

Unicode request for Initial Teaching Alphabet

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2024 December 13

This proposal for the Initial Teaching Alphabet (ITA) follows on L2/08-428, L2/22-286 and L2/23-102R. The 2020 draft for this proposal included casing forms. Those have been dropped from the proposal per advice of the SEW.

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). 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 for their collection of ITA material.

The ITA is a supplemented Latin alphabet. There is no q or x. 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.

Shortly after the ITA was created, a diaphonemic letter <r> was added for orthographic *r* that is vocalic in non-rhotic accents, though in American publications it may be restricted to the NURSE vowel. A diaphonemic ‘half-a’ <a> was later 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). ‘Half-a’ is graphically half-way between a print-style <a> and a script <a>. (Figure 9.)

The ITA letters <d g ȝ> may be distinct in shape from conventional <d g ŋ>, depending on the typeface, but the differences are equivalent to letter variation in other typefaces, such as primer-style <a g t> in Schoolbook, Andika and (via style selectors) Gentium fonts. The ITA <d> is often designed with a slight tail to make it more distinct from , making it easier for dyslexics to distinguish those letters, but several ITA publications use a standard <d> and the ITA Foundation says (p.c. 2023) that ASCII *d* is an acceptable variant. The IPA letter U+0261 <g> has the shape of ITA <g>. However, any typeface that provides the desired shape for <ȝ> and other ITA letters should also have the correct ITA shape for ASCII *g*, so there is no reason to use U+0261. For the ITA letter <ω>, the SEW suggests using the Latin omega, U+A7B7, rather than the Greek omega, U+03C9, because mixing Latin and Greek scripts might cause problems.

In some ITA typefaces, the vowel ligatures <æ> and <œ> have a short linking stroke: <æe, œe>. This suggests that all ITA vowel ligatures may be rendered with a linking stroke, but that those two were conflated with the ubiquitous Basic Latin <æ> and <œ>. In our opinion, ITA <ue> and <au> should

be similarly conflated with U+1D6A <ie> and U+A737 <ai>, with their graphic peculiarities handled by the font. However, in the opinion of the SEW, ITA <ie> should not be identified with U+AB61 ‘iotified e’ <ie>, because the left component of U+AB61 is a dotless and serified iota rather than an *i*.

The ITA minuscule letters and ligatures are as follows, in Pitmania font with Unicode equivalents. The letter names date to James Pitman. They are included here for reference but are not taught to children and are not requested as the names of the Unicode characters.

- Characters on a grey background have the generic forms of existing Unicode characters.
- Characters on a blue background are glyph variants of existing Unicode characters, or may be glyph variants in some ITA typefaces.
- Characters on a white background require separate Unicode encoding, [in brackets].

letter	name	code point
a	<i>at</i>	0061
a	<i>ask</i>	[1DF5A]
a	<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
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>	[1DF61]
s	<i>ess</i>	0073
s	<i>zess</i>	[1DF66]
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
z	<i>zhee</i>	0292
ω	<i>oot</i>	A7B7

letter	name	code point
æ	<i>ain</i>	00E6
au	<i>aud</i>	A737
ch	<i>chay</i>	[1DF5B]
ee	<i>een</i>	[1DF5C]
ie	<i>ide</i>	[1DF5D]
ig	<i>ing</i>	014B
œ	<i>ode</i>	0153
oi	<i>oin</i>	[1DF5E]
ω	<i>ood</i>	[1DF60]
ou	<i>oun</i>	[1DF5F]
sh	<i>ish</i>	[1DF62]
th	<i>ith</i>	[1DF63]
th	<i>thee</i>	[1DF64]
ue	<i>une</i>	1D6B
wh	<i>whee</i>	[1DF65]

Characters

The characters below are rendered in (1) the serif PitmanITA font, (2) the sans-serif ‘Phonemic’ font used by the ITA Foundation, which lacks half-a, and (3) the Gentium-based font used in the chart below. Literacy material in the figures uses both sans-serif and serif typefaces.

a	—	a	1DF5A LATIN SMALL LETTER HALF A.
ḥ	ḥ	ḥ	1DF5B LATIN SMALL LETTER STRETCHED C-H DIGRAPH.
€	€	€	1DF5C LATIN SMALL LETTER LUNATE EE.
ie	ie	ie	1DF5D LATIN SMALL LETTER IE.
oi	oi	oi	1DF5E LATIN SMALL LETTER OI DIGRAPH.
ou	ou	ou	1DF5F LATIN SMALL LETTER OU DIGRAPH.
ω	ω	ω	1DF60 LATIN SMALL LETTER OMEGA WITH LOOP.
ɾ	ɾ	ɾ	1DF61 LATIN SMALL LETTER R WITH LEFT TIE.
ḥ	ḥ	ḥ	1DF62 LATIN SMALL LETTER ESH-H DIGRAPH.
ṭ	ṭ	ṭ	1DF63 LATIN SMALL LETTER STRETCHED T-H DIGRAPH.
ḥ	ḥ	ḥ	1DF64 LATIN SMALL LETTER REVERSED T-H DIGRAPH.
wh	wh	wh	1DF65 LATIN SMALL LETTER WH DIGRAPH.
z	z	z	1DF66 LATIN SMALL LETTER REVERSED Z.

Properties

There are no decompositions.

ITA letters

- 1DF5A;LATIN SMALL LETTER HALF A;Ll;0;L;;;;N;;;;;
- 1DF5B;LATIN SMALL LETTER STRETCHED C-H DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF5C;LATIN SMALL LETTER LUNATE EE;Ll;0;L;;;;N;;;;;
- 1DF5D;LATIN SMALL LETTER IE;Ll;0;L;;;;N;;;;;
- 1DF5E;LATIN SMALL LETTER OI DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF5F;LATIN SMALL LETTER OU DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF60;LATIN SMALL LETTER OMEGA WITH LOOP;Ll;0;L;;;;N;;;;;
- 1DF61;LATIN SMALL LETTER R WITH LEFT TIE;Ll;0;L;;;;N;;;;;
- 1DF62;LATIN SMALL LETTER ESH-H DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF63;LATIN SMALL LETTER STRETCHED T-H DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF64;LATIN SMALL LETTER REVERSED T-H DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF65;LATIN SMALL LETTER WH DIGRAPH;Ll;0;L;;;;N;;;;;
- 1DF66;LATIN SMALL LETTER REVERSED Z;Ll;0;L;;;;N;;;;;

Chart

Latin Extended-G

1DF00

1DFFF

	1DF0	1DF1	1DF2	1DF3	1DF4	1DF5	1DF6	1DF7	1DF8	1DF9	1DFA	1DFB	1DFC	1DFD	1DFE	1DFF
0	ƒŋ	ɣ	ɔ̣	ɔ̤	Ǻ	ǻ	ω							ɣ	ɔ̥	ɔ̦
1	ϱ	ɮ	ɔ̧	ɔ̨	ǻ	Ǽ	ɾ							ɹ	ɔ̩	ɔ̪
2	ɔ̫	ɔ̬	ɔ̭	ɔ̮	ǻ	Ǽ	ʃh							ɔ̯	ɔ̰	ɔ̱
3	ɔ̲	ɔ̳	ɔ̴	ɔ̵	Ǻ	ǻ	ʒh							ɔ̶	ɔ̷	ɔ̸
4	ɔ̹	ɔ̺	ɔ̻	ɔ̼	Ǻ	ǻ	ʒh							ɔ̽	ɔ̾	ɔ̿
5	ɔ̽	ɔ̾	ɔ̿	ɔ̺	Ǻ	ǻ	wh							ɔ̻	ɔ̼	ɔ̽
6	ɔ̾	ɔ̿	ɔ̺	ɔ̻	Ǻ	ǻ	ɔ̺							ɔ̻	ɔ̼	ɔ̽
7	ɔ̻	ɔ̼	ɔ̽	ɔ̾	Ǻ	ǻ								ɔ̻	ɔ̼	ɔ̽
8	ɔ̼	ɔ̽	ɔ̾	ɔ̿	Ǻ	ǻ								ɔ̻	ɔ̼	ɔ̽
9	ɔ̽	ɔ̾	ɔ̿	ɔ̺	Ǻ	ǻ								ɔ̻	ɔ̼	ɔ̽
A	ɔ̾	ɔ̿	ɔ̺	ɔ̻	Ǻ	ǻ								ɔ̻	ɔ̼	ɔ̽
B	ɔ̻	ɔ̼	ɔ̽	ɔ̾	Ǻ	ǻ	ɔ̻							ɔ̻	ɔ̼	ɔ̽
C	ɔ̼	ɔ̽	ɔ̾	ɔ̿	Ǻ	ǻ	ɔ̻							ɔ̻	ɔ̼	ɔ̽
D	ɔ̽	ɔ̾	ɔ̿	ɔ̺	Ǻ	ǻ	ie							ɔ̻	ɔ̼	ɔ̽
E	ɔ̾	ɔ̿	ɔ̺	ɔ̻	Ǻ	ǻ	oi							ɔ̻	ɔ̼	ɔ̽
F	ɔ̻	ɔ̼	ɔ̽	ɔ̾	Ǻ	ǻ	ou							ɔ̻	ɔ̼	ɔ̽

Annotations

0064 LATIN SMALL LETTER D

- Optionally has a short tail in ITA fonts

0067 LATIN SMALL LETTER G

- Takes the form of 0261 LATIN SMALL LETTER SCRIPT G in ITA fonts

00E6 LATIN SMALL LETTER AE

- May be a-e with a linking stroke in ITA fonts

014B LATIN SMALL LETTER ENG

- Retains the bowl of the 'g' in ITA fonts

0153 LATIN SMALL LIGATURE OE

- May be o-e with a linking stroke in ITA fonts

01A3 LATIN SMALL LETTER OI

- **1DF5E** Latin small letter oi digraph

0223 LATIN SMALL LETTER OU

- **1DF5F** Latin small letter ou digraph

1D6B LATIN SMALL LETTER UE

- Takes the form of u-e with a linking stroke in ITA fonts

A737 LATIN SMALL LETTER AU

- Takes the form of a kerned au in ITA fonts

1DF5A LATIN SMALL LETTER HALF A

- The form is between 0061 and 0251

1DF5E LATIN SMALL LETTER OI DIGRAPH

- 01A3 Latin small letter oi

1DF5F LATIN SMALL LETTER OU DIGRAPH

- 0223 Latin small letter ou

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. Accessed 2020.8.28.

James Pitman & John St. John (1969) *Alphabets and Reading: The Initial Teaching Alphabet*.

Letter of support

On 2023 March 05, the ITA Foundation wrote a letter indicating unanimous support:



P. O. Box 12
Minnesota City, MN 55959
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 if you desire more information.

Sincerely,



Shelley Jerviss
President
ITA Foundation, Inc.

Figures

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

þhe mock turtl sied deeply, and drō þhe back ov wun flapper across his ies. hee lōkt at alis, and tried tō speak, but, for a minit or tō, sobs chœkt his vois. ‘sæm as if hee had a bœn in his throet,’ sed þhe gryfon: and it set tō wurk þhækiḡ him and punchiḡ him in the back. at last þhe mock turtl recuverd his vois, and, with teers runniḡ down his cheeks, went on agæn:

‘yω mæ not hav livd muçh under þhe see—’ (‘ie havn’t,’ sed alis) ‘and perhaps yω wer never œven introquest tō a lobster—’ (alis began to sæ, ‘ie wuns tæsted—’ but checkt herself hæstily, and sed, ‘nœ, never.’) ‘—sœ yω can hav nœ iedea whot a delietfōl thiḡ a lobster kwadrill is!’

Figure 2. Daniels (2018, §2.1.4). A passage that includes all proposed lower-case characters except <ou>, including the diaphonemic ‘half-a’ vowel <a>. Several capital forms are seen as well, of which <th> and <ie> would need Unicode support. The capitals seem a bit small, but 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> in the Gentium font used for the present document: Compare Pitmania <aa> and Gentium <Aa>, Pitmania <ss> and Gentium <Ss>. Some ITA publications use larger capitals, reaching the stem height of <b d k> etc. Note that ITA capitals sometimes have longer descenders as well, as is slightly the case here with capital <g> vs lower-case <g> in paragraph 1 and capital <y> vs lower-case <y> in paragraph 2.

ch	ʃh	th	ʒh	wh	a	e	i	o	u	ω
church	shush	thin	then	whale	at	egg	in	odd	up	book
[tʃ]	[ʃ]	[θ]	[ð]	[w]	[æ]	[ɛ]	[ɪ]	[ɒ]	[ʌ]	[ʊ]
Long vowels & diphthongs										
ɑ	æ	au	ɛ	œ	ω	ue	ie	oi	ou	ʀ
father	ape	all	eat	oak	ooze	use	ice	oil	owl	earn
[ɑː]	[eɪ]	[ɔː]	[iː]	[oʊ]	[uː]	[juː]	[aɪ]	[ɔɪ]	[aʊ]	[ɛʀ]

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.






























a 	æ 	b 	h 	n 	v 
e 	ɛ 	c 	j 	p 	w 
i 	ie 	d 	k 	r 	y 
o 	œ 	f 	l 	s 	z 
u 	ue 	g 	m 	t 	
ɑ 	au 	ʀ 	ɜ 	ʃh 	th 
ω 	ω 	3 	ɹ 	ch 	th 
ou 	oi 			wh 	

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

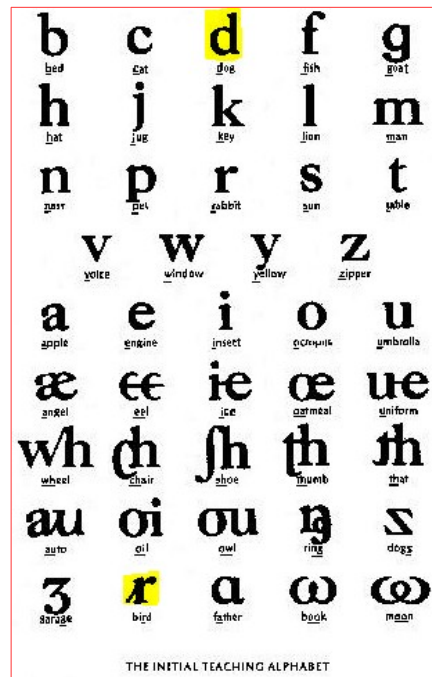


Figure 5. The typeface used by the ITA Foundation in the 1960s. It has a standard <d> and a more organic shape to the <r>. Compare the slightly distinctive <d> in the previous figure.

wun satrdæ kɑθræ wʊs ɪn θu bɑk
 jɑrd strɪŋgɪŋ bɛɛdʒ tʊgɛθr tʊ mæk u
 neklu:s. θræ wɹkt ɒn ɪt fɔ: ɪ laʊŋ tɪm,
 ʊeɪzɪŋ bɛɛdʒ ʊv mɛnɛ: kulrʒ—red, jelɔ:,
 blɔ:, grɛn, blɑk, ɒnd gɔ:ld.

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

mɪ dɑd ɒnd ɪ wæk ʊp rɪ: ɪn θu mɔ:rnɪŋ tʊ gɔ: tʊ wɹk. wɛ: gɔ:
 ɒn fɑ:mz tʊ get θu mɪlk. ɪ tɹɪ tʊ kɑ:ʃ ɪ tʃɪkɪn. ɪ rɪd ɒn ɪ bæbɛ:
 bɔ:l. ɪ pet kɔ:z θæt ɔ: nɒt ʊfræd. ɪ gɔ: ɪn θu kɹɛmɹɛ: tʊ help mɪ
 dɑd wɔ:ʃ hɪz tɹʊk. wɛn hɛ: rʊnz ʊt ʊv kɑ:fɛ: hɛ: gets mɔ:ɹ. wɛ: gɔ:
 ɪn θɪs plæs wɛ: ɪ get tɹɛts ɒnd pɒp.]

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.

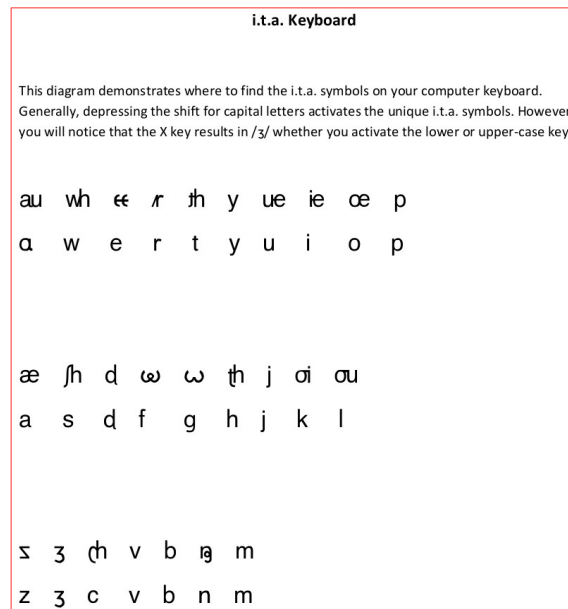


Figure 8. The character assignment of the ‘phonemic’ font currently used by the ITA Foundation. Because capital letters are not used, they have been reassigned to other ITA letters, similar to many non-Unicode IPA fonts. ‘Q’ and ‘x’ are not needed and have also been reassigned. The older ‘pitmanita’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

(rather than casl) do not say pam for *palm* (rather than pam). To overcome this difficulty, an “in-between” *a* (a, a, ɑ) has been adopted. When reading in i.t.a. those who say bath associate the a with a, while those who say bath associate it with ɑ. This character, being a compromise between two already closely related shapes, involves too sophisticated penmanship for practical use in the classroom. It is intended for use only in print or in typewriting; moreover, it is desirable that teachers should encourage the child to interpret it as a or ɑ according to his or the particular regional pronunciation. At any rate it has been found to be workable and it enables

Figure 9. Pitman & St. John (1969: 138). Explanation of the ‘half-a’ <a> as being between <a> and <ɑ> in shape, with a shorter hook and larger bowl than <a>.

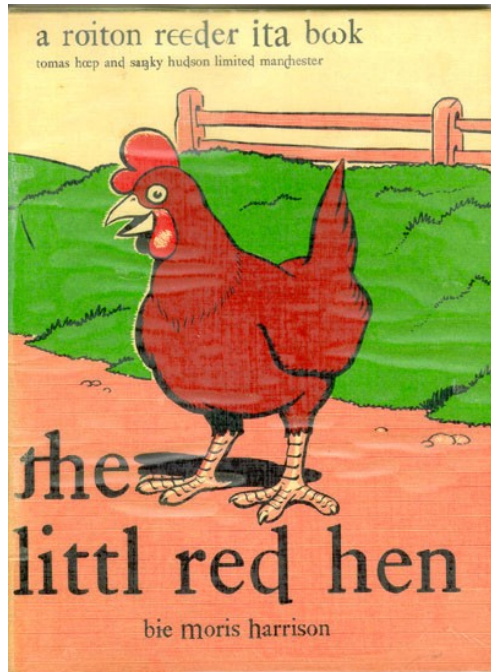


Figure 10. the littl red hen, bie moris harrison. illustrated bie jorj cropper. a roiton reeder ita book, tomas hoep and saŋky hudson limited manchester.

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 11. John Downing (1963: 1) cum heer jet, the dōuniŋ reeders – bōk 5. Initial 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 10646¹.**

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>2024 December 13</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<input checked="" type="checkbox"/> <i>yes</i>
(or) More information will be provided later:	<input type="checkbox"/>

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:	<input checked="" type="checkbox"/> <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"/>	B.2-Specialized (large collection) <input checked="" type="checkbox"/>	<i>x</i>
C-Major extinct <input type="checkbox"/>	D-Attested extinct <input type="checkbox"/>	E-Minor extinct <input type="checkbox"/>	
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/>	G-Obscure or questionable usage symbols <input type="checkbox"/>		
4. Is a repertoire including character names provided?	<input checked="" type="checkbox"/> <i>yes</i>		
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	<input checked="" type="checkbox"/> <i>yes</i>		
b. Are the character shapes attached in a legible form suitable for review?	<input checked="" type="checkbox"/> <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?	<input checked="" type="checkbox"/> <i>yes</i>		
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<input checked="" type="checkbox"/> <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)?	<input checked="" type="checkbox"/> <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.

¹ 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? If YES explain	<i>L2/08-428, L2/22-286</i>	<i>yes</i>
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.)? If YES, with whom?	<i>Shelley Jerviss, President ITA Foundation, sjerviss@itafoundation.org Jane Anderson, janderson@itafoundation.org Peggy Westlund, pwestlund@itafoundation.org</i>	<i>yes</i>
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? Reference:	<i>Daniels (2018)</i>	<i>yes</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>Daniels (2018)</i>	<i>pedagogical</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	<i>UK</i>	<i>yes</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:		<i>no</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?		<i>yes</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:		<i>no</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:		<i>no</i>
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? If YES, is a rationale for its inclusion provided? If YES, reference:		<i>no</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? 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:		<i>no</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)		<i>no</i>
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:		<i>no</i>