# ISO/IEC JTC1/SC2/WG2 <br> Coded Character Set <br> Secretariat: Japan (JISC) 

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Comments were received from China, Germany, Ireland, Japan, UK, and USA. The following document is the disposition of those comments. The disposition is organized per country.

Note - The full content of the ballot comments (minus some figures and charts) have 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 these dispositions, China, Ireland, and Japan have changed their vote to Yes, meaning that all negative votes have been accommodated.

## China, Negative

China is against to ISO/IEC JTC1/SC2N3943 FPDAM4 of ISO/IEC 10646: 2003.
(The following Chinese comments are extracted from WG2 N3313 which provided the detailed comments and are all related to Lanna.)

After carefully reading and discussing the Lanna encoding scheme in FPDAM4 and related documents, the Chinese experts in Yunnan province (where there lives over 400,00 Dai people) believe that the current scheme is uncompleted and is with errors or mistakes.

## Technical comments

## T1. Script name

The people which living in northern part of Thailand, Myanmar, Laos and Dai nation districts in China do not use this script as LANNA. The speakers of Northern Thai name this language "GAM MENG", means "local language", and name the script "TO MENG", means "local script", or "TO THAM", means "script of scripture". In China, people address this script "TO TAl", "TO TAILUE", "TO THAM", "script of scripture". Therefore, we regard that we should respect the people's will, using the name that people have identified.

## Withdrawn

The Chinese Member Body, considering various technical issues concerning the Lanna script, including the name of the script, character names, order of the encoding, possible character additions, and character removals asked to postpone the progression of the Lanna proposal. Consequently, the Lanna script proposal has been moved to the next amendment (5).

Some of the issues raised by China, including name errors for the characters between 1A65-1A7B, resulted from a FPDAM4 production error introduced when the Vowel Sign AM and TALL AM were removed whilst the remaining glyphs were not moved accordingly. See the chart in WG2 N3207R page 16 for correct representation.

The next balloted proposal will fix the charts and incorporate further updates as recommended by the ad-hoc Lanna committee during meeting \#51 and adopted by relevant resolutions in the same meeting.

## T2. Character naming

Every alphabet has its own name in China's OLD TAILUE script project, called "TSUE TO". There are many homophone alphabets for OLD TAILUE script. Besides, different alphabets are used in different situations, and conjoin with different alphabets to express different meanings. On that account, alphabet names are for discriminating different alphabet, and making things convenient for every alphabet's use.

Most of consonant alphabets' names are their pronunciation spelled with two vowels "O" and " $A$ ", for instance, consonant $k$ alphabet' name is "TO KO KA" and $x$ called "TO XO XA " and so forth.

Except above alphabet name, alphabet has another name---"SING PHON", when alphabet name is used to be spelled, it is hardly to spell directly due to too many syllables. In order to make the spelling easy, every alphabet has simple "SING PHON". "SING PHON" can be equal to alphabet pronunciation, just take one syllable and spell it with vowel.

In FPDAM4 LANNA(OLD TAILUE), "SING PHON" is used for most of alphabets' names, but alphabets' names themselves are used for some cases:
1A5A LANNA SIGN MAI KANG LAI
1A5B LANNA SIGN KHUEN MAI KANG LAI
1A74 LANNA SIGN MAI KANG
1A7B LANNA SIGN MAI SAM
1AA7 LANNA SIGN MAI YAMOK
Character names in FPDAM4 are different from those in NEW TAILUE, even if the same alphabets. We believe that since "NEW TAI LUE" is already encoded in ISO/IEC 10646, character names should be conform to those encoded, especially the same characters or the same phoneme. Characters with different names in FPDAM4 and NEW TAILUE are shown below:

The same characters with different names are as below:

| New Tai Lue | Lanna |
| :--- | :--- |
| 1980 | 1A4E |
| 1983 | 1A21 |
| 1986 | 1A24 |
| 1987 | 1A26 |
| 1988 | 1A27 |
| 1989 | 1A28 |
| $198 B$ | 1A2A |
| 1990 | 1A56 |
| 1994 | 1A3A |
| 199E | 1A48 |

There are also many errors in the FPDAM4, especially the vowel alphabet names. Corrected vowel names are given below:
1A54 VOWEL SIGN AE
1A58 component part HONG
1A61 VOWEL SIGN VOWEL SHORTENER
1A65 VOWEL SIGN AM
1A66 VOWEL SIGN AM
1A67 VOWEL SIGN I
1 A68 VOWEL SIGN II
1 A69 VOWEL SIGN UE
1A6A VOWEL SIGN UUE
1A6B VOWELSIGNU
1A6C VOWEL SIGN UU
1A6D FINALNG
1A6E VOWEL SIGN OA BELOW
1A6F VOWEL SIGN OY
1A70 VOWEL SIGN E
1A71 VOWEL SIGN AE
1A72 VOWEL SIGN OO
1A73 VOWEL SIGN AI
1A75 VOWEL SIGN OA ABOVE
1 A76 VOWEL SIGN MAI KANG
1 A77 SIGN TONE-1
1A78 SIGN TONE-2

## Withdrawn

See disposition of comment T.1.

## T3. Ordering of characters

Characters 1A4E, 1A4F, 1A50, 1A51, 1A52, 1A53, 1A54, 1A55 are put after consonant alphabets in FPDAM4. Traditionally, these 8 glottal alphabets are put preceding all consonant alphabets, according to consonant's articulate segment attribution collate: glottal, velar, apical, labial. Thus, these 8 glottal should be ordered preceding all alphabets.

In FPDAM4, the same phoneme's characters are not arranged altogether. For instance, 6 phoneme " $S$ " characters 1A28, 1A29, 1A49, 1A4A, 1A4B, 1A5F are located at three positions respectively.

## Withdrawn

See disposition of comment T.1.

## T4. Characters should be deleted (1A28, 1A55, 1A5D, 1A72)

Some characters in FPDAM4 are the same characters in different handwriting, they are unlikely to appear in the same version, so it is unnecessary to be encoded. For example:

1 A28 v.s. 1A4B: 1A28 is the different writing form of 1 A4B, these two characters pronunciation and usage are totally the same, thus the encoding of 1A28 is not needed.
$1 A 71$ v.s. 12A7: the same as that of 1 A 28 v.s. 1 A 4 B , thus 1 A 72 is not needed.

1 A58 is a combining mark, it can combined with $k, t, K, T, U, h, s, z, a . \ln$ FPDAM, 1 A55 is a combination of 1A58 and 1A4E, so 1A55 is unnecessary to be encoded.

The combined character 1A5D has only one combining form in practice, i.e. 1A50. There is no need to encode 1A5D any more since 1A50 is encoded separately.

## Withdrawn

See disposition of comment T.1.
T5.a. Characters should be added (1A7C, 1A7D)
The frequently used super joined characters 1A7C and 1A7D, which is proposed in N3207, are not in FPDAM4. 1A7C and 1A7D See characters table N3207:
(Copy of page 15 of original WG2 N3207, superseded by page 14 of WG2 N3207R which shows these characters in position 1A7A and 1A7B)

## Withdrawn

See disposition of comment T.1.
T5.b. Characters should be added (1A5E, 1A60, 1A61)
There three characters need to be encoded: 1A5E, 1A60 1A61, see character table Old Tai Lue. The Characters are named "TO TAl", means "dead character", cannot be separated.
Our new character table:..

## Withdrawn

See disposition of comment T.1.
Based on the postponement of the Lanna proposal, China changes its vote to YES

## Germany, Positive

## Editorial comments

## E1. Capital Letter Sharp S glyph change

LATIN CAPITAL LETTER SHARP S We request a glyph change for U+1E9E in the code chart.


## Accepted

See also Irish comment E. 2

## Ireland, Negative

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

## T1. Page 20, Table 36 - Row 10: Myanmar.

With reference to ISO/IEC JTC1/SC2/WG2 N3277R "Proposal for encoding additional Myanmar characters for Shan in the UCS", Ireland requests the following changes to the Myanmar characters which are under ballot:
Move U+1077 MYANMAR LETTER SHAN CA to U+1078
Move U+1078 MYANMAR LETTER SHAN NYA to U+107A and change its glyph as in N3277R.
Move $U+1079$ MYANMAR LETTER SHAN NA to $U+107 C$
Move U+107A MYANMAR LETTER SHAN PHA to $U+107 D$
Move U+107B MYANMAR LETTER SHAN FA to U+107E
Move U+107C MYANMAR LETTER SHAN THA to $U+1080$
Move U+107D MYANMAR LETTER SHAN HA to U+1081
Move U+107E MYANMAR CONSONANT SIGN SHAN MEDIAL WA to U+1082
Move U+107F MYANMAR VOWEL SIGN SHAN AA to U+1083
Move U+1080 MYANMAR VOWEL SIGN SHAN E to U+1084
Move U+1081 MYANMAR VOWEL SIGN SHAN E ABOVE to U+1085
Move U+1082 MYANMAR VOWEL SIGN SHAN FINAL Y to U+1086
Move U+1083 MYANMAR SIGN SHAN TONE-2 to $U+1087$
Move U+1084 MYANMAR SIGN SHAN TONE-3 to U+1088
Move U+1085 MYANMAR SIGN SHAN COUNCIL TONE-4 to U+108C and rename it MYANMAR SIGN
SHAN COUNCIL TONE-3
Move U+1086 MYANMAR SIGN SHAN TONE-5 to U+1089
Move U+1087 MYANMAR SIGN SHAN TONE- 6 to $U+108 A$
Move U+1088 MYANMAR SIGN SHAN COUNCIL EMPHATIC TONE to U+108D
Move U+1089 MYANMAR LETTER RUMAI PALAUNG FA to U+108E
Move U+108A MYANMAR SIGN RUMAI PALAUNG TONE-5 to U+108F
Add MYANMAR LETTER SHAN GA to U+1077
Add MYANMAR LETTER SHAN ZA to U+1079
Add MYANMAR LETTER SHAN DA to U+107B
Add MYANMAR LETTER SHAN BA to U +107 F
Add MYANMAR SIGN SHAN COUNCIL TONE-2 to U+108B
Add MYANMAR SHAN DIGIT ZERO to U+1090
Add MYANMAR SHAN DIGIT ONE to U+1091
Add MYANMAR SHAN DIGIT TWO to $\mathrm{U}+1092$
Add MYANMAR SHAN DIGIT THREE to $\mathrm{U}+1093$
Add MYANMAR SHAN DIGIT FOUR to U+1094
Add MYANMAR SHAN DIGIT FIVE to U+1095
Add MYANMAR SHAN DIGIT SIX to U+1096
Add MYANMAR SHAN DIGIT SEVEN to U+1097
Add MYANMAR SHAN DIGIT EIGHT to U+1098

Add MYANMAR SHAN DIGIT NINE to U+1099
Add MYANMAR SYMBOL SHAN ONE to U $+109 E$
Add MYANMAR SYMBOL SHAN EXCLAMATION to U+109F.

## Accepted

The move and renaming are also requested by US comment T.4. The additions request is similar to what is proposed in document WG2 N3321 concerning the 17 Shan characters.

## T2. Page 42, Table 111-Row 2E: Supplemental Punctuation.

The arrangement of the code table is unsatisfactory. We request that the characters in columns 2E2, 2E3, and 2E4 be rearranged as shown in the chart on page 5 below. We also request a name change to three of the characters, whose names were proposed in N3193 as TILDE but which were proposed to be changed by the UTC to SWUNG DASH. The TILDE U+007F and the SWUNG DASH U+2053 are similar characters with similar functions. Both may be used in lexicography as a sign of repetition (Figs. 1, 2, 3 below). In Uralic linguistics (as noted in N2419), the SWUNG DASH is used to indicate relationship between the entities on either side of it. This relation can be etymological (Figs. 4, 5 below) or phonological/phonetic (Figs. 6, 7, 8 below).
(Examples following)
The SWUNG DASH tends to be half again as long as the TILDE, however, and sometimes has fancy curved serifs. In German lexicography, the SWUNG DASH is unknown, and indeed, as shown below, the term used in German is "Tilde". Figures 1 and 2 above show quite clearly that the German character is much smaller than the typical SWUNG DASH.

Compare also the following character and their glyphs, taken from Helvetica and Lucida Grande, two fonts which ship with the Mac OS:
(screen dumps)
The characters shown are U+007F TILDE, U+00E3 LATIN SMALL LETTER A WITH TILDE, U+02DC SMALL TILDE, and U+2053 SWUNG DASH. The three German lexicographical characters under ballot are short TILDEs, not long SWUNG DASHes. We have seen no evidence that SWUNG DASH (with or without dots or rings) is used in German lexicography. The names should be changed.

## Accepted

Note that glyph for 2E19 PALM BRANCH is different from the glyph submitted in the FPDAM4 chart and should be restored to its original shape.

## Editorial comments

## E1. Page 18, Table 30 - Row OD: Malayalam.

The character U+0D7C MALAYALAM LETTER
CHILLU RR is a form that represents both U+0D30 MALAYALAM LETTER RA and U+0D31
MALAYALAM LETTER RRA, and the character U+0D7D MALAYALAM LETTER CHILLU L is a form that represents both U+0D24 MALAYALAM LETTER TA and U+0D32 MALAYALAM LETTER LA (and sometimes U+0D26 MALAYALAM LETTER DA). The confusion has to do with the fact that in pre-pausal position the sounds fell together. We propose that the characters be annotated as follows:

```
MALAYALAM LETTER CILLU RR
    = historically derived from the full letter ra
    = often used for chillu r
MALAYALAM LETTER CILLU L
    = historically derived from the full letter ta
    = used for chillu t and sometimes for chillu d
```


## Accepted

These annotations will be added in the new format proposed by Amendment 5, but can be already captured in the Unicode name list format. They are amended as follows:

MALAYALAM LETTER CHILLU RR
= historically derived from the full letter ra
= used for chillu r
MALAYALAM LETTER CHILLU L
= historically derived from the full letter ta
Page 6 of 10
= used for chillu t and for chillu d

## E2. Page 24, Table 71 - Row 1E: Latin Extended Additional.

Ireland requests that the glyph of $\mathrm{U}+1$ E9E LATIN CAPITAL LETTER SHARP S be changed from the glyph on the left to the glyph on the right.

## $\beta \rightarrow \beta$

## Accepted

Similar to comment E. 1 from Germany.
E3. Row 03: Combining Diacritical Marks. Ireland has been made aware of a glyph error in the code charts for Unicode Version 5.0, the glyphs for U+0333 and U+0347 are incorrect. The following should be used:


Accepted
As a consequence of this disposition, Ireland changes its vote to Yes.

## Japan, Negative

Japan votes against SC2 N3943 (ISO/IEC 10646:2003 FPDAM4) with the following comments. Japan will change its vote if they are accepted accordingly.

## Technical comments

Regarding the addition of a new character CJK UNIFIED IDEOGRAPH-9FC3, the following two points are inappropriate and should be fixed:
(a) The G source reference "G_KX0809" looks strange. The number seems to represent a page of Kangxi dictionary, but the page shows both 93FC and 4039 (where the new character was considered to be unified before). It is not helpful for identification of the character to say "on page 0809". It should say something like "G_KX0809.020". If the detailed identification is not needed here, it should simply say "G_KX".
(b) Because the KP source for the new 9FC3 is moved from a compatibility ideograph FAD4, the file CJKC_SR.txt should be updated as well as CJKU_SR.txt, with the following instruction: Remove the KP1-5E2B source from 0FAD4 entry in CJKC_SR.txt

## Accepted in principle

a) For Amendment 4 it will just say G_KX, because Amendment 4 does not change the CJK source file format while Amendment 5 does, so given the current constraint there is no solution to fully convey resolution M50.20. However Amendment 5 should then contain the full reference for that new character. Note that currently Amendment 5 has a $G_{-} K X d d d d d$ format which does not allow the referencing shown above. The UK comment T. 2 addresses the same issue and propose to use G_KXddddd (note 6 'd' instead of 5). See Amendment 5 (PDAM5) disposition of comments for further details, especially the Japanese section.
b) The dereferencing of the KP1 source in CJKC_SR.txt will be done. Note that as a result, FAD4 has no source but still maps to 4039.

As a consequence of this disposition, Japan changes its vote to Yes.

## UK, Positive with comments

The UK votes to APPROVE the amendment, with the following technical comments.

## Technical comments

## T. 1 Page 2 : Source references for CJK Unified Ideographs

"Remove the T4-3946 source from 04039 entry;"
In addition to removing the T4-3946 source reference from 04039, it was agreed in Resolution M50.20 to add the T6-4B7A source reference (originally for 2F949) to 04039. Therefore the above line should be changed to something like "Replace the T4-3946 source in the 04039 entry with T6-4B7A;" and the entry for 04039 in CJKU_SR.txt changed to 04039;G3-5952;T6-4B7A;J4-7222;;;H-98E6;KP1-5E34;;

## Accepted

Also part of US comment T. 1

## T. 2 Page 3 : G Source Reference for 09FC3

The new G-source reference for 09FC3 is given as "G_KX0809" in the multi-column chart on page 3, but in CJKU_SR.txt it is given as "G_KX00809", and in Resolution M50.20 it is "G_KX0809.020". In fact, on the basis of the format of the G_KX source references in Amd. 5 (G_KXppppnn, where pppp is the page number and $n n$ is the position of the character on this page), we believe that the source reference should be "G_KX080902" (i.e. second character on page 809 of the Kangxi Dictionary). The multi-column chart on page 3 and the contents of CJKU_SR.txt should both be amended to specify "G_KX080902".

In addition, as this is a new source reference format, the description of "2nd field: Hanzi G sources" in Sub-clause 27.1 (Source references for CJK Unified Ideographs) should be amended to add "(G_KXdddddd)" after "(G_KX)".

## Accepted in principle

See disposition of Japanese comments

## USA: Positive with comments:

The US National Body is voting Yes with comments on the following SC2 ballot.

## Technical Comments:

## T. 1 Source reference for existing CJK characters (page 2)

The WG2 Resolution M50.20 (dis-unification of CJK Unified ideograph 4039) was not completely conveyed in amendment 4. In addition to the removal of T4-3946, it also needs to be replaced by T6-4B7A. Furthermore, the linked file CJKU_SR.txt has none of these changes for the U+04039 entry. Note that the U+09FC3 is correct, and that this also needs to be fixed in the proposed amendment 5 which contains the CJKU_SR.txt file.

## Accepted

## T. 2 New collection numbers (page 3)

In page 3 of the amendment, the collections number for the proposed scripts are incorrect because they re-use number already allocated to scripts added by amendment 3 . So the text after ' 112 ARABIC SUPPLEMENT' should read:

```
<<
In the list of collection numbers and names, after
139 REJANG
insert new entries as follows:
141 CYRILLIC EXTENDED-A
142 CYRILLIC EXTENDED-B
143 CHAM
```

140 LANNA

1A20-1AAF
2DE0-2DFF *
A640-A69F
AA00-AA5F

```
>>
```

These collection numbers are again used in the next page (ref Note 3 about keywords), and therefore they should be updated there as well.

## Accepted

## T. 3 Deprecation of existing collections (page 3)

The collection 271 COMBINING CHARACTERS B-2 is specified by direct referencing annex B. 2 that this amendment is removing. Therefore it needs to be deprecated with wording similar to other deprecated collections (such as collections 400 and 500). The text for the definition of collection 270 COMBINING CHARACTERS and 1900 SMP COMBINING CHARACTERS also needs to be changed to point to annex B instead of annex B.1.

## Accepted

## T. 4 Shan characters (Myanmar)

The US is in favor of the re-ordering of the Shan characters as shows in WG2 N3277 which are already in the amendment (these are shown in blue in the document) to make room for additional characters (shown in yellow) in the future. N3277 also proposes a glyph change for 107A (formerly 1078) and name change for 108C (formerly 1085) from 'MYANMAR SIGN SHAN COUNCIL TONE-4' to 'MYANMAR SIGN SHAN COUNCIL TONE-3' which are agreeable by the US. In addition, the glyph for 1040 MYANMAR DIGIT ZERO should reflect actual use. If the glyph is identical to the one used for 101D MYANMAR LETTER WA, there should not be an artificial difference as currently shown in N3277.

## Accepted

Similar comments to Irish T. 1 (minus the additions covered by document WG2 N3321 concerning the 17 Shan characters). The US is also asking for a glyph change for 1040 MYANMAR DIGIT ZERO.

## T. 5 Malayalam Chillu characters

The US NB does not support a name change for OD7C MALAYALAM LETTER CHILLU RR.

## Noted

## T. 6 Latin Epigraphic characters

The US NB does not support the addition of lower case forms to these characters.

## Noted

## T. 7 Mirrored characters

After further study the US NB is in favor of undoing the change made by Amendment 3 concerning the mirrored property of the following characters.

```
2018 LEFT SINGLE QUOTATION MARK
2019 RIGHT SINGLE QUOTATION MARK
201A SINGLE LOW-9 QUOTATION MARK
201B SINGLE HIGH-REVERSED-9 QUOTATION MARK
201C LEFT DOUBLE QUOTATION MARK
201D RIGHT DOUBLE QUOTATION MARK
201E DOUBLE LOW-9 QUOTATION MARK
201F DOUBLE HIGH-REVERSED-9 QUOTATION MARK
301D REVERSED DOUBLE PRIME QUOTATION MARK
301E DOUBLE PRIME QUOTATION MARK
301F LOW DOUBLE PRIME QUOTATION MARK
```

As a result these characters should not be mirrored in bidirectional context.

## Accepted

## Editorial Comments:

## E. 1 Definition of UNICODE 5.1 in A. 6.6 (page 4)

Correct the definition as follows:
308 The fixed collection UNICODE 5.1 is arranged by planes as follows.

## Accepted

## E. 2 Identification of UTF-16 (page 7)

In the updated paragraph replace 'sequence and note' with 'sequence'

## Accepted

## E. 3 Identification of UTF-8 (page 7)

In the updated paragraph replace 'by following' with 'by the following'

## Accepted

## E. 4 Identification ASN. 1 character abstract syntaxes (page 7)

Fix the Note 4 and following paragraph as follows:
NOTE 4 - As an example, the object identifier for the subset comprising the collections BASIC LATIN, LATIN-1 SUPPLEMENT, and MATHEMATICAL OPERATORS is:
\{iso standard 10646 (0) level-3 (3) collections (1) 12 39\}
ISO/IEC 8824 also specifies object descriptors corresponding to object identifier values. For an unrestricted repertoire, the corresponding object descriptor is as follows:

## Accepted

