (4th), original and newly proposed glyphs are not optimal, the preference would be for something like the 'Emoji One' column for that code point in* http://unicode.org/emoji/charts/full-emoji-list.html*:*

> *1F922 (7th), the mouth should be narrower,*
>
> *1F924 (9th), the mouth is wrong, the original mouth is better, rest of visage is improved in the new glyph,*
>
> *1F926 (10th), original and newly proposed change are not optimal, it should look like a human form emoji like in* http://unicode.org/emoji/charts/full-emoji-list.html*.*

E18. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F932 PALMS UP

Ireland recommends that the glyph for 1F932 PALMS UP TOGETHER should use the base glyph of 2708 for consistency amongst the black and white glyphs in the standard.

Not accepted

The new glyph has separated thumbs which is not correct. If the thumbs were joined, the new glyph would be acceptable.

E19. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F933..1F937 glyphs

Ireland notes that the glyphs for 1F933 SELFIE, 1F934 PRINCE, 1F935 MAN IN TUXEDO, 1F936 MOTHER CHRISTMAS, and 1F937 SHRUG are incorrectly shown in the PDAM. The following glyphs should be used:

Accepted

The rendering issue with the range U+1F933..1F937 was a production error.

.

E20. Page 123, Row 1F90: Supplemental Symbols and Pictographs, hands design

Ireland recommends that the glyphs for 1F938 PERSON DOING CARTWHEEL, 1F939 JUGGLING, 1F93A FENCER, 1F93B MODERN PENTATHLON, 1F93C WRESTLERS, 1F93D WATER POLO, 1F93E HANDBALL, 1F9D8 PERSON IN LOTUS POSITION, 1F9DA FAIRY, 1F9DC MERPERSON, and 1F9DE GENIE should not have their hands floating from their arms, for consistency amongst the black and white isotype glyphs in the standard. The following glyphs have been cleaned up to conform to the design of related glyphs in the standard:

Accepted in principle

Original glyphs shown below:

1F938		PERSON DOING CARTWHEEL
1F939		JUGGLING
1F93A		FENCER
1F93B		MODERN PENTATHALON
1F93C		WRESTLERS
1F93D		WATER POLO
1F93E		HANDBALL
1F9D8		PERSON IN LOTUS POSITION
1F9DA		FAIRY
1F9DC		MERPERSON
1F9DE		GENIE

The newly proposed glyphs are accepted except for 1F93B MODERN PENTATHLON which always has the horse going from left to right. If the proposed glyph for 1F93B was reversed it would be acceptable.

E21. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F95C PEANUTS

Ireland recommends that the glyph for the existing character 1F95C PEANUTS should have two nuts in it, as the name is plural, and to help distinguish the glyph from that of 1F954 POTATO (especially in small sizes in coloured fonts). Anecdotally we have seen this character used on Twitter with a distinctly plural meaning.

Accepted

E22. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F965 COCONUTS

Ireland recommends that the glyph for 1F965 COCONUT should be more recognizable.
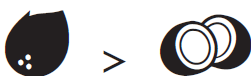
Accepted

E23. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F96B CANNED FOOD

Ireland recommends that the glyph for 1F96B [CANNED FOOD] be less specific as to its contents. See comment T8 above.

 >
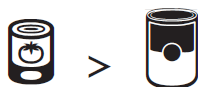
Not accepted

In T8. Ireland was requesting a name change for 1F96B to TIN CAN which was not accepted. The proposed glyph looks in fact too much like a well-known soup brand immortalized by Andy Warhol.

E24. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F985 EAGLE, 1F986 DUCK, 1F987 BAT

Ireland recommends that the glyphs for the existing characters 1F985 EAGLE, 1F985 DUCK, and 1F985 BAT should follow the majority of vendor glyphs, which are of realistic animals. Here, the first glyph is to be a bald eagle; the second should not look like a rubber toy, and the last should not look like the emblem of a super-hero.

 ; >

Accepted in principle

The symbol for the Bat should be improved, something like *.*

E25. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F98E LIZARD

Ireland recommends that the glyph for the existing character 1F98E LIZARD be given as white, to conform to the practice for the other animal symbols in the code charts.

 >
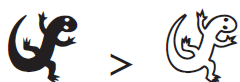
Accepted in principle
However, the glyph should be mirrored to face leftwards to be closer to most implementations.

E26. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F98F RHINOCEROS

Ireland recommends that the glyph for the existing character 1F98F RHINOCEROS should use the base glyph of a full rhinoceros' body, as two of the existing vendors' glyphs do. We note that GIRAFFE FACE and ZEBRA FACE are on the current ballot. If a RHINOCEROS FACE is required, one should be added. Vendors should make a reasonable distinction between full-body animals and faces, to ensure character identity. A review of current practice should be undertaken and additional characters be added if necessary.

 >

Accepted in principle
There are clearly inconsistencies in the way animals are represented or named. When the term 'face' is included in the animal name, most vendors show a frontal face, or in some cases a side view of the animal head. When the term 'face' is not included, the representation can either full body or partial. Although in that case, the head side view is typically chosen.

Given that, and again looking at http://unicode.org/emoji/charts/full-emoji-list.html, *the symbol for the rhinoceros should show the head side view, not the full body, and not the frontal view as currently done.*

E27. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F990 SHRIMP, 1F991 SQUID

Ireland recommends that the glyphs for the existing characters 1F990 SHRIMP and 1F991 SQUID should be rotated in line with current vendor practice.
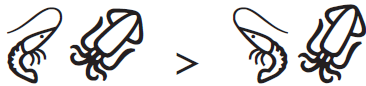
Accepted

E28. Page 123, Row 1F90: Supplemental Symbols and Pictographs, new people

Ireland recommends that the glyphs for the new people, namely the characters 1F9D1 ADULT, 1F9D2 CHILD, 1F9D3 OLDER ADULT, 1F9D4 BEARDED PERSON, 1F9D5 PERSON WITH HEADSCARF, 1F9D9 MAGE, 1F9DB VAMPIRE, and 1F9DD ELF have the same eyes and nose design as 1F468 MAN for consistency amongst the black and white glyphs in the standard. We recommend that the beard on 1F9D4 be made to stand out a little bit more by increasing visible skin area.

(showing all referenced characters in their original form in the following table)

1F468		MAN
1F9D1		ADULT
1F9D2		CHILD
1F9D3		OLDER ADULT
1F9D4		BEARDED PERSON
1F9D5		PERSON WITH HEADSCARF
1F9D9		MAGE
1F9DB		VAMPIRE
1F9DD		ELF

Accepted

E29. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F9D6 PERSON IN STEAMY ROOM

Ireland recommends that the glyph for 1F9D6 PERSON IN STEAMY ROOM use an isotype glyph. The object held by the person in the proposed glyph on the PDAM could either easily be either a sauna ladle or a cooking spoon.
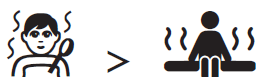
Accepted

E30. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F9DD ELF

Ireland was intending to recommend that the glyph for 1F9DD ELF, which was originally proposed as a Middle-earth-style elf, should be drawn with blond hair.
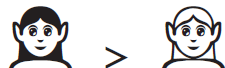
We recognize, however, that this character is different than the other mythical creatures proposed. While emoji representation is a matter for the UTC, it is not difficult to predict that users will wish to use this character alongside 1F596.

The Fitzpatrick emoji modifiers are likely to be required, since users of these symbols may wish to represent Vulcans with a range of appearance from Spock to Tuvok. For this reason we do not propose to change the hair colour of the reference glyph, believing it would be best to leave hair colour and species representation to vendors. Whether they will wish to take advantage of this opportunity will remain to be seen.

Noted

E31. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F9E0 BRAIN

Ireland recommends that the glyph for 1F9E0 should be a brain on its own rather than shown within a skull.
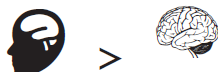
Accepted

E32. Page 123, Row 1F90: Supplemental Symbols and Pictographs, 1F9E1 ORANGE HEART

Ireland recommends that the glyph for 1F9E1 ORANGE HEART should use the normal hatching for orange. We note that the reference glyph in the PDAM is larger than the other hearts, and think the sizes should be harmonized.
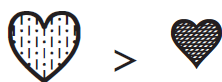
Accepted

Japan: Negative

Japan NB Changes its voting to approval if TE.1 and TE.2 are accepted

General comment:

GE1. Page 1 Editor's note, Repertoire addition

As noted in "Editor's note", some repertoires without the agreement by SC2 have been added by the project editor.

We know this comes from the decision by the project editor in order to meet the need for standardization in timely manner without waiting SC2 meeting once a year. However, it is inconsistent and unfair that some repertoires have been added with the agreement and some repertoires have been added without any discussion at SC2 meeting. As for small Kana added in PDAM without SC2 agreement, even the proposal to encode has not been submitted to SC2 and WG2 document registry.

However we understand that SC2 should have some solution to register urgently needed repertoire without waiting SC2 and WG2 face-to-face meeting once a year.

Proposed change by Japan
We request to discuss this issue at next SC2 plenary. The current proposal from Japan NB is

- Basically, only repertoire with the agreement by SC2 could be added in CD or PDAM.
- As for the repertoire urgently needed, we discuss by using a conferencing or a discussion list, after submitting a justification document to urgently needed and its encoding proposal.

Noted
See also comment T4 from Ireland.

As noted by Japan, meeting only once a year creates challenge. Through past WG2 Resolutions M58.24 (Helsinki 2011), M59.17, M60.17, M61.13, M62.14, Recommendations M63.14, M64.08, and M65.11, the editor has gained the latitude to add content in committee level draft (PDAM and CD) without waiting for a formal endorsement from SC2 and/or SC2/WG2. It is important to note that moving out of the committee level requires the establishment of a rough consensus as determined by the SC2 secretariat and the project Editor following a ballot. Such a consensus is required before issuing the next level of ballot (DAM or DIS).

Typically, additions were done in new amendments initiated after a WG2 meeting, not an existing amendment. Meeting 65 created a different opportunity because the current amendment 1 was going through another PDAM ballot (PDAM 1.2). Thus, it seemed unnecessary to wait for another amendment 2 (such as PDAM2) to insert such repertoires.

What is requested by Japan would remove that possibility except for so called 'urgently needed repertoire' and would slow down considerably any progress. Not helping is the fact that a vast minority of WG2 experts have no access to the official WG2 or even less SC2 ISO Global Directory due to their internal National Body policies, therefore they cannot contribute effectively to the progress beyond ballot comments.

To take the specific case of Small Kana, it should be noted that two of these characters (KATAKANA LETTER SMALL KO and KATAKANA LETTER SMALL KO) have been approved by Unicode since 2011 and have languished since. At the same time, the editor could have done a better job at documenting the additions by using the WG2 registry, instead of just relying on the Unicode registry. As noted in the disposition of Irish comment T4, the repertoire additions since WG2 meeting #65 have been added to the WG2 registry.

As for using teleconferencing and discussion list for urgently needed repertoire, the best approach may be for interested parties to participate remotely or in person to the UTC meetings taking place every 3 months where all these repertoire additions are discussed.

In addition, the editor can commit to present all these additions in WG2 discussion lists prior to their addition into an amendment. It is clear that such a move would have avoided some of the issues perceived in this PDAM 1.2 ballot. For example, this disposition explicitly states all the additions planned for PDAM 1.3.

Technical comments:

TE.1. Page 77 Historic Hiragana 1B001

The sub-header name "Historic Hiragana" is not appropriate for U+1B001 HENTAIGANA LETTER E-1, because U+1B001 is one of HENTAIGANA script as represented by its character name alias.

Proposed change by Japan
The sub-header name should be changed to "Hentaigana and Historic Hiragana.".

Accepted in principle
*In Unicode 10.0 beta chart, the corresponding page at
http://www.unicode.org/charts/PDF/Unicode-10.0/U100-1B000.pdf uses the terms 'Historic Hiragana and Hentaigana' which for all practical purposes is identical.*

TE.2. Page 82 Kana Extended-A 1B127-1B12F

Japan NB disagrees to encode these 9 small Kana characters at this moment with the following reason.

- As shown in the contribution that will be submitted by the Japanese expert shortly after, we found the evidence of usage for more small Kana characters. And furthermore more small Kana characters would be found through the further investigation.
- We have no information about the selection criteria of these 9 small Kana characters. Even the proposal to encode these small Kana character is not found in SC2 and WG2 document registry.
- The encoding mechanism should be considered depending on the whole repertoire of small Kana characters. For example, it may be appropriate to encode small Kana characters corresponding to all Kana characters except the ones already encoded, or to encode some kind of modifier to be associated with any Kana characters.

Proposed change by Japan
Delete 9 small Kana characters on this PDAM. Recommend to discuss small Kana characters at the next WG2 meeting.

Accepted in principle
*Two of these characters (SMALL KO) were first documented in the WG2 registry in 2011 (N3987) and have been approved by Unicode since 2011. The other characters were discussed in
http://www.unicode.org/L2/L2016/16334-kana-small.pdf ,
http://www.unicode.org/L2/L2016/16354-kana-small-ltr.pdf , and
http://www.unicode.org/L2/L2016/16358r-small-kana-fdbk.pdf . The third document presents evidence for seven of these proposed characters and is now documented as in the WG2 registry as N4803.*

Ken Lunde has suggested the following answer to the same request from Japan formulated in L2/17-091:

> If we were to accept Japan's suggestion in L2/17-091 to completely map out the missing small kana and to reserve a block for them, then encoding them as proposals come in and are accepted, the number of necessary code points appears to be 56. 36 of these correspond to small hiragana (small versions of きくこ*さしすせそたちてとなにぬねのはひふへほまみむめもらりるれろゐ*ゑ*を*ん -- asterisks follow those that are currently in the pipeline), and the remaining 20 correspond to small katakana (small versions of キコ*サセソタチテナニネノマミメモヰ*エ*ヲ*ン* -- asterisks follow those that are currently in the pipeline). Their character names would be as follows (the nine that are currently in the pipeline are marked with their tentative current code points):

HIRAGANA LETTER SMALL KI	HIRAGANA LETTER SMALL SA
HIRAGANA LETTER SMALL KU	HIRAGANA LETTER SMALL SI
HIRAGANA LETTER SMALL KO (U+1B127)	HIRAGANA LETTER SMALL SU

HIRAGANA LETTER SMALL SE | HIRAGANA LETTER SMALL RO
HIRAGANA LETTER SMALL SO | HIRAGANA LETTER SMALL WI (U+1B128)
HIRAGANA LETTER SMALL TA | HIRAGANA LETTER SMALL WE (U+1B129)
HIRAGANA LETTER SMALL TI | HIRAGANA LETTER SMALL WO (U+1B12A)
HIRAGANA LETTER SMALL TE | HIRAGANA LETTER SMALL N
HIRAGANA LETTER SMALL TO | KATAKANA LETTER SMALL KI
HIRAGANA LETTER SMALL NA | KATAKANA LETTER SMALL KO (U+ 1B12B)
HIRAGANA LETTER SMALL NI | KATAKANA LETTER SMALL SA
HIRAGANA LETTER SMALL NU | KATAKANA LETTER SMALL SE
HIRAGANA LETTER SMALL NE | KATAKANA LETTER SMALL SO
HIRAGANA LETTER SMALL NO | KATAKANA LETTER SMALL TA
HIRAGANA LETTER SMALL HA | KATAKANA LETTER SMALL TI
HIRAGANA LETTER SMALL HI | KATAKANA LETTER SMALL TE
HIRAGANA LETTER SMALL HU | KATAKANA LETTER SMALL NA
HIRAGANA LETTER SMALL HE | KATAKANA LETTER SMALL NI
HIRAGANA LETTER SMALL HO | KATAKANA LETTER SMALL NE
HIRAGANA LETTER SMALL MA | KATAKANA LETTER SMALL NO
HIRAGANA LETTER SMALL MI | KATAKANA LETTER SMALL MA
HIRAGANA LETTER SMALL MU | KATAKANA LETTER SMALL MI
HIRAGANA LETTER SMALL ME | KATAKANA LETTER SMALL ME
HIRAGANA LETTER SMALL MO | KATAKANA LETTER SMALL MO
HIRAGANA LETTER SMALL RA | KATAKANA LETTER SMALL WI (U+ 1B12C)
HIRAGANA LETTER SMALL RI | KATAKANA LETTER SMALL WE (U+ 1B12D)
HIRAGANA LETTER SMALL RU | KATAKANA LETTER SMALL WO (U+ 1B12E)
HIRAGANA LETTER SMALL RE | KATAKANA LETTER SMALL N (U+ 1B12F)

Based on this, it makes sense to remove these characters from PDAM1 and to propose a new block in a future amendment with 56 positions as stated above with the 9 small kana inserted in the sequence suggested above.

Mongolia: Positive with comments

(some comments mentioned as general or editorial were reclassified as technical)

Technical comments:

T1. Page 57-59 Zanabazar Square
Zanabazar's square initial double lined head mark, closing double lined head mark and Zanabazar square sub joiner should include in the encode table and chart.

Proposed change by Mongolia
No change.

Noted
This appears to be an endorsement of the encoding of these characters in the standard.

T2. Page 57 Zanabazar Square
The character names, transliterations and encoding order of particular Square scripts (11A2D, 11A2F, page 57) are wrong.

Proposed change by Mongolia
Therefore please consider the correction of character names, transliterations and encoding order of particular Square scripts in next time. Anshuman Pandey /author of the project/should carefully study Mongolian texts and cooperate with Mongolian researchers.

Noted
The same comment was made as T6 by Mongolia for Amendment 1 and disposed in document WG2 N4767 as following (adhoc meeting refers to the meeting in Tokyo, 15-16 Oct 2015):
> *The report for that adhoc meeting L2/15-249R [WG2 N4699] indicated that:*
> - *The ad hoc did not have consensus to recommend a change of name for the Zanabazar Square script.*
> - *The ad hoc did not have consensus to recommend any changes related to characters ☐ (11A20) ⴄ (11A2E) and ⴆ (11A2D); there were differences of opinion on the preferred names for these characters and on whether an additional character should be added in this set.*

> *It is not that the suggested changes by Mongolia were not considered; there just did not reach consensus. Mongolia needs to make a case for any changes in the current block. Note that any changes in names and allocation of 11A2D and 11A2F would need to be made in the context of the DIS ballot of the 5th edition of 10646 where these characters are included, not in this amendment.*

The 5th edition is now frozen and should be published very soon.

T3. Page 60-61 Soyombo
Soyombo pluta mark should be included in the encoding table.

Proposed change by Mongolia
No change.

Noted
This appears to be an endorsement of the encoding of this character in the standard.

T4. Page 60-61 Soyombo
Vertical writing order of Soyombo script for writing transcript of Sanskrit tantras are used in the manuscripts should be studied with awareness. Therefore, the independent encoding of subjoined forms of each consonant letter required in the encoding table. Without those forms, the stack writing practice/in vertical writing order of Soyombo script/ under one head will be failed.

<u>Proposed change by Mongolia</u>

To add place for the **subjoined forms of each consonant letter of Soyombo script**.

Otherwise, we afraid that the result of the encoding project of Soyombo script will bring lack of practice. Pleace see attached form of Soyombo writing.

<u>Noted</u>

This appears to a near identical comment to Amendment 1 which was disposed in N4767 as following (mentioned in error as T6, should have been T7). The disposition is the same:

T6. Page 41 Soyombo, additional changes

The author of this project found no resolution how to combine a vowel syllable for vertical writing of Soyombo scripts. This issue should be studied carefully in the encoding project of Soyombo script. Another comment we have is cases of vertical writing order of Soyombo script for writing transcript of Sanskrit tantras are used in the manuscripts should be studied with awareness. Otherwise, we afraid that the result of the encoding project of Soyombo script will bring lack of practice

<u>Noted</u>

These observations should be moved to a new separate contribution. If new characters need to be encoded, they need to be submitted in an encoding proposal following the usual practice for this working group.

UK: Negative

Technical/Editorial comment (T or E prefix)

E1. Title
Khitan Small script should be included in the title of this amendment.

Proposed change by UK:
Change title to "AMENDMENT 1: Dogra, Gunjala Gondi, Khitan Small, Makasar, Medefaidrin, Indic Siyaq Numbers, and other characters".

Accepted
Note however that the change may not propagate to all title locations because once a project is created, its name is frozen in some occurrences.

T2. Sub-clause 24.2, Source Reference file for Tangut ideographs
Clause 24 "Source references for Tangut Ideographs" has not been updated for the new source references used for 187ED..187F1.

Proposed change by UK:
In 24.1 add the following two Tangut sources:

L2012   Lǐ Fànwén 2012 (Tangut-Chinese Dictionary, 3rd edition)

WG2N4724   WG2 N4724 (Proposal to encode five additional Tangut ideographs)

In 24.2 Table 6 add these additional kTGT_MergedSrc formats: (L2012-dddd) and (WG2N4724-d).

Accepted

E3. TangutSrc.txt
Date is given as "Wed Oct 21 11:25:48 2015" which has not been changed since the previous version of the file. The date should be updated whenever the file is modified.

Proposed change by UK:
Change date to the date at which the file was last modified.

Accepted

E4. TangutSrc.txt
There is no line break after the final entry.

Proposed change by UK:
Add a line break after the final entry in the file.

Accepted

T5. Sub-clause 33, Khitan Small Script
The two format controls 18CFE (KHITAN SMALL SCRIPT HORIZONTAL JOINER) and 18CFF (KHITAN SMALL SCRIPT VERTICAL JOINER) are not the same two format controls that were accepted at the Meeting on Khitan Scripts on 20-22 August 2016 at Yinchuan, China.

The participants at that meeting agreed to encode KHITAN SMALL SCRIPT SINGLE CLUSTER INITIAL and KHITAN SMALL SCRIPT DOUBLE CLUSTER INITIAL, with the behaviour described in Section 4 of WG2 N4725R (see N4736 p. 1 and N4737 p. 1). At WG2 M65 in San José these two format controls were replaced by two format controls with a completely different behaviour.

As discussed in WG2 N4775, the clustering model agreed to at the Yinchuan meeting requires a single format character at the head of each cluster, whereas the cluster model agreed to at M65 requires n-1 format controls for each cluster of n characters, with a joiner character placed between each character in a cluster.

As explained in WG2 N4775, Khitan clusters have two fixed formats, one starting with a single centred character and one starting with a pair of adjacent characters, and the relative position of each character in the cluster is determined by the position of its preceding character. Therefore, only a single format character is required to indicate what the position of the first character in the cluster is, and any further positional joiner characters placed between each successive character in the cluster are entirely redundant.

Not only does the clustering model agreed to at M65 have a very high degree of redundancy, but as about 90% of typical Khitan Small Script texts consist of clusters rather than individual characters, an average Khitan Small Script text coded using this model would result in about 40% of coded characters being format controls. Having such a high proportion of format controls severely impedes the ability of users to easily enter Khitan text. Moreover, accidentally deleting or misplacing any of the format controls in a text would cause the clusters to render incorrectly, and as the format characters would be invisible between Khitan characters it is very likely that this would happen when editing texts, i.e. copying, moving, and deleting entire clusters or parts of clusters (e.g. grammatical suffixes which commonly occur as part of a cluster), and it would be very hard for users to diagnose and repair such damage.

In contrast, the clustering model agreed to at the Yinchuan meeting would not impose such a great burden on the user, and as the format controls should be rendered visibly if not placed at the head of a sequence of at least two Khitan characters, there would be far less scope for error and confusion.

Given that the horizontal and vertical joiner characters: a) are a technically inefficient and inferior mechanism for clustering, and b) impose an unacceptable burden on users, and c) have not been endorsed by the user community; we strongly believe that they should be removed from the amendment pending further study and agreement from the user community.

The removal of these two format characters should not affect the encoding of the rest of the Khitan Small Script repertoire, as the set of characters will still be usable without clustering support at the encoding level.
Proposed change by UK:
Remove 18CFE and 18CFF.

Accepted
See also comment T2 from China and T1 from Ireland. It is now clear that the solution adopted at the meeting M65 is not consensual and therefore the two control characters should be removed.

E6. Sub-clause 33, Kana Extended-A
1B127..1B12F are headed "Historic Kana", which is incorrect as they are not historic letters, but are used in modern Japanese for phonetic notation.
Proposed change by UK:
Change heading for 1B127..1B12F to "Phonetic extensions"..

Accepted in principle
Note that as disposition of comment TE.2 from Japan, these characters are removed from this amendment.

T7. Sub-clause 33, Enclosed Ideographic Supplement, Xiangqi game symbol
The 30 circled and negative circled CJK Unified Ideographs at 1F270..1F28D are intended for use as Xiangqi game symbols. However, this is a glyph encoding, with separate characters for each traditional, simplified, and variant ideograph that has been attested as a Xiangqi game symbol. This approach seems to be largely intended to facilitate the transcription of historical Xiangqi game records such as those shown in N4748 figs. 9–13, but is not appropriate for users who want to interchange Xiangqi game data or to discuss particular Xiangqi game pieces.

If the aim is only to allow the transcription of historical Xiangqi game records which show game pieces as circled or negative circled ideographs then there is no necessity to encode any circled or negative circled ideograph characters at all, as a more flexible and open-ended approach would be to represent such game pieces as sequences of the appropriate CJK Unified Ideograph and either U+20DD COMBINING ENCLOSING CIRCLE or an as yet unencoded COMBINING ENCLOSING NEGATIVE CIRCLE.

In fact, as is the case with Mahjong tiles, Domino tiles, and Playing cards, the main expected use case is for representing and interchanging game data using Unicode characters, or for discussing individual game pieces or game positions. For these purposes it is appropriate to encode a set of logical Xiangqi game pieces, with one single Unicode character for each type of piece (General, Mandarin, Elephant, Horse, Chariot, Cannon, and Soldier) for each colour, as proposed in N4748. Having multiple different Unicode characters for a single logical piece would hinder the interchange and processing of Xiangqi data, and would make it difficult to search for particular pieces or sequences of game moves in an editor or on the internet.

Defining Xiangqi game pieces as circled ideographs is also very problematic, as Xiangqi game symbols are not always represented as circled ideographs. There is a long tradition of representing Xiangqi game pieces either as ideographs or as pictures (see N4748 figs. 16–17), and particularly in Western usage pictorial symbols are often used instead of ideographs. Moreover, if vendors see fit to emojify Xiangqi game symbols they may represent them as three-dimensional coloured pieces, and possibly as pictures (cannon, etc.) rather than as ideographs, which would be incompatible with characters that are defined as circled ideographs.

The corresponding Korean game of Janggi uses cursive forms of ideographs, but in an octagon, and these cannot reasonably be unified with the circled ideographs under ballot, so it is quite possible that in the future there will be a request to encoded a set of ideographs in an octagonal frame as Janggi game pieces. It would be far better to encode a closed set of logical game pieces covering both Xiangqi and Janggi, and leave the glyph design to the font — simplified ideographs, traditional ideographs, Janggi style ideographs in an octagon, or pictures depending on the target users of the font..

Proposed change by UK:
Remove the 30 circled and negative circled characters at 1F270..1F28D, and replace them with the set of 14 Xiangqi game pieces proposed in N4748. We suggest putting these characters in a new block named Xiangqi at 1FA00..1FA0F:

1FA00 XIANGQI RED GENERAL
1FA01 XIANGQI RED MANDARIN
1FA02 XIANGQI RED ELEPHANT
1FA03 XIANGQI RED HORSE
1FA04 XIANGQI RED CHARIOT
1FA05 XIANGQI RED CANNON
1FA06 XIANGQI RED SOLDIER
1FA07 XIANGQI BLACK GENERAL
1FA08 XIANGQI BLACK MANDARIN
1FA09 XIANGQI BLACK ELEPHANT
1FA0A XIANGQI BLACK HORSE
1FA0B XIANGQI BLACK CHARIOT
1FA0C XIANGQI BLACK CANNON
1FA0D XIANGQI BLACK SOLDIER

Accepted in principle
See also comment T3 from China and T2 from Ireland.
See discussion details after comment T2 from Ireland.
They are added in a new block called 'Chess Symbols'.

T8. Sub-clause 33, Miscellaneous Symbols and Pictographs, 1F3B1 BILLIARDS
The glyph for 1F3B1 BILLIARDS has been changed from a picture of a cue and frame of balls to a picture of an "eight ball" to reflect the emoji glyph commonly used by vendors. This is entirely inappropriate as an "eight ball" is only used in one variety of the family of billiard games, i.e. pool or pocket billiards, and is not representative of other games such as billiards and snooker, and so cannot be used to represent the game of snooker, which is by far the most important member of the billiards family (with various international tournaments and the World Snooker Championship).

Moreover, the "eight ball" is not commonly used to represent a game of billiards, but is mostly used to represent the fortune-telling device known as the "Magic 8-Ball" (see https://en.wikipedia.org/wiki/Magic_8-Ball).

The BILLIARDS character was originally intended to represent the billiards family of games, but if the glyph is changed to an "eight ball" the character will no longer be appropriate for use in sporting contexts in the same way that other sports emoji are used.

The "eight ball" is clearly a very different character to the BILLIARDS character, and it is wholly wrong to unify the two characters, and even worse to hijack the BILLIARDS character to mean "magic 8-ball".

The solution to this problem is to keep the original glyph for 1F3B1, and encode a new character with the 8-ball glyph and character name EIGHT BALL. This will enable fans of billiards, snooker and pool to continue to promote their sport on social media with an appropriately-designed emoji, and for users who wish to evoke the Magic 8-Ball on social media to do so without misappropriating the BILLIARDS emoji.

Proposed change by UK:
1. Revert the glyph change for 1F3B1.
2. Add a new character named EIGHT BALL to this amendment at an appropriate code point, with the 8-ball glyph.

Not accepted
See also comment T5 from Ireland and its disposition.

E9. Sub-clause 33, Miscellaneous Symbols and Pictographs, 1F4A9 PILE OF POO
The glyph for 1F4A9 PILE OF POO has been changed from a steaming pile of poo to show eyes and a friendly smile, and a note "may be depicted with a friendly face" has been added. As the glyph now already shows a friendly face that note is redundant, and it would be better to indicate that the friendly face is optional, and it may be depicted as a steaming pile of poo, as originally designed.

Proposed change by UK:
Change note for 1F4A9 to "may be depicted as a steaming pile of poo without a friendly face".

Partially accepted
See also comment E9 from Ireland.

The annotation is not new to this amendment, but will be amended to "may be depicted with or without a friendly face".

E10. Sub-clause 33, Transport and Map Symbols, 1F6F7 SLED
This is more commonly known as a "sledge" in British English, and may also be referred to as a "toboggan". It is best to add aliases for these terms.

Proposed change by UK:
Add following aliases for 1F6F7 SLED:

= sledge, toboggan.

Accepted
See also comment T6 from Ireland.

E11. Sub-clause 33, Geometric Shapes Extended, 1F7D5..1F7D8 heading
1F7D5..1F7D8 have the heading "Go stones markers", but the plural "stones" is not right.

Proposed change by UK:
Change heading for 1F7D5..1F7D8 to "Go stone markers".

Accepted

T12. Sub-clause 33, Supplemental Symbols and Pictographs, 1F996 T-REX

The name "T-REX" for 1F996 is not appropriate as it does not accord to conventions for names of species. The name should be given in full as TYRANNOSAURUS REX.

Proposed change by UK:
Change name of 1F996 to TYRANNOSAURUS REX.

Not accepted
See also comment T9 from Ireland and its disposition.

T13. Sub-clause 33, Supplemental Symbols and Pictographs, animal symbols: GIRAFFE FACE, ZEBRA FACE, and HEDGEHOG

The addition of emoji characters representing animals to the standard is unsystematic and seems to depend upon the whimsy of the Unicode Emoji Subcommittee.

While Giraffe Face and Zebra Face complete the set of iconic and distinctive African large mammals, Hedgehog does not complete a set but is only one of several iconic and distinctive European small mammals that are not currently encoded as emoji. Badger and Squirrel are equally iconic and distinctive European small mammals. If Hedgehog is deemed suitable for encoding, then Badger and Squirrel should also be encoded as emoji in order to complete the set of icon, distinctive and well-loved small European mammals.

A 2013 BBC poll to find the national species for Britain (http://www.discoverwildlife.com/british-wildlife/britains-national-species-revealed) chose Hedgehog in first place, Badger in second place, Oak tree in third place, and Red Squirrel in third place. This shows the importance of Hedgehog, Badger and Squirrel to the British public, and we request that emoji characters for all three of these animals should be encoded.

Proposed change by UK:
Add the following characters to Supplemental Symbols and Pictographs:

BADGER

SQUIRREL.

Not accepted
Additions need to be also presented in separate contributions.

T14. Sub-clause 33, Supplemental Symbols and Pictographs, Dinosaurs

T-REX and SAUROPOD.

Dinosaurs are by far the most well-known and well-loved group of extinct animals, and encoding dinosaur emoji will fill a welcome gap in the current emoji coverage. However, the two proposed characters, T-Rex and SAUROPOD, only partially fill this gap, and users will surely not be satisfied with emoji for just two of the many iconic and distinctive types of dinosaur. If it is acceptable to have 45 emoji for mammals (as of Unicode 9.0), then surely it is appropriate to encode emoji characters for all the most well-known and distinctive groups of dinosaurs and other prehistoric animals (as suggested in L2/16-103). At a minimum, we suggest that Stegosaurus, Triceratops and Velociraptor are also encoded as these three are at least as famous as Sauropod and T. rex.

If we are going to add emoji characters for dinosaurs, then we should consider adding emoji characters for other notable prehistoric and extinct animals. We therefore suggest adding characters for DODO and MAMMOTH to this amendment, as these are two notable and distinctive extinct animals. Moreover, both have strong metaphorical connotations (Dodo invokes stupidity and extinctness, whereas Mammoth invokes hugeness of size or scale), and the selection factors for emoji (http://unicode.org/emoji/selection.html) gives weight to emoji candidates that have "notable metaphorical references or symbolism".

Proposed change by UK:
Add the following characters to Supplemental Symbols and Pictographs:

STEGOSAURUS

TRICERATOPS

VELOCIRAPTOR

MAMMOTH

DODO

Not accepted

See also comment T9 from Ireland.

Additions need to be also proposed in a separate document. The additions proposed in comment T9 from Ireland are a much larger superset with slightly different names for the 'dinosaurs': CERATOPSIAN instead of TRICERATOPS, DROMAESAURID instead of VELOCIRAPTOR, and STEGOSAURIAN instead of STEGOSAURUS. The names from comment T9 are more generic, but the names from the UK comment are more common.

E15. Sub-clause 33, Supplemental Symbols and Pictographs, Fantasy beings

MAGE, FAIRY, VAMPIRE, MERPERSON, ELF, GENIE, ZOMBIE are listed under the heading "Portrait and role symbols", but they should be placed under a separate heading, such as "Fantasy beings".

Proposed change by UK:
Add a heading of "Fantasy beings" (or other appropriate heading) for MAGE, FAIRY, VAMPIRE, MERPERSON, ELF, GENIE, and ZOMBIE.

Accepted

T16. Sub-clause 33, Supplemental Symbols and Pictographs, Fantasy beings addition

MAGE, FAIRY, VAMPIRE, MERPERSON, ELF, GENIE, ZOMBIE.

This is an arbitrary list of fantasy beings, and omits some very well-known types, such as GIANT, DWARF, GOBLIN and TROLL. In particular, a TROLL or TROLL FACE emoji is frequently requested, and has an extremely high expected usage in reference to internet trolls, and so at a minimum we suggest adding a TROLL character to the current amendment.

Proposed change by UK:
Add the following character to Supplemental Symbols and Pictographs:

TROLL or TROLL FACE.

Not accepted

Additions need to be also proposed in a separate document.

USA: Positive with comments

Technical comments:

TE.1. Enclosed Alphanumeric Supplement

The character U+1F12F is customarily called COPYLEFT SYMBOL. The term "COPYLEFT" is in wide use, including in multiple languages. It is found in Webster's II New College Dictionary (2005). There is no need to use an obscure name that will not be widely recognized.

<u>Proposed change by US:</u>

We strongly support the current name for U+1F12F COPYLEFT SYMBOL

<u>Noted</u>