Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

Doc Type: Working Group Document
Title: Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS
Source: German NB
Author: Karl Pentzlin
Status: National Body Contribution
Action: For consideration by JTC1/SC2/WG2 and UTC
Date: 2011-01-18
Replaces: L2/10-229R, L2/10-403

Major changes compared with L2/10-229R (submitted to the UTC 2010-08-04):
- The section 2.3 “Casing issues” is completely rewritten (based on the UTC feedback on Rev. 1).
- The formal case pairing reflected in the character properties was rearranged considering the naming and the shape of the characters, rather than the special use in any EPA variant.
- Variation sequences are no longer proposed.
- In consequence of this, some characters were renamed, and the whole set was rearranged.
- Three lower case forms from other sources were added, to accomplish the case pairing in the light of the valid stability policies (see the detailed explanations in the new section 2.3).
- It is proposed to group capital letters without lowercase counterparts together, employing the otherwise unusable area in the “Alphabetic Presentation Forms” block.
- One punctuation mark was added (an “inverted wiggly exclamation mark” was found in the sources).
- In section 2.5 “Special issues on single characters”, paragraphs were added for characters where questions were raised in the UTC feedback.
- The code positions of the punctuation marks were shifted to prevent overlapping with other proposals.
- Proposed annotations regarding the special casing in the major EPA variants were dropped.
- Sections on confusability issues and punctuation mark properties were added (3.6, 3.4).

Changes compared with L2/10-403 (submitted to the UTC 2010-10-24):
- As an important example of use, the "American Phonetic Dictionary of the English Language (Cincinnati 1855)" is referenced (see fig. 1855c–1855e).
- Lowercase letters which were not attested are dropped.
- Three characters were added for which additional evidence was found.
- The letter "ow" is no longer proposed to be unified with Pullum & Ladusaw’s “baby gamma”.
- The letters are rearranged according to their default collation (without referencing special EPA collations).

1. Introduction

The English Phonotypic Alphabet is one attempt to give the English language a phonetic spelling and an alphabet which accomplishes this in a way that every sound is represented by a single letter (the words "phonetic" and "sound" translate in today's language roughly as "phonemic" and "phoneme"). The English language has experienced many of such experiments; e.g. William Bullokar's "Booke at Large" (London 1580), or Unifon (1957, http://www.unifon.org ).

Some prominent examples, having their alphabets encoded in Unicode, are Deseret and Shavian.

The "English Phonotypic Alphabet", shortly referenced in the following as "EPA", stands out of these numerous experiments by these facts:
- It was propagated for more than 40 years, at least from 1847 to 1888.
- It was used in one of the earliest systematic phonetic dictionaries of the English language (see fig. 1855c–1855e).
- Besides that, there were several other thousands of pages of text published using it.
• It is closely related to the widely used Pitman Shorthand (being based on the same phonemes, as its inventor was also one of the main contributors and propagators of EPA).
• It played a role in the history of IPA.

The EPA is an extension of the Latin alphabet, including some special punctuation marks. It also assigns special meanings of existing Latin characters and punctuation marks when used in its domain.

It was developed by Isaac Pitman (who also developed the Pitman shorthand) and Alexander Ellis in England since 1844; the first stable version was published 1847. The term "phonotypic" was coined to distinguish the project from "phonographic" which then was used for the shorthand, referring to its design for lead types (while the other was designed for "graphics" done by hand). While the "English phonotypic alphabet" was called later "English phonetic alphabet" by its propagators, the original wording seems more appropriate now to name the alphabet, as the alphabet is not "phonetic" in the sense this term is used today.

Besides some hobbyist usage, texts published in the EPA are referenced and cited in discussions of details of English pronunciation of the 19th century (see especially fig. 1855c-1855e; see also fig. 1996b for a modern bibliographic reference using EPA in the naming of the cited work).

While EPA is (as outlined above) not phonetic in the modern sense, nevertheless the texts (which include self-referencing discussion texts) give hints for such pronunciation details.

Four main stages can be identified, by considerably different use of some single characters (however, the special punctuation marks devised for EPA were used unchanged throughout all EPA versions, see fig. 1848a, 1848e, 1848f).

1.1 EPA 1847

The 1847 version of EPA (shortly referenced as "EPA 1847" in the following; see fig. 1847a) contained 40 letters, distinguishing between long and short vowels, but does not address the sound differences for stressed and unstressed syllables (thus, e.g. it ignores the schwa as an English phoneme). In this, it matches the Deseret alphabet, which was developed at the same time and possibly was in fact modeled according to the EPA 1847 version.

Together with the publishing of EPA 1847, some additional letters and many diacritical combinations were devised to write other languages than English (see fig. 1848a, 1848c).

1.2 EPA 1855 (the "Cincinnati alphabet")

The EPA was adopted in the USA by a group of promoters mainly situated in Cincinnati, who in first line adopted the EPA 1847, but in 1855 published the "Cincinnati alphabet" (referenced as "EPA 1855" in the following, see fig. 1855a), which retained the consonants and diphthongs (except a glyph change for the "th" sound) but has revised the vocals, resulting in a total of 43 letters. This alphabet was in use at least until 1864 (see fig. 1864b).

1.3 EPA 1856

Independent of the USA use, in England from 1852 on, Isaac Pitman tried to "improve" the EPA (see fig. 1852a) and started to publish several short-lived new versions. From 1856 on, a reduced version was used ("EPA 1856"; see fig. 1856c, 1860a) which lacked the diphthongs and characters for the compound consonants [tʃ] and [dʒ].
1.4 EPA 1868

However, from 1868 on, a version ("EPA 1868"; see fig. 1868a, 1871a) was used which had restored most of the diphthongs and the consonant inventory from earlier versions (with the exception of replacing "c" by "k"). In 1888, the diphthongs are dropped again (see fig. 1888a).

2. Encoding considerations

2.1 Scope of this proposal

The proposal intends to include all EPA variants which were stable for at least some years, and which were used for publications beyond publishing the alphabet version itself. These are the aforementioned versions "EPA 1847", "EPA 1855", "EPA 1856", and "EPA 1868". Not included are therefore:

- any experimental versions. These include the alphabets published by Pitman/Ellis before the final 1847 versions, and the "improvements" published by Isaac Pitman from 1852 on before there was stability again (the EPA 1856).
- any characters found only in discussions of the character forms themselves (a lot of such are found in the "Plowshare", see fig. 1853a; see also fig. 1852c).
- any competing alphabets from the same era (one of the more remarkable ones is the Comstock alphabet, see fig. 1855f).

However, such characters can be in principle subject of later proposals. As an exception, such versions were used as source for lowercase counterparts of capital EPA characters, whenever elsewhere no lowercase form was found which fulfills the requirement for being a formal lowercase counterpart (see "casing issues" below; see fig. 1852b, 1852e, 1855f, and [using a completely different source] 2008a).

2.2 Character identity

During the history of EPA, some of the glyphs developed for the EPA as well as some standard Latin characters were used to denote different sounds/phonemes. On the other hand, the used glyphs show a high grade of stability during their use in any EPA versions (compare fig. 1847a, 1855a, 1860a, 1868a, 1871a, 1888a).

This includes the italic forms which were deliberately designed, not simply being skewed forms of the Roman ones (see e.g. fig. 1888b for the lowercase a, i, and o forms).

Therefore, the character identities were devised by their glyphic appearance, rather than by the sounds/phonemes they denote. This is in accordance with the general encoding principle of Latin letters (e.g. the W/w is U+0057/0077 whether it denotes [w] in English, [v] in German, or [u] in Welsh).

This is done consequentely. Therefore, the three different forms given for the lowercase th [θ] (the only phoneme addressed by different forms throughout the EPA history not resulting from an exchange of otherwise used glyphs) are encoded as different characters also.

To enable the exact reproduction of EPA texts by good typography, unifications with existing letters are selected with care. The principle is followed that EPA shall be displayable using multipurpose fonts, never needing to select a special EPA font only to get a recognizable high-quality representation of EPA texts.
2.3 Casing issues

A special phenomenon of EPA is that the combination of upper and lowercase letters is peculiar in EPA, and changes between the different EPA stages. Especially in EPA 1847, the standard letter A and the already encoded small latin alpha are involved in this:

- the uppercase A is paired with the lowercase Latin alpha;
- the lowercase a is paired with the uppercase “roundtop A” (included in this proposal).

Therefore, the “canonical” casing mechanism of Unicode, defining a fixed casing counterpart in the character properties, cannot be employed in full on EPA text.

It would be possible to solve this by defining special casing rules in the Unicode data file "special-casing.txt", as it is done for Turkish to accomplish the casing İ/ı/î).

However, the UTC gave some rules in the feedback to the first version of this proposal, which are followed in this revision.

- A formal case pairing in the character properties is only given if the form (of the representative glyph) and the naming of the capital and small letter correspond. (Of course, no naming correspondence is proposed here whenever there is no form correspondence.)
- If such a pairing is found, this has precedence over an actual case pairing found in a specific historical use, like EPA or only a specific variant of EPA.
- The actual case pairing in such a use has to be described elsewhere (e.g. in initiating a specific CLDR entry), and has to be accomplished by other means (like regarding such a CLDR entry).

Another fact to be regarded is a consequence of the current Unicode stability policies:

- Whenever a capital letter is encoded, a lowercase counterpart (by “canonical” casing reflected in the Unicode character properties) cannot be encoded later. (This does not apply vice versa: for a lowercase letter, a capital counterpart in fact can be encoded later.)

Based on this, the following rules were incorporated:

- Whenever a capital and a lowercase letter are found which match by form, they are proposed as “canonical” case pair, without regarding the actual use in any EPA variant.
- Whenever a lowercase letter is found without a capital letter matching by form, this letter is proposed as an unpaired lowercase letter.
- Whenever a capital letter is found without a lowercase letter matching by form in EPA, the following is done:
  - If an appropriate matching lowercase letter was found in an area otherwise not in the scope of this proposal, that letter is included, and the complete “canonical” case pair is proposed.
    - This is the case for:
      - U+0041 LATIN CAPITAL LETTER A WITH LOOP
      - U+0045 LATIN CAPITAL LETTER I WITH LONG STROKE OVERLAY
      - U+0046 LATIN CAPITAL LETTER U WITH INSIDE BAR
  - Otherwise, if there exists an already encoded letter which is obviously the matching lowercase letter, but which is already formally paired to another uppercase letter, that letter is formally declared formally as the lowercase part of the capital letter proposed.
This yields in a missing possibility of round-trip casing for the capital letter proposed here. (This casing behavior resembles the one U+1E9E LATIN CAPITAL LETTER SHARP S.)

This is the case for:

- U+FB0B LATIN CAPITAL LETTER PHONOTYPIC ENG (paired with U+014B LATIN SMALL LETTER ENG)
- U+FB0F LATIN CAPITAL LETTER DOUBLE U (paired with U+026F LATIN SMALL LETTER TURNED M)

Otherwise, if there is no form of a lowercase letter which is obviously matching by form (and thus being its "natural" lowercase matching independent of any use in a special EPA variant), the capital letter is proposed unpaired.

In such cases, the case matching has to be done by a tailoring specific to the EPA variant in use (which is no special problem, as any EPA variant considered here needs such a tailoring anyway).

These capital letters will never get a lowercase counterpart (due to the aforementioned Unicode stability policies), and as they cannot be lowercased independent of a special tailoring, they are excluded from the use in IDNs and identifiers.

The last two groups of capital letters are "second class letters" in some sense, as they are no "canonical" capital counterpart of any encoded lowercase letter. Therefore, it is considered appropriate to put these letters into a specific group. In fact, they are proposed to be placed in the "Alphabetic Presentation Forms" block.

As true presentation forms (like U+FB06 LATIN SMALL LIGATURE ST) will no longer be encoded, the gaps in this block are considered to be the appropriate place for other "second class" letters now.

- A list of the case pairings deviating from the "canonical" pairings is given in an informative chapter ("3.6 Special case pairing within the main EPA versions" below), which can be used as an appropriate data source when it comes to define the special casing tailoring for EPA variants elsewhere.

### 2.4 Duodecimal numbering

During some years about 1860, Isaac Pitman has propagated the duodecimal system along with EPA. As some publications are found using this system (see fig. 1860f, 1860g), the special digit forms used there for the digit values ten and eleven are included in this proposal.

### 2.5 Special issues for single characters

- A typical feature for some lowercase EPA letters is the "u-turned tail", which always displays a 180° bend upward, of about half the length of the tail (see the proposed U+A7AB, U+A7B1, U+A7C9 LATIN SMALL LETTER A/ALPHA/U WITH U-TURNED TAIL, and the italic form of U+A7B8 LATIN SMALL LETTER I WITH SPIRAL TAIL; see fig. 1888b).
  These tails are straight prolongations of the right stem of the letter replacing the usual bend or serif at the bottom line, thus differing from an appended ogonek or retroflex hook, or the hook tail of U+024B LATIN SMALL LETTER Q WITH HOOK TAIL.

- A similar feature is seen with U+A7B9/A7BA LATIN CAPITAL/SMALL LETTER I WITH RIGHT U-TURN AT BOTTOM, which therefore are not unified with the Latin iota (which usually has a bend of only 90° … 120°, ending in a sharp peak rather than a ball terminal).
The U-turn of the proposed letters may be even more prominent than that of a J/j in the same font (see fig. 1852a, middle part). Therefore, they are not called REVERSED J.

- U+A7C2/A7C3 LATIN CAPITAL/SMALL LETTER OW: Its appearing is equidistant to that of the following similar letters:
  - U+0264 RAMS HORN: Normal height; arms bend about 90° outwards (see fig. 1996a).
  - Proposed OW: Normal height; arms are straight, belly is broad.
  - U+0194/0263 LATIN GAMMA: Extended height; arms are straight, belly is narrow.
  - U+0222/0223 LATIN OU: Normal height; arms bend about 90° inwards, almost touching.

Thus, no one of the three other letters exploits a preference to be unified with the "OW" proposed here. Each of them would be look equally wrong when used in EPA (especially, the Capital Latin Gamma would look weird, as no EPA capital letter extends below the baseline; even the Q is not used in any EPA variant).

The differences between the listed letters anyway are more prominent than e.g. between U+0075 u, U+1D1C ᶣ, U+028B ᶶ, U+0076 v, U+2C71 ᶷ.

Thus, any unification of the proposed “OW” is considered inappropriate.

Also, as the most prominent part if the “OW” is the O-like “broad belly”, it is not proposed as the (not yet encoded) Pullum & Ladusaw’s “baby gamma”, which has a shape like a “v with a little loop at the peak” (see fig. 1996a).

- U+2E4F PHONOTYPIC QUESTION MARK has a specific design, which in no case is a mirror image of the ordinary question mark (see fig. 1848e, 1853a, 1855a, 1864b).

Therefore, and as its function differs from the reversed question mark in any case, it was given its own code point.

- U+218B TURNED EZH-SHAPED DIGIT THREE (duodecimal digit eleven in Pitman's notation) is no simple turned digit three, as fig. 1860f, 1860g clearly show. Therefore, a unification with 0190 LATIN CAPITAL LETTER OPEN E or A72B LATIN SMALL LETTER TRESILLO would be far more inappropriate, as an unification of the tresillo with the open E would have been. It can be presumed that Pitman wanted the digit to be clearly distinguishable from the capital open E which is a common letter in EPA.

(In fact, other propagators of non-decimal numbering systems used a simple turned three, but then, this is another character, the unifiability of which has to be discussed in due course when those digit sets are proposed for encoding.)

3. Proposed characters

Annotations in parentheses address special issues for a character, or reference to figures where such special issues are discussed. These annotations are not intended to be retained in the character listings in the standard.

All letters (except when noted) are found in at least one of the figures:
- EPA 1847 – fig. 1847a
- EPA 1855 – fig. 1855a
- EPA 1856 – fig. 1856c
- EPA 1868 – fig. 1868a

The italic forms for some letters are found in fig. 1888a.
Block: Latin Extended-D

Additions for the English Phonotypic Alphabet

\( \text{.UTF-8} \) U+A7AB  LATIN SMALL LETTER A WITH U-TURNED TAIL

\( \rightarrow 1D8F \) latin small letter a with retroflex hook

\( \text{.UTF-8} \) U+A7AC  LATIN CAPITAL LETTER A WITH LOOP

\( \text{.UTF-8} \) U+A7AD  LATIN SMALL LETTER A WITH LOOP

(see fig. 1855f)

\( \text{.UTF-8} \) U+A7AE  LATIN CAPITAL LETTER ROUNDTOP A

\( \text{.UTF-8} \) U+A7AF  LATIN SMALL LETTER ROUNDTOP A

(see fig. 1848b)

\( \text{.UTF-8} \) U+A7B0  LATIN SMALL LETTER ALPHA WITH INSIDE BAR

(see fig. 1848a, 1848h, 1848i, 1849a)

\( \text{.UTF-8} \) U+A7B1  LATIN SMALL LETTER ALPHA WITH U-TURNED TAIL

\( \rightarrow 024B \) latin small letter q with hook tail

\( \rightarrow 1D90 \) latin small letter alpha with retroflex hook

\( \text{.UTF-8} \) U+A7B2  LATIN CAPITAL LETTER ALPHA WITH LEFT NOTCH

\( = \) latin ligature of capital open e and i

\( \text{.UTF-8} \) U+A7B3  LATIN SMALL LETTER ALPHA WITH LEFT NOTCH

\( \text{.UTF-8} \) U+A7B4  LATIN SMALL LETTER PHONOTYPIC DH

\( \text{.UTF-8} \) U+A7B5  LATIN CAPITAL LETTER I WITH LONG STROKE OVERLAY

\( = \) latin capital letter i with serified crossbar

\( \rightarrow 0197 \) latin capital letter i with stroke

\( \rightarrow 2629 \) cross of jerusalem

\( \rightarrow 2720 \) maltese cross

(see fig. 1848b)

\( \text{.UTF-8} \) U+A7B6  LATIN SMALL LETTER I WITH LONG STROKE OVERLAY

(see fig. 2008a)

\( \text{.UTF-8} \) U+A7B7  LATIN SMALL LETTER I WITH PIGTAIL AT BOTTOM

· the italic form usually shows the pigtail at bottom to the right

\( \rightarrow 0279 \) latin small letter turned r

(see fig. 1848c, 1873a, 1880a)

\( \text{.UTF-8} \) U+A7B8  LATIN SMALL LETTER I WITH SPIRAL TAIL

· the italic form usually has a u-turned tail

\( \text{.UTF-8} \) U+A7B9  LATIN CAPITAL LETTER I WITH RIGHT U-TURN AT BOTTOM

\( \rightarrow 0196 \) latin capital letter iota

\( \text{.UTF-8} \) U+A7BA  LATIN SMALL LETTER I WITH RIGHT U-TURN AT BOTTOM

(see fig. 1851c, 1852a, 1852b)
ꞻ U+A7BB LATIN CAPITAL LETTER O WITH CURL
   · the italic form usually has the curl directed to the left
     (see fig. 1888b)
.splitContainer
.search_for_line_break

ظروف U+A7BC LATIN SMALL LETTER O WITH CURL

ظروف U+A7BD LATIN CAPITAL LETTER CLOSED OMEGA
   · lowercase is 0277 latin small letter closed omega

ظروف U+A7BE LATIN CAPITAL LETTER CLOSED OMEGA WITH LONG STEM

ظروف U+A7BF LATIN SMALL LETTER CLOSED OMEGA WITH LONG STEM

ظروف U+A7C0 LATIN CAPITAL LETTER TURNED CLOSED OMEGA
   (see fig. 1848d, 1848i, 1849b)

ظروف U+A7C1 LATIN SMALL LETTER TURNED CLOSED OMEGA
   (see fig. 1848a, 1848d, 1848h, 1848i, 1849b)

ظروف U+A7C2 LATIN CAPITAL LETTER OW
   · in the English Phonotypic Alphabet, it usually denotes the diphthong [au]
     → 0194 latin capital letter gamma
     → 0222 latin capital letter ou
     → A64A cyrillic capital letter monograph uk

ظروف U+A7C3 LATIN SMALL LETTER OW
   · this is not Pullum & Ladusaw’s “baby gamma”
     → 0263 latin small letter gamma
     → 0264 latin small letter rams horn
     (see fig. 1996a)

ظروف U+A7C4 LATIN SMALL LETTER PHONOTYPIC TH FIRST FORM

ظروف U+A7C5 LATIN SMALL LETTER PHONOTYPIC TH SECOND FORM

ظروف U+A7C6 LATIN SMALL LETTER PHONOTYPIC TH THIRD FORM

ظروف U+A7C7 LATIN CAPITAL LETTER U WITH INSIDE BAR
   = latin capital letter turned roundtop a
     → A7AE latin capital letter roundtop a
     (see fig. 1868a)

ظروف U+A7C8 LATIN SMALL LETTER U WITH INSIDE BAR
   (see fig. 1852e)

ظروف U+A7C9 LATIN SMALL LETTER U WITH U-TURNED TAIL
     → 1D99 latin small letter u with retroflex hook

ظروف U+A7CA LATIN CAPITAL LETTER U WITH NOTCH AT BOTTOM

ظروف U+A7CB LATIN SMALL LETTER U WITH NOTCH AT BOTTOM

ظروف U+A7CC LATIN CAPITAL LETTER REVERSED ENLARGED SMALL U
   (see fig. 1856c)

ظروف U+A7CD LATIN SMALL LETTER REVERSED U
   (see fig. 1856c, 1856d)


**Block: Alphabetic Presentation Forms**

**Capital letters used with the English Phonotypic Alphabet**

These letters are no formal capital counterpart of any encoded lowercase letter. If a lowercase matching is given here, the formal capital counterpart of that letter is another capital letter.

- **﬇** U+FB07 LATIN CAPITAL LETTER A WITH TOPBAR
- **﬈** U+FB08 LATIN CAPITAL LETTER REVERSED SCRuple
  → 2108 scruple
  → A792 latin capital letter c with bar
- **﬉** U+FB09 LATIN CAPITAL LETTER E WITH BENDED TOPBAR
- **﬊** U+FB0A LATIN CAPITAL LETTER E WITHOUT MIDDLE BAR
  (see fig. 1851c)
- **﬋** U+FB0B LATIN CAPITAL LETTER PHONOTYPIC ENG
  · lowercase is 014B latin small letter eng
  → 014A latin capital letter eng
- **﬌** U+FB0C LATIN CAPITAL LETTER REVERSED SIGMA
  → 01A9 latin capital letter esh
- **﬍** U+FB0D LATIN CAPITAL LETTER PHONOTYPIC TH
- **﬎** U+FB0E LATIN CAPITAL LETTER U WITH Q TAIL
  (see fig. 1848a vs. the Q in fig. 1848d No. 21)
- **﬏** U+FB0F LATIN CAPITAL LETTER DOUBLE U
  · lowercase is 026F latin small letter turned m
  → 019C latin capital letter turned m

**Block: Supplemental Punctuation**

**Punctuation used with the English Phonotypic Alphabet**

- **PathVariable** U+2E4F PHONOTYPIC QUESTION MARK
  · used at the start of a question or a question-like subclause
  · the glyph always shows an open circle with a sharp kink into the vertical bar
  → 2E2E reversed question mark
  (see fig. 1848e, 1852d, 1853a, 1855a, 1864b)
- **PathVariable** U+2E50 WIGGLY EXCLAMATION MARK
  = smile mark, mirth mark, laughter mark
  · wiggles are broader at top than at bottom
  (see fig. 1848e, 1851b, 1852c, 1858a)
- **PathVariable** U+2E51 INVERTED WIGGLY EXCLAMATION MARK
  · indicates sarcasm when used in sequence with U+2E50
  · used at the end of sentences, unlike U+00A1 inverted exclamation mark
  (see fig. 1852d)
U+2E52 LEFT PARENTHESIS WITH MIDDLE RING
→ FD2E ornate left parenthesis
(see fig. 1848f, 1855b, 1860d, 1868a)

U+2E53 RIGHT PARENTHESIS WITH MIDDLE RING

Block: Number Forms

Turned Digits (see fig. 1860f, 1860g)

These were devised as digits for the duodecimal system by Isaac Pitman in 1857.

ϛ U+218A TURNED DIGIT TWO
= duodecimal digit ten (in Pitman’s notation)

ϛ U+218B TURNED EZH-SHAPED DIGIT THREE
= duodecimal digit eleven (in Pitman’s notation)

Proposed also in L2/10-357 (N3914)

For the code point and its block, see that document. Nevertheless, this character is also part of the character set proposed here.

꟠ U+AB80 LATIN SMALL LETTER C WITH PALATAL HOOK

3.1 Annotations to be added for already encoded characters

Ϙ U+0277 LATIN SMALL LETTER CLOSED OMEGA

ADD: · uppercase is A7BD latin capital letter closed omega
ADD: → A7BF latin small letter closed omega with long stem

3.2 Properties for the proposed characters

<table>
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<th>Character</th>
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<th>Character</th>
</tr>
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<td>TURNED DIGIT TWO</td>
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<td>TURNED EZH-SHAPED DIGIT THREE</td>
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<tr>
<td>2E4F</td>
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<td>2E50</td>
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<td>2E51</td>
<td>INVERTED WIGGLY EXCLAMATION MARK</td>
<td>2E52</td>
<td>LEFT PARENTHESIS WITH MIDDLE RING</td>
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<td>LATIN CAPITAL LETTER I WITH LONG STROKE OVERLAY</td>
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<td>LATIN SMALL LETTER I WITH LONG STROKE OVERLAY</td>
<td>A7B7</td>
<td>LATIN SMALL LETTER I WITH PIQTAIL AT BOTTOM</td>
</tr>
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<td>LATIN SMALL LETTER I WITH SPIRAL TAIL</td>
<td>A7B9</td>
<td>LATIN CAPITAL LETTER I WITH RIGHT U-TURN AT BOTTOM</td>
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<td>A7BA</td>
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<td>A7BB</td>
<td>LATIN CAPITAL LETTER I WITH RIGHT U-TURN AT BOTTOM</td>
</tr>
</tbody>
</table>

Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

2011-01-18
3.3 Properties to be changed for already encoded characters

0277;LATIN SMALL LETTER CLOSED OMEGA;Ll;0;L;;;;;N;;;;A7BD;;A7BD

3.4 Line breaking and text delimitation properties of punctuation marks

U+2E4F PHONOTYPIC QUESTION MARK behaves like:
U+00BF INVERTED QUESTION MARK, as it introduces questions (rather than terminating them).

U+2E50 WIGGLY EXCLAMATION MARK and
U+2E51 INVERTED WIGGLY EXCLAMATION MARK both behave like:
U+0021 EXCLAMATION MARK, as both terminate sentences (U+2E51 is not an “Spanish counterpart” of U+2E50; both are terminating sentences, exploiting different meanings.)

U+2E52 LEFT PARENTHESIS WITH MIDDLE RING and
U+2E53 RIGHT PARENTHESIS WITH MIDDLE RING behave like other recently encoded parenthesis pairs (like e.g. U+2E28/U+2E29 LEFT/RIGHT DOUBLE PARENTHESIS).

3.5 Collation and sorting

As the different versions of EPA specify differing "systematical" alphabet orders, in any case strongly deviating from the standard Latin ABC... order, these have to be handled by special tailoring.

Thus, for for default collation and sorting, the characters are to be treated in the common way for Latin characters, without special exceptions.
3.6 Confusability issues

The following confusables exist:
(The first line of each paragraph shows a proposed letter, followed by lines containing similar already encoded letters.)

A7BF LATIN SMALL LETTER CLOSED OMEGA WITH LONG STEM
0277 LATIN SMALL LETTER CLOSED OMEGA
A7AD LATIN SMALL LETTER A WITH LOOP
0061 LATIN SMALL LETTER A
A7B1 LATIN SMALL LETTER ALPHA WITH U-TURNED TAIL
024B LATIN SMALL LETTER Q WITH HOOK TAIL
A7B4 LATIN SMALL LETTER PHONOTYPIC DH
0111 LATIN SMALL LETTER D WITH STROKE
A7B3 LATIN SMALL LETTER ALPHA WITH LEFT NOTCH
0061 LATIN SMALL LETTER A
A7BA LATIN SMALL LETTER I WITH RIGHT U-TURN AT BOTTOM
0269 LATIN SMALL LETTER IOTA
A7C8 LATIN SMALL LETTER U WITH INSIDE BAR
0289 LATIN SMALL LETTER U BAR
A7CB LATIN SMALL LETTER U WITH NOTCH AT BOTTOM
026F LATIN SMALL LETTER TURNED M
A7C3 LATIN SMALL LETTER OW
0223 LATIN SMALL LETTER OU
0263 LATIN SMALL LETTER GAMMA
0264 LATIN SMALL LETTER RAMS HORN

The proposed capital letters without lowercase counterparts, placed in the “Alphanumeric Presentation form” block, are explicitly not intended for use in identifiers and IDNs. Therefore, they cannot raise any confusability issues.

3.7 Special case pairing within the main EPA versions

This part is informative, regarding to this proposal.
If it is decided to include such data into the CLDR or to document them elsewhere, these tables can be used as data source.

# English Phonotypic Alphabet, final 1847 Pitman/Ellis version ("Original EPA")
# (see fig. 1848a)
0041 LATIN LETTER CAPITAL A
0251 LATIN SMALL LETTER ALPHA
A7AE LATIN CAPITAL LETTER ROUNDTOP A
0061 LATIN SMALL LETTER A
FB07 LATIN CAPITAL LETTER A WITH TOPBAR
A7B1 LATIN SMALL LETTER ALPHA WITH U-TURNED TAIL
FB08 LATIN CAPITAL LETTER REVERSED SCRUPLE
AB80 LATIN SMALL LETTER C WITH PALATAL HOOK
01B8 LATIN CAPITAL LETTER D WITH TOPBAR
A7B4 LATIN SMALL LETTER PHONOTYPIC DH
A7B5 LATIN CAPITAL LETTER I WITH LONG STROKE OVERLAY
A7B8 LATIN SMALL LETTER I WITH SPIRAL TAIL
FB0B  LATIN CAPITAL LETTER PHONOTYPIC ENG
014B  LATIN SMALL LETTER ENG
FB0C  LATIN CAPITAL LETTER REVERSED SIGMA
0292  LATIN SMALL LETTER EZH
A7B0  LATIN CAPITAL LETTER TURNED L
A7C4  LATIN SMALL LETTER PHONOTYPIC TH FIRST FORM
FB0E  LATIN CAPITAL LETTER U WITH SWASH TAIL
A7C9  LATIN SMALL LETTER U WITH U-TURNED TAIL
FB0F  LATIN CAPITAL LETTER DOUBLE U
026F  LATIN SMALL LETTER TURNED M

# English Phonotypic Alphabet, 1855 version ("Cincinnati alphabet")
# (see fig. 1855a)
A7AE  LATIN CAPITAL LETTER ROUNDTOP A
A7B1  LATIN SMALL LETTER ALPHA WITH U-TURNED TAIL
A7AC  LATIN CAPITAL LETTER A WITH LOOP
A7AB  LATIN SMALL LETTER A WITH U-TURNED TAIL
FB0B  LATIN CAPITAL LETTER REVERSED SCRUPLE
AB80  LATIN SMALL LETTER C WITH PALATAL HOOK
018B  LATIN CAPITAL LETTER D WITH TOPBAR
A7B4  LATIN SMALL LETTER PHONOTYPIC DH
FB09  LATIN CAPITAL LETTER E WITH BENDED TOPBAR
0065 0323  LATIN SMALL LETTER E with COMBINING DOT BELOW
A7B5  LATIN CAPITAL LETTER I WITH LONG STROKE OVERLAY
A7BB  LATIN SMALL LETTER I WITH SPIRAL TAIL
FB0B  LATIN CAPITAL LETTER PHONOTYPIC ENG
014B  LATIN SMALL LETTER ENG
FB0C  LATIN CAPITAL LETTER REVERSED SIGMA
0292  LATIN SMALL LETTER EZH
FB0D  LATIN CAPITAL LETTER PHONOTYPIC TH
A7C5  LATIN SMALL LETTER PHONOTYPIC TH SECOND FORM
FB0E  LATIN CAPITAL LETTER U WITH SWASH TAIL
A7C9  LATIN SMALL LETTER U WITH U-TURNED TAIL

# English Phonotypic Alphabet, 1856 Pitman version ("Reduced EPA")
# (see fig. 1856c, 1860e)
FB0B  LATIN CAPITAL LETTER REVERSED SCRUPLE
AB80  LATIN SMALL LETTER C WITH PALATAL HOOK
018B  LATIN CAPITAL LETTER D WITH TOPBAR
A7B4  LATIN SMALL LETTER PHONOTYPIC DH
A7B7  LATIN SMALL LETTER I WITH PIGTAIL AT BOTTOM
FB0B  LATIN CAPITAL LETTER PHONOTYPIC ENG
014B  LATIN SMALL LETTER ENG
FB0D  LATIN CAPITAL LETTER PHONOTYPIC TH
A7C5  LATIN SMALL LETTER PHONOTYPIC TH SECOND FORM
FB0F  LATIN CAPITAL LETTER DOUBLE U
026F  LATIN SMALL LETTER TURNED M

Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS
2011-01-18
4. Acknowledgements

Special thanks for Google and Microsoft for providing scans of numerous 19th century books and publications accessible on the Internet. Without access to these sources, this proposal could not have been made within considerable time. In fact, only fig. 1880a and fig. 1888a/b/c were made from original paper material. All other figures are excerpts from scans found by Internet search.

Special thanks also to Andreas Stötzner [http://www.signographie.de/cms/front_content.php?idcat=1] for his insightful comments regarding typographical questions, and for drawing the glyphs for the characters proposed here.

5. Examples and figures

The figures are numbered by the year of the publication of the book from where the scan is taken, following by a letter. Remarkable occurrences of characters mentioned in the figure descriptions are marked by a colored circle.

Disclaimer:
The religious, philosophical, or ideological views expressed in some of the text specimens are not necessarily the ones of the author of this proposal.
Fig. 1847a: The Gospel according to Matthew, in Phonotypy and Heterotypy. Interlinear Edition; London/Bath, 1847; p.4, showing the EPA 1847.

THE ENGLISH PHONOTYPIC ALPHABET.

<table>
<thead>
<tr>
<th>VOWELS.</th>
<th>CONSONANTS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Type.</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>LONG.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>E e</td>
</tr>
<tr>
<td>8</td>
<td>a e</td>
</tr>
<tr>
<td>3</td>
<td>A a</td>
</tr>
<tr>
<td>4</td>
<td>o o</td>
</tr>
<tr>
<td>5</td>
<td>o o</td>
</tr>
<tr>
<td>6</td>
<td>W w</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>i i</td>
</tr>
<tr>
<td>8</td>
<td>E e</td>
</tr>
<tr>
<td>9</td>
<td>A a</td>
</tr>
<tr>
<td>10</td>
<td>O o</td>
</tr>
<tr>
<td>11</td>
<td>U u</td>
</tr>
<tr>
<td>12</td>
<td>U u</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>ï ï</td>
</tr>
<tr>
<td>14</td>
<td>s e</td>
</tr>
<tr>
<td>15</td>
<td>ë ë</td>
</tr>
<tr>
<td>16</td>
<td>ì ì</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>y y</td>
</tr>
<tr>
<td>18</td>
<td>w w</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>h h</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1847b: ibid., excerpt from p.10.

MATU. 3.14—4.9.  

him. 14 But Jon forbade him, saip, ñ hav ned tu be baptjzd ov dz, and him. 14 But John forbade him, saying, I have need to be baptized of thee, and I comemst dz tu me. 15 And Jesus anserinj sed untu him, Sufir it tu be comest thou to me? 15 And Jesus answering said unto him, Suffer it to be so nyx: for dus he comcumst us tu fulfl el ritrusnes. Hen he suferd him, so now: for thus it becometh us to fulfil all righteousness. Then he suffered him.

16 And Jesus, hwen he woz baptjzd, went up stratwa st ov dz woter: and, 16 And Jesus, when he was baptized, went up straightway out of the water: and,

lo, dz hev'nz wor cp'nd untu him, and he se dz Spirit ov God descendig lo, the heavens were opened unto him, and he saw the Spirit of God descending lce a duf, and lfitj upon him: 17 and lo a vors from hev'n, saip, His iz mi like a dove, and lighting upon him: 17 and lo a voice from heaven, saying, This is my
AN EXPLANATION OF
THE ENGLISH PHONETIC ALPHABET,
FOR THE USE OF THOSE WHO CAN READ THE HISTORICAL ORTHOGRAPHY.

[Columns 1 and 2 contain the phonotypic letters, capital and small, each representing a certain sound, or modification of sound, which constitutes the power of the letter; the other columns show what that power is. For further information, see January Journal, pages 17—20.]

<table>
<thead>
<tr>
<th>LONG VOWELS</th>
<th>STOPPED VOWELS</th>
<th>EXPLODENTS</th>
<th>CONTINUANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>E e ee in eel</td>
<td>I i i in ill</td>
<td>P p p in rope</td>
<td>F f f in safe</td>
</tr>
<tr>
<td>Ω a a.. ale</td>
<td>E e e .. ell</td>
<td>B b b .. robe</td>
<td>V v v .. sere</td>
</tr>
<tr>
<td>Α q a .. alns</td>
<td>Α q a .. am</td>
<td>T t t .. tafe</td>
<td>T t th .. wreath</td>
</tr>
<tr>
<td>Θ o α .. all</td>
<td>O o o .. olive</td>
<td>D d d .. fade</td>
<td>Θ d th .. wreath</td>
</tr>
<tr>
<td>Ω o o .. ope</td>
<td>U u u .. up</td>
<td>Ε e ch .. cheer</td>
<td>Η s s .. his</td>
</tr>
<tr>
<td>U m oo .. food</td>
<td>U u oo .. foot</td>
<td>J j j .. jeer</td>
<td>Z z s .. his</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIPHTHONGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ i i in isle</td>
</tr>
<tr>
<td>Ω o oi .. oil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COALESCENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>R r r in for</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIQUIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y y y in yea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NASALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>M m m in scent</td>
</tr>
</tbody>
</table>

The sign (') is prefixed to l, m, n, to show when they form syllables by themselves; as, dub'l, dublin; ril'm, ritmic; cle'n, cena'; and the compound symbols 'l, 'm, 'n, are then called "vocals."

Additional Symbols are used for foreign sounds, as may be seen by the following examples. See p. 21.

French.—fain, pât, paθ, bon, vû, hût, zôn, zôn, zê chêne, palë, patte, bonne, vû, hatte, jeûne, je
fain, ën, ocuñ, bon, fêl, rënu
fin, champ, aïcun, bon, fille, règne

German.—çûnste, çûnste, Göte, böce, ik, æ, zeq, tái, ën kûhnste, kûnste, Goethe, bûcke, ich, aïch, sieg, tái, wann

New Orthographical Signs:—(?) query, placed at the commencement of interrogative clauses; (i) sigh; (ıt) smile; (ıı) obsolete parentheses, used to inclose words which are not spelt phonetically. See pp. 24, 25.
This shows an earlier development stage of the EPA 1847. This stage is not subject of this proposal. However, it proves that the U+0197 LATIN CAPITAL I WITH STROKE was considered different from U+A7B5 LATIN CAPITAL PHONOTYPIC I as these letters are both included in that draft as different letters (see circle markings).

5. August, 1844.

$\mathbb{I}$, E, J, A, O, e, u, w, U; $\mathbb{E}$, X, W; Y, W, H,
$\mathbb{A}$, I, a, e, q, a, o, o, [e], u, o, w, u; i, s, y; y, w, h, ov 1847.

P, B, T, D, e, J, c, G, F, V, T, d, S Z, S Z, L, R; M, N, N,
$\mathbb{P}$, B, t, d, q, j, c, g; f, v, t, d, s, z, f, j; l, r; m, n, y, ov 1847.

Dis woz avsedli onli a temporeri alfabet.

This shows another earlier development stage of the EPA 1847. This stage also is not subject of this proposal. However, it shows U+A7B7 LATIN SMALL LETTER I WITH PIGTAIL AT BOTTOM together with an uppercase form which is not included in later stages of the EPA development (and therefore not proposed here).

This form, together with the asymmetric serif at the top below the dot of U+A7B7 itself, which is typical for the small letter i, proves that that an unification of that letter with 0279 0307 "small letter turned r with dot above" would be inappropriate.

7. October, 1844.

$\mathbb{I}$, E, J, A, O, E, U, O, C W; $\mathbb{E}$, P, I, W; Y, W, H,
$\mathbb{A}$, I, a, e, q, a, o, o, [e], u, o, w, u; i, s, y; y, w, h, ov 1847.

P, B, T, D, e, J, K, G; F, V, T, d, S Z, S Z, L, R; M, N, N,
$\mathbb{P}$, B, t, d, q, j, k, g; f, v, t, d, s, z, f, j; l, r; m, n, y,
$\mathbb{P}$, B, t, d, q, j, c, g; f, v, t, d, s, z, f, j; l, r; m, n, y, ov 1847.

Dis iz de først "loer-cas" er smel-leter alfabet, and it wil be sen dat de consonants wer ns priti wel set’ld. Prijr tu de adopfjvn ov dis alfabet,
Part of the list of additional symbols for foreign sounds.

Mostly, diacritical marks are used which are already encoded. For the right dot on small u and o (No. 15 and 16), U+0358 COMBINING DOT ABOVE RIGHT seems appropriate.

No. 14 (marked red) shows the letter pair U+A7C0/A7C1 LATIN CAPITAL SMALL LETTER TURNED CLOSED OMEGA, which is not listed in the alphabet shown in fig. 1848a.
3. ECSPREEUNAL SznZ.

11 (§) de Coer, dis iz plaz befør cui würd or cloez b'hwīg a cwsaun iz qeet.

12 (?) de Dät, dis iz plaz aﬅer cui würd or stammt, consmniq hwiq de rţr felz sum b'r, or hwiq he wiţez tu cwl iz cwsaun. Obzerv de diřferens biwen de dstrft uńe vüc'ri "U cam laşt nój?" and de uńqul intersog'fuń "¿Did cú cem laşt nój?"

13 (!) de Col; a marc ov esclamańun, or simplic surpréja. Dub'ld (11), it indicats grat astonijnent.

14 (1) de Sj; a marc ov gref or sora: plaz aﬅer a stamnt hwiq givz de rţr pan. Dub'ld (11), it indicats grat affličun.

15 (!) de Smil; a marc ov merct or pľequr: plaz aﬅer a stamnt hwiq givz de rţr pľequr, or produța iz him a felip ov anjuement; and hens wul in plaz ov dus eespréjuz in de specr hwiq iz cumn intercors iz ment tu indic "¿wos enifi iz jœc?" de dub'ld smil (11) iz a dwrij laf.

[ Ol dzq sńez ov wul tu indic de felip ov de rţr or specr: da hav no referens tu de reder, hu iz cwiq at liberti tu sń ov a smil, or smil ov a sń.]

Fig. 1848f: ibid., excerpt from p.25.

Showing the "Obsolescent Parentheses" as No. 19 (U+2E52 LEFT PARENTHESES WITH MIDDLE RING and its right counterpart).

4. Parențetikal SznZ.

16 () de Parențesis, or in de plural Parențtes; wul tu incloz cui würd er cloez hwiq iz insernet in de bōdi ov a sentens, wid huz gramatìcal constructiun iz samhwot interferes. It is also wul tu incloz cui li'l mores or sīnz hwiq iz intherse lo overlauct, or not huv suńfiz importants giv'n tu dem bi de reder. For instans, we hav fer dis raz'n, incloz de orthograpilical sńez iz 1 tu 15 in de marjiun ov de acab esclamańuz between parentheses.

17 { } Braces, wul as a variațün ov de parențesis; de fırst hœl { } is also wul tu cnoct or lige tugen ofer sevr al lın.

18 [ ] Brackets; wul as a variațün ov parențesis, and also tu incloz hol sentenze hwiq interfir wid de jeneral arnjuement ov a paragraf, and conseçuenti hav reder de operans ov a nots. Obzervaz nuz mad bi de sțez, in de cor ov a sțez, or jenerali so incloz, tu disting-gwif dem iz de würdz ov de oțur sțez.

19 { } Obsolescent Parențesis; wul tu incloz wurdiz hwiq iz not egzistid Foneticali.

20 (" " ) Involved Comas or Mores ov Sțez, incloz wurdiz wroten from anudder oțur, or put intam de mest ov de specr. Wurds tu hwiq particulière importants iz tiếcz, teclical egzistiițün, etc., ov'n so incloz.
Fig. 1848g: ibid., excerpt from p.122.
Showing some of the special punctuation marks (in red circles).
Also, showing some examples of the elision dot (in green circles), which is constantly shown at x-height within EPA.

\[\text{Hwi last ds so wldli.} \quad \text{Hwot se st ds afur.}\]
\[\text{A specter, } \text{a goest from } \text{d} \text{ ded.}\]

*Prins.*—It is not \text{d} \text{e bodi}es form ov \text{d} \text{e} \text{d} \text{ed},
\text{Nur } \text{d} \text{e} spector ov \text{d} \text{e} \text{t}, do \text{t} \text{afrits},
\text{\textordfeminine} \text{owl} \text{at a spirit} \text{t} \text{u} \text{m} \text{en} \text{er} \text{c} \text{e} \text{r} \text{m} \text{d} \text{ed},
\text{\textordfeminine} \text{e} \text{sp} \text{ir} \text{t}, \text{in l\textordfeminine} \text{y-n} \text{a} \text{slad} \text{v} \text{nafuzn hat bred}
\text{\textordfeminine} \text{b} \text{old} \text{ness} \text{t} \text{u} \text{g} \text{alenj \textordfeminine} \text{d} \text{ar} \text{r} \text{t}s.

\text{It bursts from } \text{d} \text{e} \text{d} \text{ep} \text{t ov } \text{d} \text{e} \text{priz\textordfeminine} \text{n} \text{h} \text{ss}, \text{w} \text{hr}
\text{It haz lo\textordfeminine} \text{n} \text{ \textordfeminine} \text{s} \text{tr} \text{p} \text{gas}, \text{wo iz me\textordfeminine}\text{y}
\text{\textordfeminine} \text{Tiz a hundred\textordfeminine} \text{nd}, \text{hundred-ramd j\textordfeminine} \text{n} \text{t}, \text{hwi\textordfeminine} \text{d} \text{ar}
\text{\textordfeminine} \text{e} \text{strug\textordfeminine} \text{l}, \text{o} \text{Fredum, wid } \text{d} \text{f}.

M. P.

1. His lit\textordfeminine}l poem is in a trunalsfun or Clog\textordfeminine}fooc "Füreit und zin Cebefib" ("Füreit und sein Eke\textordfeminine}n") hwig wox compassed in 1389, wid referens tu \text{d} \text{e} \text{f} \text{e} \text{r} \text{s} Fre\textordfeminine}v \text{r} \text{e} \text{v} \text{olution.

Fig. 1848h/i: ibid., excerpts from p.276/280.
Excerpt from an article "The Pronunciation of Lowland Scots", showing the letters not listed in the alphabet table in fig. 1848a: U+A7C1 LATIN SMALL LETTER TURNED CLOSED OMEGA, U+A7B0 LATIN SMALL LETTER ALPHA WITH INSIDE BAR. The second figure shows an interlinear sample, (F) being the claimed Scots pronunciation, (E) the claimed Standard English one.

\[\text{dz complët Sco} \text{ç alphabet opërzs tu be:}\]
\[\text{Loj Vools} \quad e \quad \text{a} \quad \text{q} \quad \text{o} \quad \text{m} \quad \text{u} \quad \text{y} \]
\[\text{Zort Vools} \quad i \quad \text{e} \quad \text{a} \quad \text{o} \quad \text{u} \quad \text{s} \quad \text{a} \quad \text{u} \]
\[\text{Diftoz} \quad \text{u} \text{i}, \text{a} \text{i}, \text{a} \text{i} (\text{i} \text{u}), \text{eu}\]
\[\text{Conlæonds and Brefig} \quad \text{y} \text{w}, \text{b} \]
\[\text{Ecroplæods} \quad \text{p} \text{b}, \text{t} \text{d}, \text{cj}, \text{e} \text{g}\]
\[\text{Continslæods} \quad \text{f} \text{v}, \text{t} \text{d}, \text{s} \text{x}, \text{f} \text{g}, \text{k} \text{r}, \text{k}\]
\[\text{Læwizide} \quad \text{r} \text{i}, \text{m} \text{n} \text{y}.\]

\[\text{dz cæl pents tu be noted bi an Ingæfæmæn ar:}\]
\[\text{dz præzens ov dz vœlæs } \text{d}, \text{u}, \text{e}, \text{a}, \text{e}, \text{i}, \text{o}, \text{u}, \text{y}, \text{a}, \text{w}, \text{u}, \text{v}, \text{hwig duz not ocür in Ingæf};
\text{dz natur ov dz diftæps, espeziali dz diftæps æi}, \text{æi}, \text{neder ov hwig ocür in}
\text{Ingæf}, \text{and hwig replæs dz Ingæf } \text{i} \text{at different tǐmz. \text{Ov dus}, æi iz veri}
\text{nærli dz tru Ingæf } \text{i}, \text{and Ingæfæmæn ma darnor substitut } \text{i} \text{for it, hwig æi}
\text{veri nærlæ } \text{æi} = \text{q}, \text{dz ssnd givn in Ingæfland tu dz singl wurd (eye).} \text{dz Scoç,}\]

**Duncan Gray came here to wu,**
(F) dupeæn gra \text{cæm} her tu wu,
(E) Dupeæn Gra \text{cæm} her tu wu,

**On blæt yule night when we were fun,**
(F) \text{on} blæt yul někt hwén wz wé fun,
(E) \text{On} blæt yul někt hwén wz wé fun,
Fig. 1848j:  Charlie's house - a tale for young children, Alexander John Ellis, London 1848: Title page; p.39 (as an example for a publication printed in EPA 1847).

CARLIZ HYS.

A TAL FOR YUM CHILDREN.

by
ALEXANDER JON ELLIS, B.A.

STANFORD LIBKA

LUNDUN:
FRED PITMAN, PONEKIE DEPO, I, CWSEZ HED PASIKI,
PATERNOSTER RO.

1848.

Fig. 1848k:  Shakespeare, Macbeth, phonetic edition London 1848, excerpt from p.11/12:


act 1.

11  15 Ros.  Hat ny.
    Sweno, de Norwas ciq, craws compisijun;
    nor wad we dan him berial ov his men,
    til he diiseres, et Sant Calmez Inq,
    ten benz delsey tu 97 jeneral us.

16  12 Dug.  No mor dft tan ov Cesar fal dezév
    sr banum interest.—Go, pramfis his det,
    and wiz his former tji'1 gret Macbeth.

17  13 Ros.  #1 se it dun.

18  14 Dug.  Hwok-ize hot lost, nobl'Macbeth hot
    wun.  

---

SEN 3.—3 Het. Tunder. Enter tre Wigs.

1  1 1  First Wic.  I Hwar hast de 97 ben, sister.
2  Second Wic.  Clij swjin.
**Fig. 1849a:** Scripture texts. Compiled by: Thielisch, Johann Christian; Bath 1849. p.6
Showing an example of U+77B0 LATIN SMALL LETTER ALPHA WITH INSIDE BAR.

**NOTIS.**

He folioj pejes were orijinali compild by Yohan Cristián Telif (Thielisch), superintóndent (or luteran bifup) ov evanjelical (or luteran protestant) congresjuns in Uper Ostría, and prezer tu ñe evanjelical congresjun in Sarter (Scharten), (lat 43°, lonj. 14°, ner Linte), and wer ljenest bi ñe protestant cònsisturi in Ven (Vënoa), in ñe yur 1799. He jenerál eseëns ov ñe aranjment recoménded it tu ñe printer as a convenient sculíbue, and he

---

**Fig. 1849b:** The Phonetic Reader. Bond, Robert; London 1849, p.vii.
Showing example of U+77C0/U+77C1 LATIN CAPITAL/SMALL LETTER TURNED CLOSED OMEGA.
**Fig. 1851a:** First phonetic reader, Cincinnati 1851. Title page; p.6.
Showing that the EPA 1847 alphabet was used unchanged in Cincinnati for a time.

**Fig. 1851b:** ibid., excerpt from p.53.
Showing an example of U+2E50 WIGGLY EXCLAMATION MARK (encircled).
Also, this book being a primer using large types, shows a good example for U+A7B8 LATIN SMALL LETTER I WITH SPIRAL TAIL, displaying clearly its unique spiral tail.

**PHONETIC ALPHABET.**

Phonetically Arranged.
The Phonetic letters have the value of the slanted letters in the illustrative words.

<table>
<thead>
<tr>
<th>Letters</th>
<th>Illustrative words</th>
<th>Names</th>
<th>Letters</th>
<th>Illustrative words</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>J</td>
<td>Jeer</td>
<td>A</td>
<td>F</td>
<td>Fear</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
<td>Goose</td>
<td>O</td>
<td>O</td>
<td>Eeer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E</td>
<td>E</td>
<td>Ei</td>
</tr>
</tbody>
</table>

**Diphthongs.**

<table>
<thead>
<tr>
<th>E</th>
<th>I</th>
<th>Ice</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>S</td>
<td>Shead</td>
</tr>
<tr>
<td>S</td>
<td>S</td>
<td>Seel</td>
</tr>
</tbody>
</table>

**Liquids.**

<table>
<thead>
<tr>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

**Breathing.**

M m mum am
H h hny ha
N n muss en
M m siu i

(\(\) vocal, showing when \(l, m, n\) make syllables of themselves.

**Mj Slat.**

Pra giv m\(j\) n\(q\) slat, \(i\) wi\(j\) tu dre on it. M\(j\) slat haz a fi\(n\) red ej. \(\mathbb{E}\) wil dro a bo. Hwot a lo\(j\) noz he haz, and but wun q\(r\)m? N\(s\) j wil dro a c\(\(w\)\), and a mile...
**Fig. 1851c:** Cubi i Soler, Mariano: Nuevo Sistema (Bath 1851), p. 8.  
Showing a variation of the EPA 1847. Presumably, the use of “Ɛ”/“ɛ” for [iː] seemed not acceptable for a Spanish audience, thus U+A7B9/U+A7BA LATIN CAPITAL/SMALL LETTER I WITH RIGHT U-TURN AT BOTTOM (marked red) were introduced to indicate that phoneme. Also, the “a” was used to mark liquids being syllabic, using U+FB0A LATIN CAPITAL LETTER E WITHOUT MIDDLE BAR as capital form of that letter.

**ALFABETO FONÉTICO INGLES.**

En la primera columna se hallan las letras mayúsculas y minúsculas. En la segunda columna hay el modo de pronunciación según se suenan las letras cursivas en las palabras inglesas que siguen. En la tercera, está el correspondiente sonido, según pronunciaciones nuestros los españoles, las letras cursivas en las voces castellanas adjuntas: donde este se miento no es exacto, o al menos no es aproximado, se pone una señal de referencia a la página inmediata, en que se dan explicaciones clara y terminantes. En la cuarta y última columna, se halla el nombre de las letras del alfabeto fonético, escrito, donde es posible, en ortografía castellana; y, donde no, en ortografía fonética.

<table>
<thead>
<tr>
<th><strong>VOCALES.</strong></th>
<th><strong>CONSONANTES.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Largas.</strong></td>
<td><strong>Prorumpientes.</strong> (Explodos)</td>
</tr>
<tr>
<td>Í . e . ë . . é .</td>
<td>P . p . rope . . pan . . pi</td>
</tr>
<tr>
<td>E . e . ale . . el . . è .</td>
<td>B . b . robe . . bo . . bi</td>
</tr>
<tr>
<td>A . q . . . . (1) . . q .</td>
<td>T . t . . fate . . (19) . . ti</td>
</tr>
<tr>
<td>Ñ . ñ . . . . (1) . . ñh .</td>
<td>D . d . fade . . (19) . . di</td>
</tr>
<tr>
<td>Ó . ò . . . . (1) . . ò .</td>
<td>C . ñ . oteh . . chehro . . ché</td>
</tr>
<tr>
<td>O . o . . ope . . oro . . ò .</td>
<td>J . j . . edge . . (11) . . je</td>
</tr>
<tr>
<td>U . u . . food . . . . û .</td>
<td>C . c . . leek . . . . ca . . . . qué</td>
</tr>
<tr>
<td></td>
<td>G . g . . leaghe . . . . leyn . . gué</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Cortas.</strong></th>
<th><strong>Continuantes.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>I . i . . ìl . . . . (4) . . it .</td>
<td>F . f . . safe . . . . fuego . . ef</td>
</tr>
<tr>
<td>E e . . ël . . . . (4) . . et .</td>
<td>V . v . . sae . . . . vi .</td>
</tr>
<tr>
<td>A a . am . . . . (4) . . at .</td>
<td>Ñ . ñ . . th . . . . si . . . . ió</td>
</tr>
<tr>
<td>A . ñ . . . . (4) . . ñ .</td>
<td>Ñ . ñ . . th . . . . del . . . . di</td>
</tr>
<tr>
<td>O o . . ol . . . . (7) . . ot .</td>
<td>S . s . . sel . . . . se . . . . es</td>
</tr>
<tr>
<td>U u . sup . . . . (8) . . ut .</td>
<td>Z z . . zel . . . . . . . . . . . . zel</td>
</tr>
<tr>
<td>Ò o . . til . . . . (10) . . òl .</td>
<td>Ë . j . . mesh . . . . . . . . . . . . if</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Diptongos.</strong></th>
<th><strong>Liquidas.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>ß . i . . eye . . (13) . . i .</td>
<td>K . g . . measure . . (20) . . gi</td>
</tr>
<tr>
<td>Ñ s . ool . . . . (18) . . ñ .</td>
<td>L . l . . fall . . . . (21) . . el</td>
</tr>
<tr>
<td>Ù u . . you . . . . yego . . yu .</td>
<td>R . r . . rare . . . . (22) . . ar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ligantes.</strong> (Coalescentes)</th>
<th><strong>Nasaless.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>W w . . emy . . (18) . . we .</td>
<td>M m . . sem . . . . semá . . am</td>
</tr>
<tr>
<td>Y y . . you . . . . rayita . . yó .</td>
<td>N n . . sem . . . . (22) . . en</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Aspirante.</strong></th>
<th><strong>Nasaless.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>H h . . lay . . . . (18) . . heق</td>
<td>I ñ . . sing . . . . (19) . . iñ</td>
</tr>
</tbody>
</table>
In 1852, Isaac Pitman began to try to "improve" the EPA, changing letterforms several times (the forms beyond Jan. 1852 not shown here). While these letterforms are not subject of this proposal, one of them (see red circle) was used as the source for the canonical lowercase form to U+ATB9 LATIN CAPITAL LETTER I WITH RIGHT U-TURN AT BOTTOM.

The complete U-turn together with the thick dot at its end distinguishes this letter from the Latin iota, which usually has a 90° or 120° turn without a distinctive closing.

---

**No. 4, Jan., 1847.**

:eaoem, ieooun, :aooun, w y h, p h d q j c g, f v t d z f g, i r, m n y.

*Specimen.*

*Nuthaq hueveror iz mor tu be dezird, or mor deltilful, dan de lit ov trut: for it iz de sors or wis- dum. Hwen de mijd iz harast wid obscursiti, distracted bj dsts, renderd torpid or sadnd bj ignor- ans or falsiti, and trut emerjes az from a dare abis, it fijnz fort instantienui, lje de sun dispersiun miste and vupurs, or lje de don dispeilin de fa/az ov darcnes.*

---

**No. 5, Proposed Jan., 1852.**

:i:aoou, i::oou, i::m, w y h, p h d q j c g, f v d a s f j, l r, m n y.

*Specimen.*

*Nuthaq hueveror iz mor tu be dezird, or mor deltilful, dan de lit ov trut: for it iz de sors or wis- dum. Hwen de mijd iz harast wid obscursiti, distracted bj dsts, renderd torpid or sadnd bj ignor- ans or falsiti, and trut emerjes az from a dare abis, it fijnz fort instantienui, lje de sun dispersiun miste and vupurs, or lje de don dispeilin de fa/az ov darcnes.*

---

**No. 6, Romanic Alphabet.**

:an, bd, ce, dd, ee, ff, gg, hh ii, jj, ko, ll, mm, nn, oo, pp, qq, rr, ss, tt, uu, vv, ww, xx, yy, zz.

*Specimen.*

*Nothing whatever is more to be desired, or more delightful, than the light of truth: for it is the source of wisdom. When the mind is harassed with obscurity, distracted by doubts, rendered torpid or saddened by ignorance or falsities, and truth emerges as from a dark abyss, it shines forth instantaneously, like the sun dispersing mists and vapours, or like the dawn dispelling the shades of darkness.*

---

**Fonetik Alfabet Wih Sics Low Vœlzel And For Diophiz.**

**LONG VOWELS.**

L i, E e, A a, Θ θ, O o, U u;
cest, age, sir, alms, all, ope, food;

**SHORT VOWELS.**

I i, E e, A a, O o, U u, W w;
it, edge, err, at, are, pass, not, nor, out, our, foot;

**DIPHTHONGS.**

I i, O or, Θ θ, W w;
pine, ool, owl, you, new;

**CONSONANTS.**

C q, Θ θ, A d, Σ f, Ξ ξ, Υ y,
such, thin, then, she, vision, sing,

together with the consonants of the old alphabet, except l, g, which are rejected.
Fig. 1852c: The American Reporter, Vol. 5, No. 26; Washington (DC) Nov. 1852; excerpt from p.40.
This was one of the magazines which used and discussed the EPA, including proposals for change of letterforms. In doing so, the letterforms changed between single issues and even between articles within the same issue. These letterforms are not subject of this proposal. However, this excerpt shows one of the rare examples of U+2E50 WIGGLY EXCLAMATION MARK in a context not addressed to children.

44 PHONETICL

ʊ wil lev Dr Ston tu tæc car ov his on reputësen. It wud be losabl for me tu testifi dat ʧ hav sm him rjt 120 wurdz a minit ₧
ʧ hav rin 201 wurdz in a minit wid ze, befor witnesses, but did not tec ds truBl tu get a sertificat dërför for ds simpl rzn dat
an abiliti tu rjt rapidili duz not prsv an abiliti tu report wel.

Fig. 1852d: The American Reporter, Vol. 5, No. 16; Washington (DC) 1852; p.43.
Showing U+2E51 INVERTED WIGGLY EXCLAMATION MARK to denote different levels of sarcasm.

upon mj cor, wid de afurans dat de cud rjt 60 wurdz per minit, and after mor practis cud undowtedli rjt faster (?)
A jentlman woz introducd to me bj Mr Lenlil az beig wun ov dər fastest rjtärz hwil he cud not rjt mor än 60 or 70 wurdz per minit!??
A wëstern fonografær woz told bj wun ov de ledin fonografærz oy de

Fig. 1852e: The Ploughshare, Vol. 4, No. 13; Washington (DC) March 1852; p.9.
Showing a proposal of letterforms which were used for a short time before the finalizing of EPA 1855 (the Cincinnati alphabet) in the USA:
These intermediate forms are not subject of this proposal. However, this is used as source as U+A7C8 LATIN SMALL LETTER U WITH INSIDE BAR for the canonical lowercase form of U+A7C8 LATIN CAPITAL LETTER U WITH INSIDE BAR, which is used in EPA 1868 employing a special case pairing.

Æ TWELV VÆL SCÆL.

ʊ i ñ ñ fits pin [yuzd in frenç]
æ s æ ren wet clær fæder
a a æ a har hat Frans pas
ɔ o æ æ cot cot car Cinq
ɔ o u u hold hol hært hat
u u æ æ ful fut tæn regular
Fig. 1853a: The Plowshare, Vol. 5, No. 34; Washington (DC) 1853; p.171.
This was another of the magazines which used and discussed the EPA (see fig. 1852c).
It contains discussion of letterforms and their application to various vocal discrimination schemes even more thoroughly than the magazine cited by fig. 1852c.
However, the use of the punctuation marks of EPA 1847 is continued unchangedly.
The example here shows an independent evidence for the U+2E4F PHONOTYPIC QUESTION MARK being different from a mirrored question mark (see red circles).
Fig. 1854a: American Manual of Phonography (Elias Longley; Cincinnati 1854): excerpt from p.10.
The alphabet shown here resembles EPA 1855 (the "Cincinnati alphabet"; see fig. 1855a), only missing some letters, and using one letterform (for [uː]) from EPA 1847 which was replaced in EPA 1855.
Regarding the case pairing, this alphabet version is compatible with EPA 1855.

### THE ENGLISH PHONETIC ALPHABET.

<table>
<thead>
<tr>
<th>The letter written</th>
<th>prntd</th>
<th>is always sounded as</th>
<th>The letter written</th>
<th>prntd</th>
<th>is always sounded as</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>E</td>
<td>ee in eel</td>
<td>P</td>
<td>P</td>
<td>p in pole</td>
</tr>
<tr>
<td>A</td>
<td>a</td>
<td>a .. ale</td>
<td>B</td>
<td>b</td>
<td>b .. bowl</td>
</tr>
<tr>
<td>H</td>
<td>H</td>
<td>a .. alms</td>
<td>T</td>
<td>t</td>
<td>t .. toe</td>
</tr>
<tr>
<td>O</td>
<td>o</td>
<td>o .. all</td>
<td>D</td>
<td>d</td>
<td>d .. doe</td>
</tr>
<tr>
<td>U</td>
<td>u</td>
<td>o .. ope</td>
<td>C</td>
<td>c</td>
<td>c .. came</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>i .. ill</td>
<td>G</td>
<td>g</td>
<td>g .. game</td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>e .. ell</td>
<td>K</td>
<td>k</td>
<td>k .. jecer</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
<td>a .. am</td>
<td>J</td>
<td>j</td>
<td>j .. jecer</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o .. olive</td>
<td>G</td>
<td>g</td>
<td>g .. game</td>
</tr>
<tr>
<td>u</td>
<td>u</td>
<td>u .. up</td>
<td>S</td>
<td>s</td>
<td>s .. seal</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>i .. isle</td>
<td>Z</td>
<td>z</td>
<td>z .. seal</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o .. oil</td>
<td>E</td>
<td>e</td>
<td>e .. iecer</td>
</tr>
<tr>
<td>s</td>
<td>s</td>
<td>o .. ocel</td>
<td>Z</td>
<td>z</td>
<td>z .. iecer</td>
</tr>
<tr>
<td>u</td>
<td>u</td>
<td>u .. male</td>
<td>R</td>
<td>r</td>
<td>r .. rar</td>
</tr>
<tr>
<td>y</td>
<td>y</td>
<td>y .. yea</td>
<td>L</td>
<td>l</td>
<td>l .. lull</td>
</tr>
<tr>
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<td>w</td>
<td>w .. way</td>
<td>M</td>
<td>m</td>
<td>m .. mum</td>
</tr>
<tr>
<td>h</td>
<td>h</td>
<td>h .. hay</td>
<td>N</td>
<td>n</td>
<td>n .. nun</td>
</tr>
<tr>
<td>y</td>
<td>y</td>
<td>ng .. sing</td>
<td>W</td>
<td>w</td>
<td>ng .. sing</td>
</tr>
</tbody>
</table>
Fig. 1855a: American Phonetic Journal (ed. Randall P. Prosser), Cincinnati (Ohio) 1853, p.12. This is the first complete listing of EPA 1855 (the "Cincinnati alphabet"), the version which was propagated by a group of supporters in Cincinnati. This alphabet was used there without any changes at least until 1864 (see fig. 1864b).

The punctuation marks are the same as in EPA 1847 (see again U+2E4F PHONOTYPIC QUESTION MARK not being a mirror image of the "ordinary" question mark). The elision dot is called here "inverted period", which obviously refers to the application of the lead type.

The missing uppercase form for η (last line of the table, right part) is considered being a typo, as the usual EPA form is found in other documents using the Cincinnati alphabet (see fig. 1864b).

---

THE PHONETIC ALPHABET.

The Phonetic letters in the first column are pronounced like the italic letters that follow. The last column contains the names of the letters.

<table>
<thead>
<tr>
<th>LETTERS</th>
<th>ILLUSTRATIVE WORDS</th>
<th>NAME LETTERS</th>
<th>ILLUSTRATIVE WORDS</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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</tr>
<tr>
<td>Long Vowels.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E e</td>
<td>ele</td>
<td>P p</td>
<td>pale</td>
<td>pe</td>
</tr>
<tr>
<td>E o</td>
<td>earth</td>
<td>B b</td>
<td>bale</td>
<td>be</td>
</tr>
<tr>
<td>G</td>
<td>alo</td>
<td>T t</td>
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<td>te</td>
</tr>
<tr>
<td>A q</td>
<td>air</td>
<td>D d</td>
<td>dame</td>
<td>de</td>
</tr>
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<td>A u</td>
<td>arms</td>
<td>C q</td>
<td>cheer</td>
<td>qa</td>
</tr>
<tr>
<td>Θ o</td>
<td>all</td>
<td>J j</td>
<td>jeer</td>
<td>ja</td>
</tr>
<tr>
<td>Ω o</td>
<td>ock</td>
<td>K k</td>
<td>came</td>
<td>ka</td>
</tr>
<tr>
<td>Ω o</td>
<td>ooze</td>
<td>G g</td>
<td>game</td>
<td>ga</td>
</tr>
<tr>
<td>Short Vowels.</td>
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<tr>
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<td>ill</td>
<td>F f</td>
<td>fain</td>
<td>ef</td>
</tr>
<tr>
<td>E e</td>
<td>eel</td>
<td>V v</td>
<td>vain</td>
<td>ve</td>
</tr>
<tr>
<td>A a</td>
<td>am</td>
<td>R r</td>
<td>thigh</td>
<td>it</td>
</tr>
<tr>
<td>O o</td>
<td>on</td>
<td>H h</td>
<td>thy</td>
<td>th</td>
</tr>
<tr>
<td>U u</td>
<td>up</td>
<td>S s</td>
<td>seal</td>
<td>se</td>
</tr>
<tr>
<td>U u</td>
<td>wood</td>
<td>Z z</td>
<td>zcal</td>
<td>zc</td>
</tr>
<tr>
<td>Diphthongs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Æ i</td>
<td>eco</td>
<td>Σ j</td>
<td>shall</td>
<td>sj</td>
</tr>
<tr>
<td>Ο ə</td>
<td>oil</td>
<td>Κ k</td>
<td>vision</td>
<td>ge</td>
</tr>
<tr>
<td>Σ ə</td>
<td>seal</td>
<td>Λ l</td>
<td>julf</td>
<td>el</td>
</tr>
<tr>
<td>Κ η</td>
<td>depe</td>
<td>R h</td>
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<td>Coalesc.</td>
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<tr>
<td>Y y</td>
<td>yea</td>
<td>M m</td>
<td>main</td>
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<td>W w</td>
<td>way</td>
<td>N n</td>
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<td>en</td>
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<tr>
<td>Breathing.</td>
<td></td>
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<tr>
<td>H h</td>
<td>hay</td>
<td>N n</td>
<td>sing</td>
<td>ig</td>
</tr>
</tbody>
</table>

= The marks of punctuation are the same as in the Romanic orthography, excepting the following changes and additions: the mark of interrogation is placed before the first word of a question; ? is placed at the end of a sentence, and indicates doubt; ? indicates laughter; ! surprise; ? sorrow; the inverted period signifies the omission of a letter.
Fig. 1855b: ibid., p.31. Showing a sample of the use of EPA 1855.

---

**JERMANSILVER.**

---

Fu ov sr rederz qr probabilu awar hu meni aplikason qr ns-o-daz mad ov dia yuful komposifon. We kol it komposifon, oldo de majoriti ov dw pln imajin dat it iz a metal(*sui generis*)—but suq iz not de fakt. It iz kompozd ov wun part nikel, wun part ov spelter ov ziqk, and tre parts ov koper; but el dez sustanse hav tu be pur, and ekspozd tu a grat hat befor da miks amug demselv. De ziqk metal, hwig iz ov a volatil natyur, iz not put in de pot until de fyrst tw qr wil yuunjed tageder. De refraktori natyur ov de nikel, and de diffikulit ov obtaniz de metal fré ov qseuik, iron and kobelt, qr de koz dat not unfrekwenti we se Jerman silver sponz ov a gold yelo kular, hwij Jerman silver prepaed, from pur metalz, wil sikoal in hwjnes sterlig silver, and wil not tgrnif. Te and tabl sponz, nwz ov forks, fjmen and fip kaptenz spekij trumpets, poket-bak klops, te sets, lamps and gun mntigu qr ns mosti mad ov Jerman silver. Upwars ov fity thzand yndnd ov dez komposifon iz manyufaktyurd in de kuntri anyuall, for hwig de nikel iz impoetd from Jerman and Igland. Dår qr but tre lokaliz ov nikel or in de kuntri—Catham, Konektikut; La Mot, Mizeri, and Lak Superior.
Fig. 1855c: The American Phonetic Dictionary of the English Language. Designed by Nathanael Storrs, compiled by Dan S. Smalley. Cincinnati 1855.

Showing the title page, p.iii claiming this being the first phonetic dictionary of the English language, and an excerpt from p.xxxi showing EPA 1855 (the Cincinnati alphabet).
Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

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Fig. 1855d: ibid., p.1.
Fig. 1855e: ibid., p.741.

PRONUNSIATION
on
JEOGRAFIKAL NUMZ.

Aaben, Æ'ken.
Aalborg, Æll'borg.
Aars, Æ'rs.
Argovia, Ærg-o'-vé. [Fr.]
Aarhuus, Æh'hus.
Aalborg, Æh'kö-ko.
Aalbæk, Æ-blek.
Aabak, Æ-blek.
Aabek, Æ-bæk.
Abso, Æ-bso.
Abbenose, Æ-benose.
Absolom, Æs'-hlo.
Aberystwyth, Ær-bis-ith-th.
Abernetty, Ær-nétt-ih.
Abex, Æl'bez.
Abington, Æb'-ting.
Abo, Æ'bo.
Abomey, Æ-bô-má.
Aboukir, Æb'-kör.
Aboukir, Æ'b-ko-ká.
Abuhat, Æb'-hät.
Abuham, Æb'-ham.
Abuhel, Æb'-hél.
Abuham, Æb'-hém.
Abuham, Æb'-heam.
Abydos, Æb'-dy'-ós.
Aburaba, Æb'-ué-rá-ba.
Abras, Æb'-ra-s.
Abramos, Æb'-ra-mós.
Abras, Æb'-ra-s.
Abramos, Æb'-ra-mós.
Abras, Æb'-ra-s.
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Abras, Æb'-ra-s.
The alphabet shown here is one of the competitors of the EPA, published in the same era (promoted by the author in exactly this form at least from 1846 to 1858). While this alphabet is not subject of this proposal, it is the source of the lowercase letterform U+0057 LATIN SMALL LETTER A WITH LOOP.
(An enlarged excerpt from this table, containing that letter, is shown at the lower right.)
Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

Fig. 1856a: Biographies of the Presidents of the United States (F. G. Adams); Cincinnati (Ohio) 1856; title and p.13 (showing another publication using EPA 1855).

Fig. 1856b: An English Grammar, printed phonetically (London 1856); title page and p. 4. Showing EPA 1856. The letter pair U+A7CC LATIN CAPITAL LETTER REVERSED ENLARGED SMALL U / U+A7CD LATIN SMALL LETTER REVERSED U) is unique to it.

THE PHONETIC ALPHABET.

The phonetic letters in the first column are pronounced like the italic letters in the words that follow. The last column contains the number of the letters.

**CONSONANTS.**

- *Guttural.*
  - K k..: lock, cane.........ks
  - G g..: loupe, gain.........ge
  - H h..: hey, house.........he
  - Y y..: yet, see (you).......ye
  - L l..: lisp, see (yoo).....le
  - D d..: dade, cup.........de
  - C c..: vicious, stick, she...ce
  - J j..: vision, edge.......je
  - S s..: his, seal.........es
  - Z z..: his, seal.........ez
  - H h..: wrench, thight.....he
  - W w..: speak, quide.......we

- *Liguids.*
  - L l..: fall, light....l..ll
  - R r..: more, right....rr
  - U u..: sing, long....ug
  - N n..: seen, met.........um

- *VOWELS.*
  - A a..: am, face, far.....ai
  - E e..: call, head, say.....e
  - I i..: ill, pit, fall.....i
  - O o..: on, nor, or.....o
  - U u..: fall, foot.....uu

- *Lateral.*
  - P p..: pop, rot...p
  - B b..: bow, boss...b
  - F f..: lof, fat...f
  - V v..: move, vai...v
  - W w..: whet, qui...w

- *Diphthongs.*
  - oi, oi, ou, ou...i
  - as heard in by...ay, eye, eay, eau, eaw.
Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

Fig. 1856d: The Phonetic Journal (ed. Isaac Pitman, London 1856); excerpt from p.334. This shows a text specimen using EPA 1856, with the character meanings like shown in fig. 1856c. One occurrence of U+A7CD LATIN SMALL LETTER REVERSED U is marked.

Fig. 1858a: American Phonetic Journal, vol. 5, no. 7, July 1858: excerpt from p.106. Showing the use of U+2E50 WIGGLY EXCLAMATION MARK in EPA 1855.

Fig. 1860a: The Phonetic Journal (ed. Isaac Pitman, London 1860); excerpt from p.1. Showing a variant of EPA 1856 (the letter used for [ʌ] is exchanged).
14 Jan., 1860]

THE PHONETIC JOURNAL

LITERARI GLÆNIEZ.

Everi touf hvito wi nò and anholód in dis lieif, 
bat du not veliffræl obo, iiz tiken awo from wi 
kwam wi enter dis spiritual world; Në iiz tiken 
auro from wi bihoz we ha no rift afkzen for it; 
kwij in oar hvito tu retin it; for kwij kan 
aboed wi no but kwot hay enterd in oar lieif tu oef. 
A god man's foundy mo foseh him, or me de 
and liv ito him tu mor. Hëy fortun mo fel, or 
hek half dako. Helslimi and nepte mo enderll 
alak his karcher. In everisntemy ov dis

But hwen dou mokst de propzns fel, 
and kwam de sol hay graigt de reiz, 
hou fast de drizo câyz mel 
beniè de worm and vói lyt ligt! 
Ja de es findn a nobor besh, 
a glori ov de world ov u! 
and Paridiz returntu oef, 
and blumz ajen for wi in de.

Dou stopp and lyziè Son ov Aman, 
Rodimer from de bondy ov vin, 
tig Dou de vói spark dont fun 
Dat sets mëi kart on foin widin.

Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

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2011-01-18
THE PHONETIC ALPHABET.

The phonetic letters in the first column are pronounced like the italic letters in the words that follow. The last column contains the names of the letters.

<table>
<thead>
<tr>
<th>CONSONANTS.</th>
<th>Liquids.</th>
<th>VOWELS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K k...leak...ks</td>
<td>ñ n...sing...iñ</td>
<td>A a...am...at</td>
</tr>
<tr>
<td>G g...league...ge</td>
<td>N n...seen...en</td>
<td>Æ æ...ale...æ</td>
</tr>
<tr>
<td>H h...hay...eh</td>
<td>M m...seem...am</td>
<td>E e...ell...et</td>
</tr>
<tr>
<td>y y...yet...ye</td>
<td>L l...full...el</td>
<td>ö ö...oep...ö</td>
</tr>
<tr>
<td></td>
<td>R r...rare...ar</td>
<td>I i...ill...it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ì ì...rel...i</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lingual.</td>
<td></td>
<td>Labial.</td>
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<tr>
<td>T t...fate...ti</td>
<td>Ú ú...on...ot</td>
<td>O o...on...ot</td>
</tr>
<tr>
<td>D d...fate...di</td>
<td>Æ æ...all...æ</td>
<td>Ó ó...all...o</td>
</tr>
<tr>
<td>C ç...vicious...ïç</td>
<td>S s...up...st</td>
<td>Ù ù...all...u</td>
</tr>
<tr>
<td>J j...vision...ji</td>
<td>Ë è...ale...ë</td>
<td>Ù ù...food...u</td>
</tr>
<tr>
<td>S s...his...es</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z z...his...iz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R r...wreathe...ir</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H h...wreathe...di</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labial.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P p...rope...pi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B b...robe...bi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F f...safe...ef</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V v...sare...vi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W w...wet...we</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Diphthongs:</td>
<td>as heard in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ay, by, voic, now.</td>
<td></td>
</tr>
</tbody>
</table>

He numberiŋ ov de paraγrafs bei dzesn and grossz is a kontribucion towards a yunitersal sistem ov kountiŋ, mxn, wets, and mejurs, best on de number twelve and its metzielz. De seinz "I, 2" represent de numbers ten and eleven, and "10" represents wsn dzesn; "16," wsn dzesn and siks; 433, fır gross, feiv dzesn, and hrı; 7,819, seven tripeiz, et gross, wsn dzesn and mxn; and so on. It qud bi konsidér a strög argumen for a twelve sistem ov noţeçon dat ås wi prefes tu rekon bei tenz, yet wi kount artiķelz in tred, djen-erali, bei de dzesn and de gross; msk de gilij konsisť ov twelv pens; mejur bei de fut kontenig twelv inges; and diveid de de intu tu dzesn ours.
Fig. 1860g: ibid., excerpt from p.12 (noted as “10” in the duodecimal system).
The encircled duodecimal number shows clearly that the shape of the duodecimal digit
eleven is based on an ezh-shaped digit three is intentional, as the first digit, an “ordinary”
unturned digit three, is not ezh-shaped.

Fig. 1864a: The Reporting Magazine; Vol. 3, 1864: Appendix "Key to the Reporting
Magazine", excerpt from p.1: Showing the use of EPA 1856 in 1864.

THE PHONETIC ALPHABET.
The Phonetic Alphabet consists of 36 letters, namely, the 23 useful letters of the common alphabet (c, q and x being rejected), and the
11 new ones below. J is used for the French j (ch), or g in edge, or s in “vision;” hence dj represents J in Johns, and dg in edge.
Te (t ch) represents eh in cheese, and teh in catch. Y and w are consantants: w being replaced by hw. The vowels a, e, i, o, u, have
invariably their short sounds, as in pat, pet, pit, pot, put. All the
other old letters have their usual signification. The italic letters
in the words in the third line denote the sounds of the letters.

VOWELS.

Consonants.

The double letter s, as in unit unite, duty, value, is written thus:
"yunit, yuneit, diunit, valui." When si, ce, make a dissyllabic diph
thong, the second letter is marked with a diacritic; thus, soffing, sculp.
The order of the Phonetic Alphabet, and the names of the letters are;

CONSONANTS.

VOWELS.
Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

PHONETIC ALPHABET OF THE ENGLISH LANGUAGE.

Each letter has the sound of the indicated letter or letters in the corresponding language.

<table>
<thead>
<tr>
<th>Letter</th>
<th>IPA</th>
<th>Corresponding English Sound</th>
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</thead>
<tbody>
<tr>
<td>B</td>
<td>/b/</td>
<td>&quot;b&quot;</td>
</tr>
<tr>
<td>C</td>
<td>/k/</td>
<td>&quot;k&quot;</td>
</tr>
<tr>
<td>D</td>
<td>/d/</td>
<td>&quot;d&quot;</td>
</tr>
<tr>
<td>E</td>
<td>/e/</td>
<td>&quot;e&quot;</td>
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<td>F</td>
<td>/f/</td>
<td>&quot;f&quot;</td>
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<td>G</td>
<td>/g/</td>
<td>&quot;g&quot;</td>
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<td>H</td>
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<td>I</td>
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<td>&quot;i&quot;</td>
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<tr>
<td>J</td>
<td>/dʒ/</td>
<td>&quot;j&quot;</td>
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<td>K</td>
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<td>&quot;k&quot;</td>
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<td>Q</td>
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<td>W</td>
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<td>&quot;w&quot;</td>
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<td>X</td>
<td>/ks/</td>
<td>&quot;ks&quot;</td>
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<tr>
<td>Y</td>
<td>/j/</td>
<td>&quot;y&quot;</td>
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<tr>
<td>Z</td>
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<td>&quot;z&quot;</td>
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<tr>
<td>D</td>
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<td>&quot;d&quot;</td>
</tr>
<tr>
<td>E</td>
<td>/e/</td>
<td>&quot;e&quot;</td>
</tr>
<tr>
<td>F</td>
<td>/f/</td>
<td>&quot;f&quot;</td>
</tr>
<tr>
<td>G</td>
<td>/g/</td>
<td>&quot;g&quot;</td>
</tr>
<tr>
<td>H</td>
<td>/h/</td>
<td>&quot;h&quot;</td>
</tr>
<tr>
<td>I</td>
<td>/i/</td>
<td>&quot;i&quot;</td>
</tr>
<tr>
<td>J</td>
<td>/dʒ/</td>
<td>&quot;j&quot;</td>
</tr>
<tr>
<td>K</td>
<td>/k/</td>
<td>&quot;k&quot;</td>
</tr>
<tr>
<td>L</td>
<td>/l/</td>
<td>&quot;l&quot;</td>
</tr>
<tr>
<td>M</td>
<td>/m/</td>
<td>&quot;m&quot;</td>
</tr>
<tr>
<td>N</td>
<td>/n/</td>
<td>&quot;n&quot;</td>
</tr>
<tr>
<td>O</td>
<td>/o/</td>
<td>&quot;o&quot;</td>
</tr>
<tr>
<td>P</td>
<td>/p/</td>
<td>&quot;p&quot;</td>
</tr>
<tr>
<td>Q</td>
<td>/k/</td>
<td>&quot;k&quot;</td>
</tr>
<tr>
<td>R</td>
<td>/r/</td>
<td>&quot;r&quot;</td>
</tr>
<tr>
<td>S</td>
<td>/s/</td>
<td>&quot;s&quot;</td>
</tr>
<tr>
<td>T</td>
<td>/t/</td>
<td>&quot;t&quot;</td>
</tr>
<tr>
<td>U</td>
<td>/u/</td>
<td>&quot;u&quot;</td>
</tr>
<tr>
<td>V</td>
<td>/v/</td>
<td>&quot;v&quot;</td>
</tr>
<tr>
<td>W</td>
<td>/w/</td>
<td>&quot;w&quot;</td>
</tr>
<tr>
<td>X</td>
<td>/ks/</td>
<td>&quot;ks&quot;</td>
</tr>
<tr>
<td>Y</td>
<td>/j/</td>
<td>&quot;y&quot;</td>
</tr>
<tr>
<td>Z</td>
<td>/z/</td>
<td>&quot;z&quot;</td>
</tr>
</tbody>
</table>

Note: The table above is not exhaustive and may not cover all English sounds.

In Phonetic Spell.

Fig. 1864b: The New Testament, in phonetic spelling; Cincinnati (Ohio) 1864. Title; pp. vi, viii, 21.

Givin' an example of the unchanged use of EPA 1855 in Cincinnati for at least 10 years.

Rule of Acrost:
1. Words of two syllables are selected on the first.
2. Words of three syllables are selected on the third from the end.
3. The final syllable of EPA 1855 has not changed in Cincinnati for at least 10 years.
4. The sounds of pronunciation are not the same in the old and the new systems, nor are the meanings the same in pronunciation.
5. The last word in a sentence that includes a question is at the end of a sentence, and the question mark is at the end of the sentence.

SE GOSPEL AKORDIN' TU SINT MARU.
Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

Fig. 1868a: The Trial of William Rodger (Isaac Pitman; London 1868); p. vi and p.3. Showing the EPA 1868, which reintroduces single letters for some diphthongs and consonant clusters.

The encircled letter introduced here (U+A7C7 LATIN CAPITAL LETTER U WITH INSIDE BAR) is in fact a TURNED ROUNDTOP A (see the proposed U+A7AE LATIN CAPITAL LETTER ROUNDTOP A).

Therefore, a unification with U+0244 LATIN CAPITAL LETTER U BAR is inappropriate, as this letter has a protruding bar. The difference is comparable to:

U+019F LATIN CAPITAL LETTER O WITH MIDDLE TILDE (which, as the reference glyph in the Standard shows, is in fact an O with non-protruding bar; this letter is common in EPA), vs. U+A74A LATIN CAPITAL LETTER O WITH LONG STROKE OVERLAY, showing a protruding bar.

THE PHONETIC ALPHABET.

The phonetic letters in the first column are pronounced like the italic letters in the words that follow. The last column contains the names of the letters.

CONSONANTS.

<table>
<thead>
<tr>
<th>Mutes.</th>
<th>Liquids.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P p...rope, post.......pi</td>
<td>L l...full, light.....el</td>
</tr>
<tr>
<td>B b...robe, boast.......bi</td>
<td>R r...more, right...ar</td>
</tr>
<tr>
<td>T t...fate, tip........li</td>
<td>Coalescents.</td>
</tr>
<tr>
<td>D d...fade, dip.........di</td>
<td>W w...wet, quit......we</td>
</tr>
<tr>
<td>C c...cheap, fetch....ge</td>
<td>Y y...get, young....ye</td>
</tr>
<tr>
<td>J j...jump, bridge.....je</td>
<td>Aspirate.</td>
</tr>
<tr>
<td>K k...leek, cane....ke</td>
<td>H h...hay, house.....eq</td>
</tr>
<tr>
<td>G g...league, gain....ge</td>
<td>VOWELS.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Continuants.</th>
<th>Guttural.</th>
</tr>
</thead>
<tbody>
<tr>
<td>F f...sifo, fat.......ef</td>
<td>A a...am, fast, for...at</td>
</tr>
<tr>
<td>V v...save, eat.......vi</td>
<td>A a...aims, father....a</td>
</tr>
<tr>
<td>H h...wreath, thigh...hi</td>
<td>E e...ell, any, her...et</td>
</tr>
<tr>
<td>A a...wreath, thy...di</td>
<td>E e...ale, fair, bear...e</td>
</tr>
<tr>
<td>S e...lily, so...es</td>
<td>I i...ill, pity, filial...it</td>
</tr>
<tr>
<td>Z z...his, seal........ni</td>
<td>T t...eel, est, mere...e</td>
</tr>
<tr>
<td>gr...vicious, ghe.......lf</td>
<td>Labial.</td>
</tr>
<tr>
<td>z z...vision, pleasure...zi</td>
<td>O o...om, not, nor...ot</td>
</tr>
<tr>
<td>nasal.</td>
<td>O o...all, law, ought...o</td>
</tr>
<tr>
<td>m m...sem, met.......em</td>
<td>U u...up, son, cur...ot</td>
</tr>
<tr>
<td>n n...sem, net.......en</td>
<td>O o...cope, cost, pour...o</td>
</tr>
<tr>
<td>j y...sing, long.......iy</td>
<td>U u...full, foot....ut</td>
</tr>
</tbody>
</table>

Diphthongs: i j, e s, u u. as heard in by, now, new.

"William Bojer (Rodger) : ker ov Mestiere Tiuli (Tinley) and Sunz, 7 Weter stritt, Liverpool," was duji entier in de Fonetisk Journal for Februarri, 1848, p.72. Hi entier de servis ov dis form in 1844, at de ej ov fitten.

Wek hav ne rekord ov him dujip 1848, bwen hi was droig mir de ekspiration ov his fy yir's sprentiply; bset dujip dis yir it apir dis boujform de desis ov biwikn a traveling professional fonografik lektorujer og tager. Hi konnent in de trus ov Edinburhove og Dalkif (Dalkeith).

Gr frst konsumt ov fonografik instruktion buks for his pupils, wes med tu him in Februarri, 1960, and forwarded tu Edinburhove. Hi碗 svipid wid instruktion buks for tu yir and a haft: de aknt wan den inklust tu P 67. As wu kud giv nor remittance, bset unli promisest tu pa, de aknt wan klered in Julii, 1892. But bijdso promises, hi send kopis ov som tijel duds ov properti hwic wun sol kun inhis pro yiren, in order tu aul ur firs dat wi wer inkorrig a bad det. Dis pepers wer mir fabricjons, as wi afterwards lerand, on biwikn akevened wi his famili, hun or el respectabel og wordi pipel.

Hi kontinuul tu lektur og tie Fonografis in Edinburhove og Dalkif for mow an yir. An entier in his aknt respektig a parcel ov instruktion buks sent 25 Julii, 1891. "tu remen at de stefon (Edinburhove) til kold for," naturlsi eksjet us ae apsjon, is bipla a komun okzernes. Wi hav in dis present yir lerad de rizon for dis prekojen tu prevent his adress from bigg men.

Sodeni us talented og succesful lektorujer adress us from Berik-on-Twist (Berwick-on-Tweed), and eksplend de kos ov his kroij de border—ov kore hi didnot innust dat der wan einlig ov de karakter ov a "sh" in it—bliy sig dat hi kud perfekt his Edinburhove og Dalkif populfr de post, hwi hi read og tel frej klasses in Berik—a gari eskelet amenjen wi sut.

Duaj de foleig frej yirs hi work his we art fru de trus ov Northumberland og Durham, lekturujon on Fonografis, og tieq de art in Anik (Alnwick), Morpes, North
Fig. 1871a: The Other Life (William Holcombe); London 1871; p.2 and p.8.
Showing the 1871 form of EPA 1868.
Compared with the original EPA 1868, one character is dropped, and for one character another meaning is assigned. From an encoding point of view, this version has no features (esp. case mapping) which must be handled differently from EPA 1868; therefore it is subsumed under EPA 1868.

THE PHONETIC ALPHABET.

The phonetic letters in the first column are pronounced like the static letters in the words that follow. The last column contains the names of the letters.

CONSONANTS.

Mutes.
P p...rope, post.........pi
B b...robe, boast.....bi
T t...taro, tip...........ti
D d...fade, di...........di
G g...cheap, fish.....gi
J j...jump, bridge....ja
K k...seek, cane.......ke
G g...league, gain.......ge

Consonants.
F f...safe, fat........of
V v...save, vat.........vi
H h...wreath, thigh....hi
D d...wreath, thigh....di
S s...his, seal..........si
X x...his, seal..........x
Z z...his, seal..........zi

VOWELS.

Guttural.
A a...am, fast, far......at
A a...aim, father......aa
E e...ell, head, any......et
E e...ell, air, bear......a
I i...ill, pig, filial.....it
U u...eul, out, more.....ut

Labial.
O o...on, not, now......ot
O o...all, lose, ought....oo
Y y...sp, son, cur........yt
O o...ope, cost, pour......or
U u...fall, foot.........ut
U u...do, food, tour......uu

Diphthongs: 

\[\text{\& i, as heard in by, now, now, boy.}\]
Fig. 1873a: The Future of the English Language: An Argument for a Spelling Reform; William E. A. Axon, London 1874 (reprinted from the "Quarterly Journal of Science" for July 1873); p.12/13. 

Showing the 1871 subset of EPA 1868 in different fonts and styles. Apparently, two lines are lost in the scanning process where the image shows a white gap in the middle.

A VIEW OF THE PHONETIC ALPHABET,
IN VARIOUS STYLES OF WRITING AND PRINTING.

**CONSONANTS.**

<table>
<thead>
<tr>
<th>Example</th>
<th>Roman.</th>
<th>Old English</th>
<th>Ita.</th>
<th>Script</th>
<th>Short-hand</th>
<th>Name.</th>
</tr>
</thead>
<tbody>
<tr>
<td>peep</td>
<td>P p</td>
<td>P p</td>
<td>P p</td>
<td></td>
<td>pe</td>
<td>pe</td>
</tr>
<tr>
<td>sib</td>
<td>B b</td>
<td>B b</td>
<td>B b</td>
<td></td>
<td>bee</td>
<td>ab</td>
</tr>
<tr>
<td>right</td>
<td>T t</td>
<td>T t</td>
<td>T t</td>
<td></td>
<td>too</td>
<td>ot</td>
</tr>
<tr>
<td>dead</td>
<td>D d</td>
<td>D d</td>
<td>D d</td>
<td></td>
<td>dee</td>
<td>eh</td>
</tr>
<tr>
<td>chuck</td>
<td>C c</td>
<td>C c</td>
<td>C c</td>
<td></td>
<td>chey</td>
<td>it</td>
</tr>
<tr>
<td>judge</td>
<td>J j</td>
<td>J j</td>
<td>J j</td>
<td></td>
<td>jay</td>
<td>co</td>
</tr>
<tr>
<td>cake</td>
<td>K k</td>
<td>K k</td>
<td>K k</td>
<td></td>
<td>kay</td>
<td>ot</td>
</tr>
<tr>
<td>pig</td>
<td>G g</td>
<td>G g</td>
<td>G g</td>
<td></td>
<td>gay</td>
<td>aw</td>
</tr>
<tr>
<td>faith</td>
<td>F f</td>
<td>F f</td>
<td>F f</td>
<td></td>
<td>ef</td>
<td>ut</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example</th>
<th>Roman.</th>
<th>Old English</th>
<th>Ita.</th>
<th>Script</th>
<th>Short-hand</th>
<th>Name.</th>
</tr>
</thead>
<tbody>
<tr>
<td>bathec</td>
<td>B b</td>
<td>B b</td>
<td>B b</td>
<td></td>
<td>bathec</td>
<td>bathec</td>
</tr>
<tr>
<td>sanvec</td>
<td>S s</td>
<td>S s</td>
<td>S s</td>
<td></td>
<td>sanvec</td>
<td>sanvec</td>
</tr>
<tr>
<td>size'</td>
<td>Z z</td>
<td>Z z</td>
<td>Z z</td>
<td></td>
<td>size'</td>
<td>size'</td>
</tr>
<tr>
<td>skip</td>
<td>S j</td>
<td>S j</td>
<td>S j</td>
<td></td>
<td>skip</td>
<td>skip</td>
</tr>
<tr>
<td>azure</td>
<td>K z</td>
<td>K z</td>
<td>K z</td>
<td></td>
<td>azure</td>
<td>azure</td>
</tr>
</tbody>
</table>

**PÆOWELS.**

<table>
<thead>
<tr>
<th>Example</th>
<th>Roman.</th>
<th>Old English</th>
<th>Ita.</th>
<th>Script</th>
<th>Short-hand</th>
<th>Name.</th>
</tr>
</thead>
<tbody>
<tr>
<td>thee</td>
<td></td>
<td>(thee)</td>
<td></td>
<td></td>
<td>thee</td>
<td>thee</td>
</tr>
<tr>
<td>ooze</td>
<td>W w</td>
<td>W w</td>
<td>W w</td>
<td></td>
<td>ooze</td>
<td>ooze</td>
</tr>
</tbody>
</table>

**DIPHTHONGS.**

<table>
<thead>
<tr>
<th>Example</th>
<th>Roman.</th>
<th>Old English</th>
<th>Ita.</th>
<th>Script</th>
<th>Short-hand</th>
<th>Name.</th>
</tr>
</thead>
<tbody>
<tr>
<td>my</td>
<td>I i</td>
<td>I i</td>
<td>I i</td>
<td></td>
<td>my</td>
<td>eye</td>
</tr>
<tr>
<td>new</td>
<td>N u</td>
<td>N u</td>
<td>N u</td>
<td></td>
<td>new</td>
<td>new</td>
</tr>
</tbody>
</table>

The diphthongs in "ay" (yes), "oi" (toy), "ou" (vous), are written by the single letters that represent their elements, thus:

```
ai [aɪ]  oi [ɔɪ]  ou [ʌ]  
```

The Phonetic Alphabet consists of 38 letters, namely, the 23 useful letters of the common alphabet (a, o, and e being rejected) and 15 new ones. The vowels a, e, i, o, u have invariably their short sounds, as in pot, pot, pot, pot. All the other old letters have their usual signification.

**SPECIMEN OF PHONETIC PRINTING.**

Bij de Fonetik Alfabet eni person, old or yep, ma bi tot tu rid, bi in fonetik and in ordinari buks, in fri msnds,—ai, ofen in twenti ourz’ instrskfon,—a task wim iz rct akompîft in fri yirz ov toil bi de old alfabet. Wat fider or tâger wil not hel di gret buun tu ediksfon?—dis powerful mafin for de difuzon ov nolej!
I. PITMAN'S ENGLISH PHONOGRAPHIE.

Vokale.

<table>
<thead>
<tr>
<th>Antiqua</th>
<th>Cursiv</th>
<th>Schreibschrift</th>
<th>Stenographie</th>
<th>Antiqua</th>
<th>Cursiv</th>
<th>Schreibschrift</th>
<th>Stenographie</th>
</tr>
</thead>
<tbody>
<tr>
<td>A a</td>
<td>H a</td>
<td>$\Rightarrow$</td>
<td>A a</td>
<td>A a</td>
<td>$\Rightarrow$</td>
<td>i, ay</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>E e</td>
<td>E e</td>
<td>$\Rightarrow$</td>
<td>E e</td>
<td>E e</td>
<td>$\Rightarrow$</td>
<td>o, oy</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>I i</td>
<td>I i</td>
<td>$\Rightarrow$</td>
<td>I i</td>
<td>I i</td>
<td>$\Rightarrow$</td>
<td>aw</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>O o</td>
<td>O o</td>
<td>$\Rightarrow$</td>
<td>O o</td>
<td>O o</td>
<td>$\Rightarrow$</td>
<td>waw</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>U u</td>
<td>U u</td>
<td>$\Rightarrow$</td>
<td>U u</td>
<td>U u</td>
<td>$\Rightarrow$</td>
<td>yes</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>F f</td>
<td>F f</td>
<td>$\Rightarrow$</td>
<td>F f</td>
<td>F f</td>
<td>$\Rightarrow$</td>
<td>yes</td>
<td>$\Rightarrow$</td>
</tr>
</tbody>
</table>

Konsonanten.

<table>
<thead>
<tr>
<th>Antiqua</th>
<th>Cursiv</th>
<th>Schreibschrift</th>
<th>Stenographie</th>
<th>Antiqua</th>
<th>Cursiv</th>
<th>Schreibschrift</th>
<th>Stenographie</th>
</tr>
</thead>
<tbody>
<tr>
<td>P p</td>
<td>B b</td>
<td>$\Rightarrow$</td>
<td>V v</td>
<td>V v</td>
<td>$\Rightarrow$</td>
<td>L l</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>T t</td>
<td>T t</td>
<td>$\Rightarrow$</td>
<td>T t</td>
<td>T t</td>
<td>$\Rightarrow$</td>
<td>L l</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>D d</td>
<td>D d</td>
<td>$\Rightarrow$</td>
<td>D d</td>
<td>D d</td>
<td>$\Rightarrow$</td>
<td>L l</td>
<td>$\Rightarrow$</td>
</tr>
<tr>
<td>G g</td>
<td>G g</td>
<td>$\Rightarrow$</td>
<td>G g</td>
<td>G g</td>
<td>$\Rightarrow$</td>
<td>L l</td>
<td>$\Rightarrow$</td>
</tr>
</tbody>
</table>

Nach dem Standard Alphabetbedeu
ten obige Zeichen: $\hat{a}$, $\hat{e}$, $\hat{i}$, $\hat{u}$, $\hat{\breve{u}}$, $\hat{y}$, $\hat{\breve{y}}$, $\hat{\check{y}}$, $\hat{\tilde{y}}$

| $\tilde{a}$ | $\tilde{e}$ | $\tilde{i}$ | $\tilde{u}$ | $\tilde{\breve{u}}$ | $\tilde{y}$ | $\tilde{\breve{y}}$ | $\tilde{\check{y}}$ | $\tilde{\tilde{y}}$ |

Fig. 1880a: Das Buch der Schrift, enthaltend die Schriftzeichen und Alphabete aller Zeiten und aller Völker des Erdkreises (Carl Faulmann, Wien 1880; reprint Nördlingen 1985; ISBN 392156851X); p.240. Showing the 1871 subset of EPA 1868.

Fig. 1880b: On Spelling (M. Müller, London 1880); p.46: Showing an example using the 1871 subset of EPA 1868. The text claims that Isaac Pitman's "Phonetic Journal" is distributed by 12,400 copies in 1880.

If ei hav spoken stroikly in svpart ov Mr Pitman's sistem, it iz not bekoe on ol points ei konsider it sii. prior tu de sistenz preaperd bea vder reformerz, hu az dri inkriog tu usameer; bst gidi bekoe it haz biu tested so lawli, and haz stud de test vel. Mr Pitman's Fonetik Journal haz now [1880] biu publivt zerliet vyrz, and if it iz nem dat it iz publivt wikli in 12,400 kopis, ki zi represenit at list for or feiv rinder, it ish not sim so veri higiz, after of, if wi imajin dat der iz sim veidal poen in dat insigniffikant jerim.
Fig. 1888a: The Phonetic Journal, vol. 47 (London 1888); excerpt from p.1. 
Showing an again reduced version of EPA 1868 (however with no new case pairings; thus this stage can still be subsumed under EPA 1868).

**THE PHONETIC ALPHABET.**

The Phonetic Alphabet consists of 36 letters, namely, the 33 useful letters of the common alphabet (v, w, and x being rejected,) and the 13 new ones below. The vowels a, e, i, o, u have invariably their short sounds, as in pat, pet, pit, pot, put. All the other old letters have their usual significance. The italic letters in the words in the fourth line denote the sources of the letters.

<table>
<thead>
<tr>
<th>VOWELS</th>
<th>CONSONANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a e (E e) 1: Ω, Ω, σ, Υ, Υ</td>
<td>Κ, Κ, Κ, Κ, Κ, Κ, Κ</td>
</tr>
<tr>
<td>A u, E e, (E e) 1: Ω, Ω, Ω, Ω, Ω</td>
<td>Κ, Κ, Κ, Κ, Κ, Κ, Κ</td>
</tr>
<tr>
<td>A e, E e, (E e) 1: Ω, Ω, Ω, Ω, Ω</td>
<td>Κ, Κ, Κ, Κ, Κ, Κ, Κ</td>
</tr>
<tr>
<td>alms, age, air, pet, eat: all, ope, food</td>
<td>son, but. chair, thin, then, shoe, vision, sing</td>
</tr>
<tr>
<td>smz, ej, er, pet, it: ol, op, fud</td>
<td>snn, bst. ger, sin, den, fu, vigon, sig</td>
</tr>
</tbody>
</table>

The order of the Phonetic Alphabet, and the names of the letters are,

**Consonants:**—p, b; t, d; g, k; f, v; t, d; s, z; j, ñ: m, n, y: l, r: w, y: h. 

**Vowels:**—a, e; i, î: o, o; æ, σ; u, u. 

**Diphthongs:**—ei, ui, ou, ai, oi.

Fig. 1888b/c: ibid., enlarged parts from the same excerpt (to show the exact letterforms).
The left picture shows the (not yet encoded) "Baby gamma" as a phonetic symbol (p. 69), while the right one shows the "ram's horns" (U+0264), which is the preferred character to be used in phonetics.

The proposed U+A7C3 LATIN SMALL LETTER OW has a "belly" which extends to the full breadth of the letter, making this "o part" the predominant feature of the letter. The two Pullum & Ladusaw letters, however, have a tiny "belly", making the arms the predominant feature of the letter. Thus, the "ow" is deliberately not proposed as "baby gamma".


**Fig. 1996b:** Schmitter, Peter (ed.): Geschichte der Sprachtheorie, Vol. 5: Sprachtheorien der Neuzeit II. Tübingen 1996, ISBN 3-8233-5011-0, p. 315.

**Fig. 2008a:** George, Dieter: Historisches Ortsnamenbuch von Bayern, Oberfranken Band 6: Lichtenfels. München 2008, p.96.
Revised Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646

Please fill all the sections A, B and C below.


Please ensure you are using the latest Form from http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html.

See also http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html for latest Roadmaps.

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A. Administrative

1. Title: Proposal to encode characters for the English Phonotypic Alphabet (EPA) in the UCS
   
   2. Requester's name: German NB
   
   3. Requester type (Member body/Liaison/Individual contribution): Member body contribution
   
   4. Submission date: 2011-01-18
   
   5. Requester's reference (if applicable): 
   
   6. Choose one of the following:
   
   (or) More information will be provided later:
   
   ---

B. Technical – General

1. Choose one of the following:
   
   a. This proposal is for a new script (set of characters): No
   
   b. The proposal is for addition of character(s) to an existing block: Yes
   
   Name of the existing block: Latin Extended-D; Supplemental Punctuation; Number Forms; etc.
   
   2. Number of characters in proposal: 52
   
   3. Proposed category (select one from below - see section 2.2 of P&P document):
   
   A-Contemporary
   
   B.1-Specialized (small collection)
   
   B.2-Specialized (large collection)
   
   C-Major extinct
   
   D-Attested extinct
   
   E-Minor extinct
   
   F-Archaic Hieroglyphic or Ideographic
   
   G-Obscure or questionable usage symbols
   
   4. Is a repertoire including character names provided? Yes
   
   a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document? Yes
   
   b. Are the character shapes attached in a legible form suitable for review? Yes
   
   5. Fonts related:
   
   a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard? Andreas Stötzner
   
   b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):
   
   Andreas Stötzner, as@signographie.de
   
   6. References:
   
   a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? Yes
   
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? Yes
   
   7. Special encoding issues:
   
   Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? Yes
   
   Special casing of Latin letters (see text)
   
   8. Additional Information:
   
   Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script.

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### C. Technical - Justification

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Has this proposal for addition of character(s) been submitted before?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>If YES explain</td>
<td><em>(one character proposed simultaneously in another document is referred)</em></td>
<td></td>
</tr>
<tr>
<td>2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?</td>
<td>No</td>
<td></td>
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<tr>
<td>If YES, with whom?</td>
<td></td>
<td></td>
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<tr>
<td>If YES, available relevant documents:</td>
<td></td>
<td></td>
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<tr>
<td>3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Reference:</td>
<td>see text</td>
<td></td>
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<tr>
<td>4. The context of use for the proposed characters (type of use; common or rare)</td>
<td>Rare</td>
<td></td>
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<tr>
<td>Reference:</td>
<td>see text</td>
<td></td>
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<tr>
<td>5. Are the proposed characters in current use by the user community?</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Reference:</td>
<td></td>
<td></td>
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<tr>
<td>6. After giving due considerations to the principles in the P&amp;P document must the proposed characters be entirely in the BMP?</td>
<td>Yes</td>
<td></td>
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<tr>
<td>If YES, is a rationale provided?</td>
<td>To keep them in line with similar characters</td>
<td></td>
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<tr>
<td>7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?</td>
<td>Yes</td>
<td></td>
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<tr>
<td>8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?</td>
<td>No</td>
<td></td>
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<tr>
<td>If YES, reference:</td>
<td></td>
<td></td>
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<tr>
<td>9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?</td>
<td>No</td>
<td></td>
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<tr>
<td>If YES, is a rationale for its inclusion provided?</td>
<td></td>
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<tr>
<td>If YES, reference:</td>
<td></td>
<td></td>
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<tr>
<td>10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?</td>
<td>No</td>
<td></td>
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<tr>
<td>If YES, is a rationale for its inclusion provided?</td>
<td></td>
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<tr>
<td>If YES, reference:</td>
<td></td>
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<tr>
<td>11. Does the proposal include use of combining characters and/or use of composite sequences?</td>
<td>No</td>
<td></td>
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<tr>
<td>If YES, is a rationale for such use provided?</td>
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<tr>
<td>If YES, reference:</td>
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<tr>
<td>Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?</td>
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<tr>
<td>If YES, reference:</td>
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<tr>
<td>12. Does the proposal contain characters with any special properties such as control function or similar semantics?</td>
<td>No</td>
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<td>If YES, describe in detail (include attachment if necessary)</td>
<td></td>
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<tr>
<td>13. Does the proposal contain any ideographic compatibility character(s)?</td>
<td>No</td>
<td></td>
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<tr>
<td>If YES, is the equivalent corresponding unified ideographic character(s) identified?</td>
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<tr>
<td>If YES, reference:</td>
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</tbody>
</table>