

# Unicode request for Initial Teaching Alphabet

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2023 April 22

This proposal for letters of the Initial Teaching Alphabet (ITA) follows on L2/08-428 and L2/22-286. The 2020 draft for this proposal included casing forms. Those were dropped per advice of the SAH.

The ITA was used for basic literacy materials in the UK in the early to mid 1960s, from where it spread to Australia and the US. It has largely fallen out of use since the 1970s, but is still occasionally encountered. An ITA Foundation was founded in New York in 1965, and has maintained a website since 2000 ([itafoundation.org](http://itafoundation.org)). An ITA Association was founded in Melbourne in 1974 and published through at least 1987. The Australian Science and Technology Heritage Centre maintains a website at [austehc.unimelb.edu.au/guides/itaa](http://austehc.unimelb.edu.au/guides/itaa) for their collection of ITA material.

The ITA minuscule letters and ligatures, with Unicode equivalents, are as follows. Names date to James Pitman. They are included here for reference but are not taught to children.

letter	name	code point
a	<i>at</i>	0061
ɑ	<i>ask</i>	--
ɑ	<i>ahd</i>	0251
b	<i>bee</i>	0062
c	<i>kee</i>	0063
d	<i>did</i>	0064
e	<i>et</i>	0065
f	<i>ef</i>	0066
g	<i>gay</i>	0067, 0261
h	<i>hay</i>	0068
i	<i>it</i>	0069
j	<i>jay</i>	006A
k	<i>kay</i>	006B
l	<i>el</i>	006C
m	<i>em</i>	006D

letter	name	code point
n	<i>en</i>	006E
o	<i>og</i>	006F
p	<i>pee</i>	0070
r	<i>ray</i>	0072
r	<i>er</i>	--
s	<i>ess</i>	0073
s	<i>zess</i>	--
t	<i>tee</i>	0074
u	<i>ug</i>	0075
v	<i>vee</i>	0076
w	<i>way</i>	0077
y	<i>yay</i>	0079
z	<i>zed</i>	007A
ʒ	<i>zhee</i>	0292
ω	<i>oot</i>	A7B7

letter	name	code point
æ	<i>ain</i>	00E6
au	<i>aud</i>	A737
ɸ	<i>chay</i>	--
œ	<i>een</i>	--
ie	<i>ide</i>	--
ɨ	<i>ing</i>	014B
œ	<i>ode</i>	0153
oi	<i>oin</i>	--
ω	<i>ood</i>	--
ou	<i>oun</i>	--
ʃ	<i>ish</i>	--
th	<i>ith</i>	--
th	<i>thee</i>	--
ue	<i>une</i>	1D6B
wh	<i>whee</i>	--

- Characters in grey cells have the generic forms of existing Unicode characters.
- Characters in blue cells are glyph variants of existing Unicode characters, or may be variants in some ITA typefaces.

The ITA is a supplemented Latin alphabet. There is no q or x. Shortly after the ITA was created, the letter <ɾ> was added for orthographic r that is vocalic in non-rhotic accents, though in American publications it may be restricted to the NURSE vowel. Later <ɑ> was added for the BATH vowel, so that the same literacy material could be used regardless of how children pronounced that set of words (Daniels 2018: 27). Capital letters are merely the minuscules set in a larger font. They are illustrated in the figures but have fallen out of use and are not requested from Unicode.

The ITA letters <d g ɳ> may be distinct in shape from conventional <d g ŋ>, but are equivalent to the design in other typefaces, such as primer-style <a g t> in Schoolbook, Andika and (via style selectors) Gentium. The ITA <d> is often designed with a slight tail to make it more distinct from <b>, to address dyslexia, but several ITA publications show it as a standard <d>, and the ITA Foundation says (p.c. 2023) that ASCII d is an acceptable variant. The IPA letter U+0261 g is available for the ITA <g>. However, any typeface that provides the desired shape for <ɳ> and other ITA letters will also have the correct ITA shape for ASCII g, so there is no particular benefit to using U+0261. The Latin omega, U+A7B7 ω, matches the ITA letter <ω>. The SAH advises against using Greek U+03C9 ω, as mixing scripts may cause problems.

In some ITA typefaces, the vowel ligatures <æ> and <œ> have a short linking stroke: <æ̣>, <œ̣>. This suggests that all vowel ligatures may be rendered as tied together with a stroke, but that these two were identified with readily available Basic Latin <æ> and <œ>. ITA <ue> and <au> should thus be treated as graphic variants of U+1D6A ũ and U+A737 au. However, in the opinion of the SAH, ITA <ie> should not be identified with U+AB61 ð ‘iotified e’, because the left component of <ð> is a dotless and serified iota rather than an i.

Thanks to Deborah Anderson of the Universal Scripts Project for her assistance.

## Characters

The characters are rendered here in the serif PitmanITA font (column 1), the sans-serif ‘Phonemic’ font used by the ITA Foundation (column 2), and the serif Gentium-based Unicode font used in the chart below (column 3). For purposes of literacy, a sans-serif Unicode font may be preferred.

ɑ	--	ɑ	1DF1F LATIN SMALL LETTER HALF A.
ɕ	ɕ	ɕ	1DF20 LATIN SMALL LETTER STRETCHED C H DIGRAPH.
ee	ee	ee	1DF21 LATIN SMALL LETTER LUNATE EE.
ie	ie	ie	1DF22 LATIN SMALL LETTER IE.
oi	oi	oi	1DF23 LATIN SMALL LETTER OI.

ou	ou	ou	1DF24 LATIN SMALL LETTER OU.
ω	ω	ω	1DF2B LATIN SMALL LETTER OMEGA WITH LOOP.
ʀ	ʀ	ʀ	1DF2C LATIN SMALL LETTER R WITH LEFT TIE.
ʃh	ʃh	ʃh	1DF2D LATIN SMALL LETTER ESH H DIGRAPH.
ʈh	ʈh	ʈh	1DF2E LATIN SMALL LETTER STRETCHED T H DIGRAPH.
ʞh	ʞh	ʞh	1DF2F LATIN SMALL LETTER REVERSED T H DIGRAPH.
wh	wh	wh	1DF30 LATIN SMALL LETTER WH DIGRAPH.
ɹ	ɹ	ɹ	1DF31 LATIN SMALL LETTER REVERSED Z.

## Chart

Latin Extended-G			
	1DF1x	1DF2x	1DF3x
...0	ɹ	ʈh	wh
...1	ʈ	ee	ɹ
...2	ɹ	ie	
...3	ɹ	oi	
...4	ɹ	ou	
...5	ɹ	ɹ	
...6	ɹ	ɹ	
...7	ɹ	ɹ	
...8	ɹ	ɹ	
...9	ɹ	ɹ	
...A	ɹ	ɹ	
...B	ɹ	ω	
...C	ɹ	ʀ	
...D	ɹ	ʃh	
...E	ɹ	ʈh	
...F	a	ʞh	

## Annotations

Unicode may wish to note the glyph appearance in ITA of the unified characters U+0064 <d d> vs <d> (variable difference), 0067 <g g> vs <g/g>, 00E6 <æ> vs <æ> (variable), A737 <au au> vs <au>, 014B <ŋ ŋ> vs <ŋ>, 0153 <œ> vs <œ> (variable) and 1D6B <ue ue> vs <ue>.

## Properties

There are no decompositions.

1DF1F;LATIN SMALL LETTER HALF A;Ll;0;L;;;;N;;;;;  
1DF20;LATIN SMALL LETTER STRETCHED C H DIGRAPH;Ll;0;L;;;;N;;;;;  
1DF21;LATIN SMALL LETTER LUNATE EE;Ll;0;L;;;;N;;;;;  
1DF22;LATIN SMALL LETTER IE;Ll;0;L;;;;N;;;;;  
1DF23;LATIN SMALL LETTER OI;Ll;0;L;;;;N;;;;;  
1DF24;LATIN SMALL LETTER OU;Ll;0;L;;;;N;;;;;  
1DF2B;LATIN SMALL LETTER OMEGA WITH LOOP;Ll;0;L;;;;N;;;;;  
1DF2C;LATIN SMALL LETTER R WITH LEFT TIE;Ll;0;L;;;;N;;;;;  
1DF2D;LATIN SMALL LETTER ESH H DIGRAPH;Ll;0;L;;;;N;;;;;  
1DF2E;LATIN SMALL LETTER STRETCHED T H DIGRAPH;Ll;0;L;;;;N;;;;;  
1DF2F;LATIN SMALL LETTER REVERSED T H DIGRAPH;Ll;0;L;;;;N;;;;;  
1DF30;LATIN SMALL LETTER WH DIGRAPH;Ll;0;L;;;;N;;;;;  
1DF31;LATIN SMALL LETTER REVERSED Z;Ll;0;L;;;;N;;;;;

## References

Keith Brown, ed. (2005) Spelling reform proposals: English. *Encyclopedia of Language and Linguistics*. 2nd edition, Elsevier.  
Peter T. Daniels (2018) *An Exploration of Writing*. Equinox.  
Omniglot, *Pitman Initial Teaching Alphabet (i.t.a.)*. [omniglot.com/writing/ita.htm](http://omniglot.com/writing/ita.htm). Accessed 2020.8.28.

## Letter of support

The ITA Foundation wrote a letter indicating unanimous support on 2023 March 05:



P. O. Box 12  
Minnesota City, MN 55959  
[www.itafoundation.org](http://www.itafoundation.org)

March 5, 2023

Unicode Technical Committee  
Unicode Consortium  
611 Gateway Blvd.  
Suite 120  
South San Francisco, CA

Dear Unicode Technical Committee:

**Subject: Unicode request for Initial Teaching Alphabet letters**

This letter is in support of the request from UC Berkeley Script Encoding Initiative to add letters of the Initial Teaching Alphabet (ITA) to Unicode Standard. Our Foundation Board has reviewed the proposal written by Mr. Kirk Miller and is unanimously supportive of inclusion of the ITA characters in Unicode Standard.

Our Foundation Board is comprised of six educators dedicated to reading development at all levels from kindergarten to graduate teacher training and research. Our combined 122 years of experience using this phonetic alphabet has led to academic success for thousands of individuals with dyslexia from elementary children through adults. Currently, we also support programs for young children at-risk of reading failure and English learners of all ages. Our grant-funded program sites include K-12 schools, universities, and private not-for-profit organizations in six states and the territory of Puerto Rico. We also provide informational and training materials to researchers and professionals both in the United States and internationally.

Although we have a dedicated font for Foundation-produced student reading materials, we are hampered in our ability to communicate information about the linguistic and orthographic features of ITA and provide training to interested educational institutions. Work-around methods, e.g., screenshots of individual characters or words, are less than ideal and result in documents that lack a professional appearance. We are especially constrained in submissions to scholarly journals, in communications between fellow educators in K-12 schools and

universities, and in demonstration of ITA research-based materials on our Foundation and Grantee websites.

Although the ITA alphabet was used successfully in the 60s and 70s to give children a fast start to reading, it fell out of favor due to the lack of reading materials for children and training for teachers. The ITA phonetic alphabet has gained new impetus due to the current emphasis on the Science of Reading, which emphasizes the role of systematic, intensive phonics instruction for prevention of reading failure. Having the ITA characters added to Unicode Standard would facilitate communications between k-12 teachers, university teacher trainers, and researchers about the scientific evidence for using ITA to prevent and/or remediate reading failure.

Enhanced opportunities to communicate and share training materials extends to other Anglophone nations also. Cross-linguistic research documents that children who learn to read in transparent orthographies are much less likely to fail than those learning to read English. The US has the highest incidence of dyslexia in the world; informational and training materials on ITA as a beginner's transparent orthography would make a significant contribution to research and educational practice in Anglophone countries. We believe that having the full ITA character set represented in Unicode would encourage communication and adoption across educational and research institutions.

Thank you for the opportunity to support this proposal to add the ITA characters to Unicode Standard. Please feel free to contact me at [sjerviss@itafoundation.org](mailto:sjerviss@itafoundation.org) if you desire more information.

Sincerely,

A handwritten signature in cursive script that reads "Shelley Jerviss".

Shelley Jerviss  
President  
ITA Foundation, Inc.



# Figures

i.t.a. <sup>a</sup>									
<sup>1</sup> p	<sup>3</sup> t	<sup>5</sup> c,k	<sup>7</sup> f	<sup>9</sup> th	<sup>11</sup> s	<sup>13</sup> fh	<sup>15</sup> ch	<sup>24</sup> y	<sup>19</sup> g
pæ	top	cat,kitten	fun	thin	sit	fhip	church	yelloe	sig
<sup>2</sup> b	<sup>4</sup> d	<sup>6</sup> g	<sup>8</sup> v	<sup>10</sup> fh	<sup>12</sup> z, s	<sup>14</sup> z	<sup>16</sup> j	<sup>23</sup> w	<sup>22</sup> h
but	dog	gæt	vois	with	zœ, as	mezuer	jam	wet	hat
<sup>20</sup> l	<sup>17</sup> m	<sup>29</sup> i	<sup>27</sup> e	<sup>25</sup> a	<sup>(1+)</sup> a, e, i, o, u	<sup>31</sup> o	<sup>35</sup> œ	<sup>38</sup> ou	<sup>26</sup> ɑ
lip	man	it	egg	appl	about, etc.	on	tœk	out	father
<sup>21</sup> r, r	<sup>18</sup> n	<sup>30</sup> œ	<sup>28</sup> æ	<sup>37</sup> ie	<sup>33</sup> u	<sup>34</sup> œ	<sup>36</sup> œ	<sup>39</sup> oi	<sup>32</sup> au
riq	not	œch	æbl	ies	up	œpen	mœn	boi	aull
	(œr	aur, or	ær	er	—	œer	—)	<sup>40</sup> ue	<sup>25/26</sup> ɑ
	ar	waurt, or	ær	er		œer		uez	grass

Figure 1. Daniels (2018, p. 26, Table 2.2). A chart of the ITA. The digits cross-index another table. ‘Half-a’ is at bottom right.

the mock turtl sied deeply, and drœ the back ov wun flapper across his iex. hee lœkt at alis, and tried tœ speek, but, for a minit or tœ, sobœ chœkt his vois. ‘sœm as if hee had a bœn in his throet,’ sed the gryfon: and it set tœ wurk fhœking him and punching him in the back. at last the mock turtl recuverd his vois, and, with teers running down his cheeks, went on agœn:

‘yœ mœ not hav livd much under the sœ—’ (‘ie havn’t,’ sed alis) ‘and perhaps yœ wer never œeven introquest tœ a lobster—’ (alis began to sœ, ‘ie wuns tœsted—’ but chœkt herself hæstily, and sed, ‘nœ, never.’) ‘—sœ yœ can hav nœ iedea whot a delietfœl thiŋ a lobster kwadrill is!’

Figure 2. Daniels (2018, §2.1.4). A passage that includes all proposed lower-case characters but <œ>, including the interdialectal ‘half-a’ vowel <ɑ>. Several capital forms are seen as well, of which <fh> and <ie> would need Unicode support. In this typeface, the capitals seem small compared to standard Latin typefaces. However, there is not actually much difference between the heights of the capital A’s in the ITA <alis> seen here (2nd paragraph) and in <Alice> set in the Gentium font used for the present document: aa : Aa, ss : Ss. Some ITA publications use larger-sized capitals, rising to the stem height of <b d k> etc. Note that capitals have longer descenders as well, for example capitalized <yœ> vs l.c. <yœ> in paragraph 2.

Figure 3. The typeface at Omniglot uses an allograph of <æ> with a short linking stroke between the a and the e, rather than the prototypical ash.

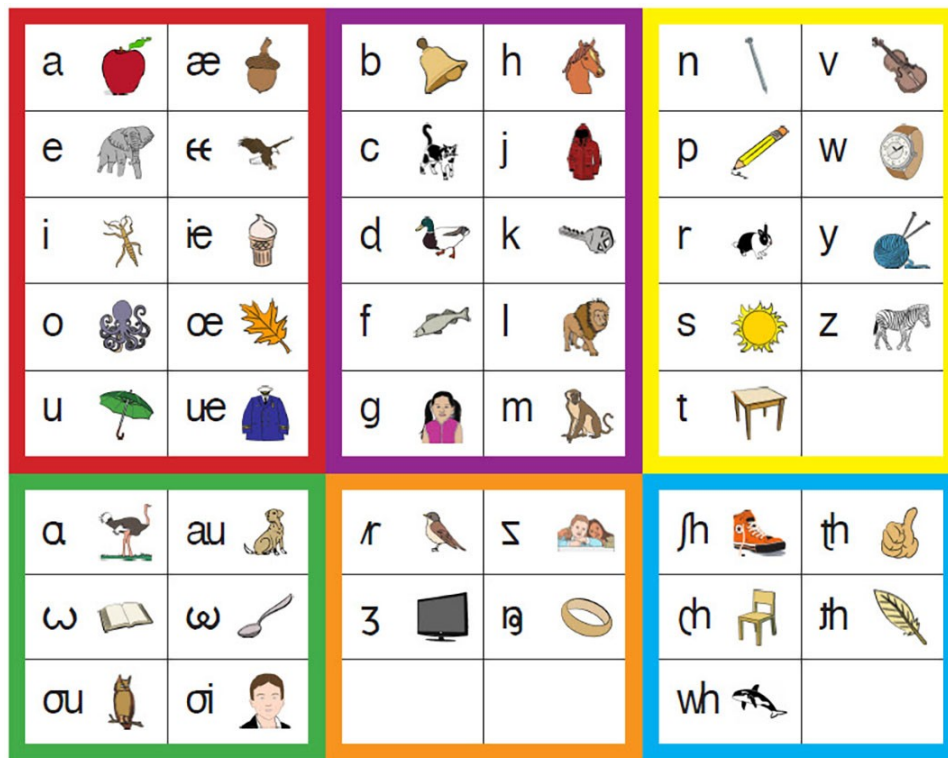


Figure 4. The typeface used since 1993 by the ITA Foundation in New York. From [itafoundation.org/about-us/what-is-i-t-a/](http://itafoundation.org/about-us/what-is-i-t-a/). Note that <au> and <wh> are simple juxtapositions.

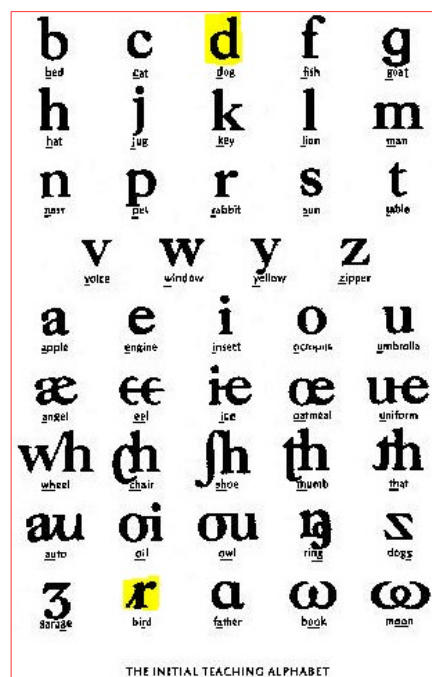


Figure 5. The typeface used by the ITA Foundation in the 1960s. It has a standard <d> and a more organic shape to the <r>. Compare the slightly distinctive <d> in



the previous figure.

wun satrdæ kathæ wus in ðu bak  
yard striggiŋ bæds twgethr tw mæk u  
neklus. þhæ wrkt on it fœr u lauŋ tiem,  
ueziŋ bæds uv menæ culrs—red, yelœ,  
blœ, græn, blak, and goeld.

Figure 6. Jane Flynn Anderson (2017: 1) ITA Linguistic Readers, bœk 5.  
Capital letters are not used at all in recent material such as this.

mie dad and ie wæk up rle in ðu mœrniŋ tw gœ tw wrk. wæ gœ  
on farmz tw get ðu milk. ie trie tw cagh u ðhiken. ie ried on u bæbæ  
bwl. ie pet couz ðat ar not ufræd. ie gœ in ðu creamræ tw help mie  
dad wofh hiz truk. when hæ runz out uv caufæ hæ gets mœr. wæ gœ  
in ðis plæs whær ie get trets and pop.]

Figure 7. A sample text sent by the ITA Foundation. Note the use of <r> for the  
syllabic *r* in *creamery* in the third line.

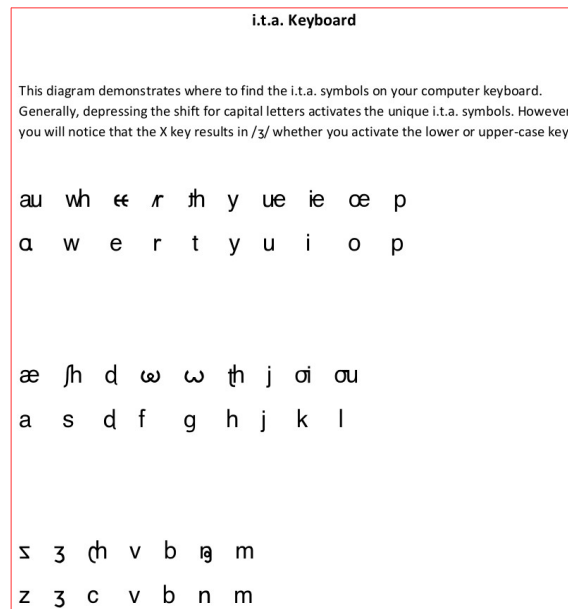


Figure 8. The character assignment of the ‘phonemic’ font currently used by the ITA Foundation. Because capital letters are not used, they have been reassigned to other ITA letters, similar to many non-Unicode IPA fonts. ‘Q’ and ‘x’ are not needed and have also been reassigned. The older ‘pitmanita’ font has capital letters and a very different character assignment for the other letters.

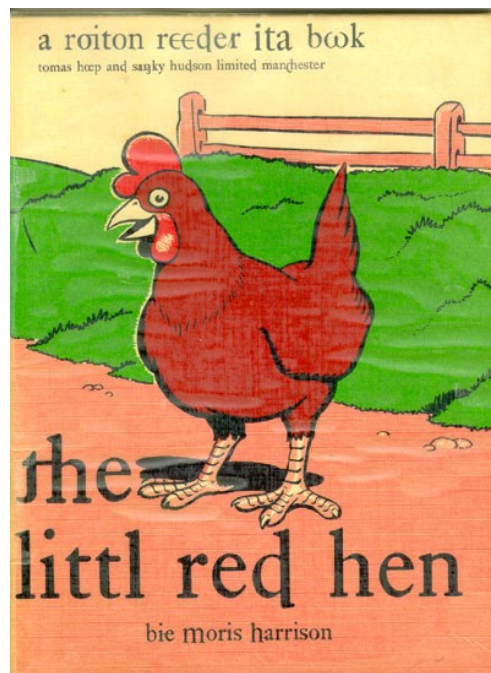


Figure 9. the littl red hen, bie moris harrison. illustrated bie jorj Cropper. a roiton

reeder ita bōk, tomas hōep and sāgky hudson limited manchester.

Note how 'ITA' and the capitals of 'Moris Harrison' extend slightly below the baseline as well as above x height. The title itself is not capitalized.



Figure 10. John Downing (1963: 1) Cum heer jet, the dōuning reeders – bōk 5. Initital Teaching Publishing Co., UK.

Here also, the capital C and S extend as much below the baseline as they do above x height.

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

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

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

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

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

**A. Administrative**

1. Title:	<i>Initial Teaching Alphabet</i>
2. Requester's name:	<i>Kirk Miller</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>individual</i>
4. Submission date:	<i>2023 April 22</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>yes</i>
(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):	
Proposed name of script:	
b. The proposal is for addition of character(s) to an existing block:	<i>yes</i>
Name of the existing block:	<i>Latin Extended-G</i>
2. Number of characters in proposal:	<i>13</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary <input type="checkbox"/>	B.1-Specialized (small collection) <input type="checkbox"/>
C-Major extinct <input type="checkbox"/>	D-Attested extinct <input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/>	E-Minor extinct <input checked="" type="checkbox"/>
	G-Obscure or questionable usage symbols <input type="checkbox"/>
4. Is a repertoire including character names provided?	<i>yes</i>
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	<i>yes</i>
b. Are the character shapes attached in a legible form suitable for review?	<i>yes</i>
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Kirk Miller</i>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>SIL OFL</i>
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<i>yes</i>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<i>yes</i>
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)?	<i>yes</i>

**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. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database ( <http://www.unicode.org/reports/tr44/> ) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

<sup>1</sup> Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

### C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	yes
If YES explain L2/08-428	
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.)?	yes
If YES, with whom? Shelley Jerviss, President ITA Foundation, sjerviss@itafoundation.org Jane Anderson, janderson@itafoundation.org Peggy Westlund, pwestlund@itafoundation.org	
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	yes
Reference: Daniels (2018)	
4. The context of use for the proposed characters (type of use; common or rare)	pedagogical
Reference: Daniels (2018)	
5. Are the proposed characters in current use by the user community?	yes
If YES, where? Reference: UK	
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	no
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	yes
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	no
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	no
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	no
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
11. Does the proposal include use of combining characters and/or use of composite sequences?	no
If YES, is a rationale for such use provided?	
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	
If YES, reference:	
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	no
If YES, describe in detail (include attachment if necessary)	
13. Does the proposal contain any Ideographic compatibility characters?	no
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	