

Proposal to encode in the UCS extensions to Ellis's Phonotypic Alphabet for writing Yahgan and Ona

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1. Introduction

This is a proposal to include in the Universal Character Set several characters used by the 19th-century missionary Thomas Bridges in his documentation of the Yahgan language, and by his son Lucas Bridges in his documentation of the Ona language. The characters were created as an extension of the Ellis Phonotypic Alphabet, which has previously been added to the standard. They were used in both handwritten and printed forms.

2. Background

The Yahgan language (= yagán, yámana, ISO 639-3: yag) was spoken until recently in Tierra del Fuego, in what is now Chile and Argentina. The most extensive body of documentation of the language was compiled in the 19th century by an Anglican missionary, the Rev. Thomas Bridges (c. 1842–1898). Bridges was adopted as a child by the missionary George Despard, and at age 14 was taken by him to South America. In 1861 Despard returned to England, leaving the young Bridges to continue the work of the mission. Bridges spent most of his adult life among Yahgan speakers, at a time when the language was used actively by all members of the tribe, first in a missionary settlement in the Falklands, and later on the big island of Tierra del Fuego. He documented the language throughout his life there, producing an extensive dictionary in several versions (Bridges 1866b, 1879ab [1933/1987], 1879c), a grammar (Bridges 1866a), translations of three books of the New Testament (Bridges 1881, 1883, 1886), and other smaller works, some published (Bridges 1894, 1898 [De Mauro 2023]) and some yet unpublished.

Ellis's Phonotypic alphabet was utilized from the start by Bridges's adoptive father George Despard, with the aim of teaching literacy to the Yahgans and eventually producing religious literature in the language. Bridges was from the beginning an enthusiast of Ellis's phonotypic alphabet, and used it in all of his known writings on Yahgan. Over his lifetime of documentation of the language he added some characters to Ellis's original repertoire for recording Yahgan, but also what he considered improvements to Ellis's system in the transcription of English. Those were utilized for English words and other foreign names present throughout his biblical translations into Yahgan.

Lucas Bridges (1874–1949), Thomas Bridges’s son, was born in Tierra del Fuego. He took a special interest in the Ona (Selk’nam) people and their language (ISO 639-3: ona), and compiled materials in the language, some published (Bascopé and Domínguez 2023). Lucas Bridges added two more characters to Ellis’s system to represent sounds in Ona.

3. Variants

Bridges’s orthography was originally based on Ellis’s Phonotypic alphabet. Over the years, it underwent several revisions, initially to accommodate new sounds which Ellis’s original system did not represent adequately, and later in order to make the orthography more efficient and compact, in Bridges’s view. The stages in the development of the orthography are described as follows.

3.1 Bridges’s grammar notebook (Bridges 1866a) is the earliest available witness of his orthography, which is used through most of it. An introductory orthography table is missing, except for its end, showing the Latin letters v, w, y, and z. The ‘aspirated’ consonants are written with a preceding <h> (U+0127) or a plain <h>: <hr>, <hl> or <hl>, and <hw> (fig. 2). <hn> and <hy> are not attested in the grammar.

The Phonotypic u (U+1DF7B, LATIN SMALL LETTER U WITH HOOK TAIL) is used to represent a sound like the English sequence /ju/, as in *few*. m (U+026F, LATIN SMALL LETTER TURNED M) is used to represent tense English /u/, as in *food*. Both are used for similar sounds in Yahgan.

The first version of the dictionary (Bridges 1866b) uses a similar orthography, and includes instances of <hw> and <hy>. The ‘aspirated’ l is written as <hl>. There are no known instances of <hn> in the dictionary.

In this version of the orthography Bridges used the acute diacritic over vowels to mark stressed syllables.

3.2 In the latter part of the second version and in the third version of the dictionary (Bridges 1879ab, 1879c), Bridges adopts the “looped” letters d, n, r, w, and y, instead of the h- and h- digraphs (figs. 3–8). Otherwise the orthography is the same as the earlier one.

3.3 Bridges made a significant revision of the orthography by the time of the publication of the first biblical translation (Gospel of Luke, Bridges 1881). In a later addition to the grammar manuscript, Bridges explains the new system and what he considers its advantages, and gives examples of English texts written in it.

In this revision, the letters h, w, and y were discarded, along with w and y. They were replaced by a diacritic over the following vowel letter: ́ (U+0301, COMBINING ACUTE ACCENT) for h, ̄ (U+0304, COMBINING MACRON) for w, and ̀ (U+0300, COMBINING GRAVE ACCENT) for y (figs. 7, 8, 12, 14). So, for example, <we, he, ye> (IPA /we he je/) in the earlier system corresponds to <ē, è, é> in the newer one. Bridges considered this system a more compact improvement. (Incidentally, this limited subsystem functions as a vowel-centered abugida, a rare type of orthography, comparable to Pahawh Hmong.) For

As mentioned above, the combining acute accent had been used with the earlier orthography to represent stressed vowels. In the newer orthography, where it has been repurposed for representing the sound /h/, stress is instead marked with ◌̣ (U+0323, COMBINING DOT BELOW) under the stressed vowel.

This revision also added the character **ɾ** proposed here, for representing the English syllabic /ɾ/. There are no English texts in the known corpus of Bridges's writings which uses the earlier orthography, and so it is not known if **ɾ** was first innovated for this revision.

3.5 Lucas Bridges based his Ona alphabet on his father's later revision of the Yahgan alphabet, adding to it the letter *jk* proposed here. It also proposes a character which may be represented as the existing Unicode character *ɟ* (U+01BE, LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE), and a trigraph <ctl> ("= are pronounced together by the Ona without a break and form a separate sound.") No separate encoding is proposed here for the trigraph (fig. 10).

4.1 **ɫ, ɲ, ɾ, w, y.** These letters represent sounds which subjectively sound aspirated in some way. **ɾ**, usually phonetically transcribed as [ɬ], is a common sound in Yahgan. **ɫ**, described by Bridges as similar to Welsh *ll*, and **ɲ**, approximately /hn/, are rare. **w** /hw/ and **y** /hj/ are rare, and appear only in the manuscript dictionaries. Along with plain <w> and <y>, they were left out of the later revision of the orthography and are not used in the biblical translations or in Bridges (1894).

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There are attested handwritten versions of *w* in which the loop attaches to the left, the middle, or the right stem of the underlying *w*. The left version is chosen here, for typographical felicity and for consistency with the other looped letters.

4.2 *ɿ*. This character was used by Bridges for the phonetic transcription of syllabic [ɹ] and occasionally coda [ɹ] in English words within English texts, and for English loanwords within the Yahgan text of the biblical translations. *ɿ* is treated by Bridges as a vowel, in that it can take consonant-onset diacritics.

4.3 *ʃ̥*. This character was created for writing the Ona language, and appears in Lucas Bridges’s handwritten orthographical chart and vocabularies (fig. 10). Since it only appears in handwritten form, the print form given here was designed based on informed guesswork. No uppercase form is shown for this character in the orthography chart, and no instances of it are known at the beginning of a word, where capitalization might be an issue, and so no uppercase form is proposed to be encoded here.

ʃ̥ is described as “hs js shj”, which I take to mean that the sound in question shares some phonetic properties with both a sibilant, [s] ~ [ʃ] (<s> ~ <sh>), and a velar fricative like [x] (<h> or <j>); the orthography chart describes <k> = [x] as “j in jabon Spanish”). [ʃ] is represented in the Phonotypic transcription as <f>, and [x] is represented as <k> (fig. 11), which supports the visual interpretation of the proposed character as a fusion of <f> and <k>. The sound represented would be some kind of a palatalized velar fricative, like IPA [xʲ] or [ʃ̥x] ~ [ʃ̥j].

Bascope Julio and Domínguez (2023:157) transcribe from one of the Ona vocabulary manuscripts the form <óilʃ̥ke> for the place-name Cabo Peñas (fig. 15), which I therefore read as approximately [hojʃ̥xə]. Najlis (1975:149), a phonetically precise dictionary, transcribes that placename as /hòjxj/, perhaps [hojxʲ], consistent with the phonetic interpretation here, and supporting the interpretation of the written character as a fusion of <f> and <k>.

4.4 *◌̂◌̃* This diacritic is a fused version of a combining macron and a combining acute accent. In Bridges’s later system it represents the cluster /hw/, used in Both Yahgan and English. Note that the implied reading order of the diacritics is top-to-bottom, the reverse of the Unicode convention. The proposed name is COMBINING LEFT-JOINED ACUTE-MACRON, to indicate that it is composed of two diacritics joined at their left ends, in contrast to COMBINING ACUTE-MACRON (U+1DC7, ◌̃), where the right end of the acute diacritic is joined to the left end of the macron. Like the other diacritics representing syllable onsets, this diacritic may appear at the beginning of a word, and so may appear over a capital letter.

5. Other characters

5.1 All the orthography charts depict uppercase equivalents for each of the characters *ɿ*, *ɹ*, *ɿ̥*, and *ɿ̃* proposed here, along with capital letter versions of all the other characters. There are no examples of those uppercase letters in any known texts, and none are expected, since in Yahgan the sounds they represent never occur at the beginning of a word. For the same reason, the uppercase version of *ɿ̃* does not appear in any of the English words transcribed by Bridges. In principle they might be utilized in all-caps texts such as titles, but the only known such titles in any of Bridges’s materials are the titles of the

books in biblical translations (fig. 13), which do not contain any of the characters discussed here. Encoding these uppercase characters seems to be of little utility, and is not requested here.

5.2 The handwritten Ona orthography includes a character which appears like an <s> with a raised crossbar, like that of a <t> (fig. 10). It is glossed as “tsh ths sth”. For the present, it may be encoded adequately as the existing character ꞥ (U+01BE, LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE), with the same visual suggestion of fused <s> and <t>. It corresponds to <t> in other sources. For example, Bascopé Julio and Domínguez (2023:162), transcribing Lucas Bridges’s manuscript, give a word for ‘chalk’, transcribed <Cꞥitꞥ>, but in a later manuscript by the same author (ibid., fn. 8) the form is given as <Cꞥitꞥ>. The modern dictionary of the language by Najlis (1975:99) has /kʔaitꞥ/ ‘pintura muy blanca’ (referring to chalk used as face or body paint). This suggests that the sound is either an allophone of /t/, or a distinct but phonetically similar phoneme, at least in the variety Bridges recorded.

6. Character charts and technical details

1AB0

Combining Diacritical Marks Extended

1AFF

	1AB	1AC	1AD	1AE	1AF
0					
1					
2					
3					
4					◡ 1AF4
5					
6					
7					
8					
9					
A					
B					
C					
D					
E					
F					

1DF00

Latin Extended-G

1DFFF

	1DF0	1DF1	1DF2	1DF3	1DF4	1DF5	1DF6	1DF7	1DF8	1DF9	1DFA	1DFB	1DFC	1DFD	1DFE	1DFF
0																
1																
2																
3																
4																
5																
6																
7											ɖ					
											1DFA7					
8											ɗ					
											1DFA8					
9											ɛ̃					
											1DFA9					
A											ɥ					
											1DFAA					
B											ɣ					
											1DFAB					
C											ɘ					
											1DFAC					
D											ɟ					
											1DFAD					
E																
F																

Block: Combining Diacritical Marks Extended

English Phonotypic Alphabet diacritic

◌̸ U+1AF4 COMBINING LEFT-JOINED ACUTE-MACRON
→ 20D0 combining left harpoon above

Block: Latin Extended-G

Additions to the English Phonotypic Alphabet

ł U+1DFA7 LATIN SMALL LETTER L WITH MIDDLE LOOP
→ 026C latin small letter l with belt

ñ U+1DFA8 LATIN SMALL LETTER N WITH MIDDLE LOOP

ŗ U+1DFA9 LATIN SMALL LETTER R WITH MIDDLE LOOP

Ẃ U+1DFAA LATIN SMALL LETTER W WITH MIDDLE LOOP

ȳ U+1DFAB LATIN SMALL LETTER Y WITH MIDDLE LOOP

Ŗ U+1DFAC LATIN SMALL LETTER PHONOTYPIC SYLLABIC R

ƙ U+1DFAD LATIN SMALL LETTER ESH-K

6.1 Properties for the proposed characters

1AF4; COMBINING LEFT-JOINED ACUTE-MACRON; Mn; 230; NSM; ; ; ; ; N; ; ; ;
1DFA7; LATIN SMALL LETTER L WITH MIDDLE LOOP; Ll; 0; L; ; ; ; ; N; ; ; ;
1DFA8; LATIN SMALL LETTER N WITH MIDDLE LOOP; Ll; 0; L; ; ; ; ; N; ; ; ;
1DFA9; LATIN SMALL LETTER R WITH MIDDLE LOOP; Ll; 0; L; ; ; ; ; N; ; ; ;
1DFAA; LATIN SMALL LETTER W WITH MIDDLE LOOP; Ll; 0; L; ; ; ; ; N; ; ; ;
1DFAB; LATIN SMALL LETTER Y WITH MIDDLE LOOP; Ll; 0; L; ; ; ; ; N; ; ; ;
1DFAC; LATIN SMALL LETTER PHONOTYPIC SYLLABIC R; Ll; 0; L; ; ; ; ; N; ; ; ;
1DFAD; LATIN SMALL LETTER ESH-K; Ll; 0; L; ; ; ; ; N; ; ; ;

6.2 Collation and sorting

As noted in the earlier proposal for encoding the English Phonotypic alphabet (L2/24-277, §2.5), there is no standard ordering for the Phonotypic alphabet. In general, all the vowels precede all the consonants, and within both the order is quite different from the standard ordering of the Latin alphabet. It is noted that in Bridges's orthography charts the looped characters follow the corresponding non-looped letters: ɹ follows l, ɳ follows n, etc. ʃ is considered a vowel, and is listed at the end of the vowels. There is no indication anywhere in Bridges's works of how vowel characters bearing consonant onset diacritics should be ordered.

Note that under the current default sorting rules, the sorting order for the same words will differ between Bridges's early and late orthographies. For example, in the earlier orthography, the syllable /we:/ would be represented as <wa>, and collated after <w>. In the later orthography it would be represented as <ā>, and collated after <a>.

Likewise in the earlier orthography, the acute diacritic ˊ marks stress, which is never or almost never phonemic, and may be ignored for the purpose of collation. In the late orthography the same diacritic signifies the consonant /h/ before the vowel it is attached to, and would properly affect the collation of the word in which it appears.

However, given the technical difficulties, the uncertainties, and the minimal utility of establishing a sorting order for this script, none is requested here.

6.3 Confusability issues

None are identified.

7. Motivation for encoding and alternatives

Yahgan has a small phonemic and phonetic inventory, and Thomas Bridges was able to distinguish its different sounds and represent them in writing. However, he was a naive linguist, even for his day. Although Ellis's orthography was originally designed to represent English, he presumed that most of the distinctions it represented would be meaningful in Yahgan, if he could hear them. As a result, his records demonstrate some allophonic distinctions, which would typically not be recorded in linguistically informed phonemic writing. These variations are worthy of future investigation, and Bridges's documentation warrants being disseminated while fully preserving his orthography, or at least its intent.

In many contexts, this can be achieved by using proxies for the original orthography. In 1933, Gusinde and Hestermann published an edition of Bridges's second dictionary (Bridges 1879a,b, published as Bridges 1933, reprinted with additional materials in 1987). Gusinde and Hestermann substituted for Bridges's orthography what they considered to be its equivalents within the Anthropos phonetic alphabet (whose repertoire is now included in the UCS). Thus, in the 1933 edition, Bridges's Phonotypic <q> was represented as <ā>, and <r> was represented as <r^z> (but note that superscript ^z is not in Unicode); see fig. 16. Some Phonotypic characters were represented as a sequence of two characters in the 1933 edition: for example, <n> is represented as <hn>. Since the combination <h> plus <n> never occurs otherwise in the manuscript, that alternative representation of Bridges's orthography is unambiguous. The same is almost always true for other single Phonotypic characters represented in that edition as sequences of characters. In general, the Anthropos system or one like it can be an adequate substitute for using the Phonotypic alphabet as is, without loss of information; for a similar system, see Prieto (2012), fig. 17. However, there are at least two circumstances where proxies to Bridges's Phonotypic system are inadequate.

The first is where Bridges explicitly discusses the orthography. For example, in Bridges (1894) he writes, "This last vowel is written *ɶ* [in uppercase and lowercase], and is only used in foreign words in translations or otherwise introduced, and is sounded as *ear* in *earth*" and "c is hard like *k*, *g* as in 'lag'" (fig. 8). In such cases maintaining the original orthography is needed for keeping the writer's intent clear.

A second case for reproducing the original orthography is in highlighting transcription errors due to a confusion between similar letter shapes. Bridges's biblical translations (Bridges 1881, 1883, 1886) contain hundreds of such errors, due to the typesetter and to Bridges himself. In presenting them, using the original characters is needed to see the source of the error. So, for example, the source of the error in the phonotypic <évn> instead of <évn> (a phonetic spelling of English 'heaven') is clear when using the original orthography but would not be in the Anthropos system, where the words would be rendered as <həvn> vs. <hevn>, respectively.

8. Examples and figures

Fig. 1: A letter written in 1859 by Luccaenche Telson, a Yahgan native, using the Phonotypic Alphabet, reproduced in Despard (1860:[48a–b]). Photo from Regúnaga (2022), p. 198, fig. 5.

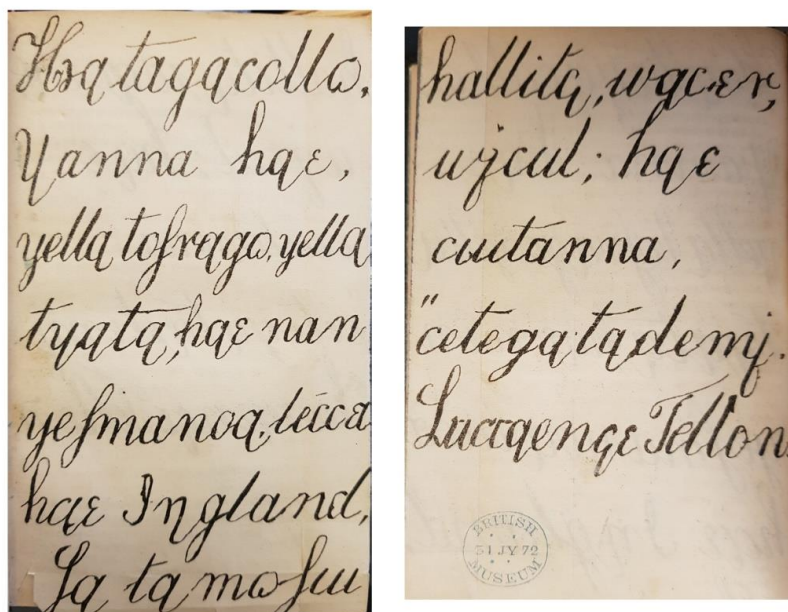


Fig. 2: Examples of the “aspirated” consonants in the earliest orthography (§3.1). <Úchr> ‘house’ (Bridges 1866a: 9); <Uhwá> ‘ashes’ (Bridges 1866b f. 114v); <Wuhyá> ‘door’ (Bridges 1866b f. 145r).

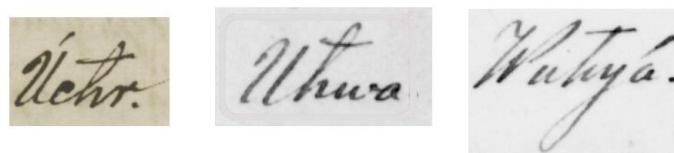


Fig. 3: Examples of handwritten <ɿ> and <ɾ> (Bridges 1879c, f. 57r). Note also acute accents marking stress.

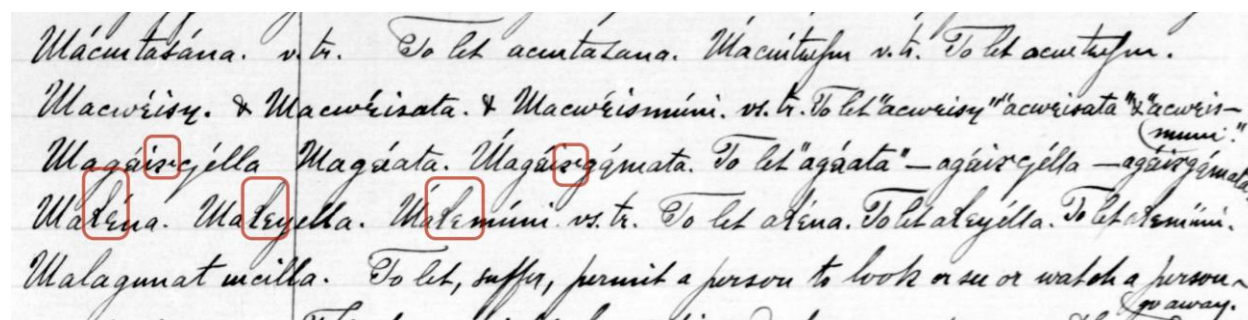


Fig. 4: Example of handwritten <n> (Bridges 1879a, f. 221v).



Fig. 5: Examples of handwritten <w>, showing different attachments of the loop (Bridges 1879a, f. 29r; 1879c, f. 46v).

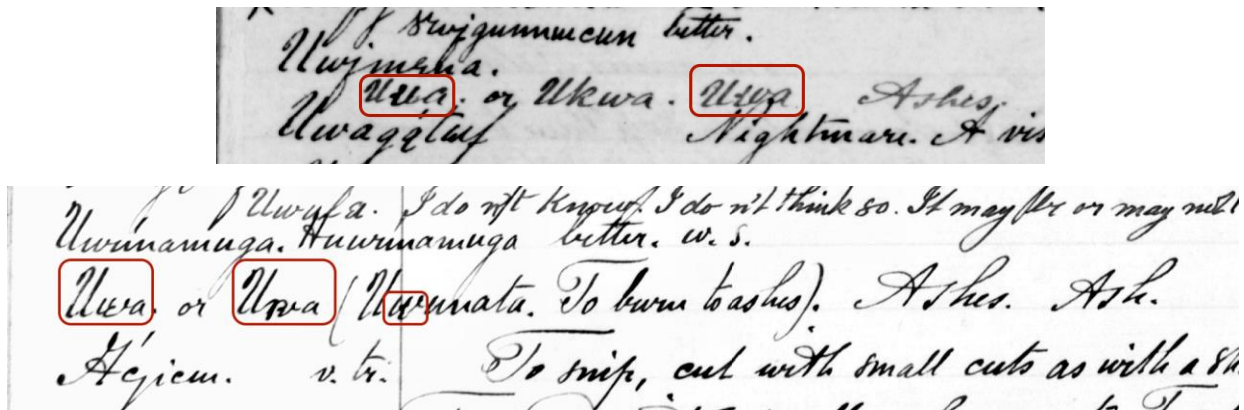


Fig. 6: Examples of handwritten <y> (Bridges 1879b, f. 4v)

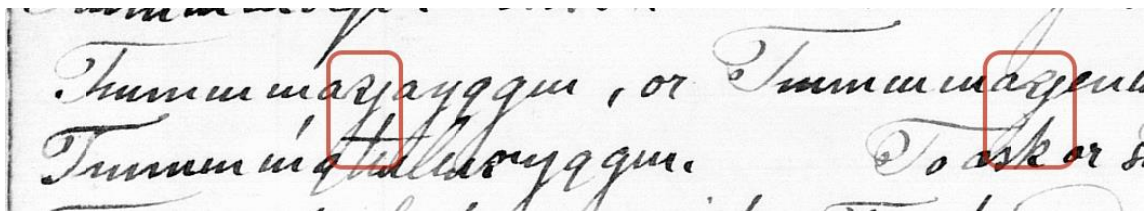


Fig. 7: “The Yahgan Phonetic Alphabet”, a chart of the later orthography, in Thomas Bridges’s hand (source and date unknown. Reproduced in Bridges 1987:IV). It shows proposed forms of the written and printed letters, small and capital, and explains the usage of the diacritics. A similar chart appears in the grammar (Bridges 1866a:145–147).

The Yahgan Phonetic Alphabet.

The letter is always			The letter is always			The letter is always		
written	printed	sounded as	written	printed	sounded as	written	printed	sounded as
A a	A a	a in at	O o	O o	oa in oat	So s	S s	s in so
A q	A q	a - alms.	S s	S s	ur - fur.	Z z	Z z	s in so
O o	θ θ	a - all.	Consonants.			Σ s	Σ s	sh - show
O o	O o	o - olive	C c	C c	c in cot	Σ s	Σ s	s - please
U u	U u	oo - foot	G g	G g	g - go	L l	L l	l - low
U u	U u	oo - food	T t	T t	t - to	L l	L l	ll - ulsh
I i	I i	i - ill	D d	D d	d - do	M m	M m	M - me
E e	E e	ee - cel	P p	P p	p - put	N n	N n	n - no
E e	E e	e - ell.	B b	B b	b - but	N n	N n	kn - alman.
A a	A a	ai - aim.	F f	F f	f - foe	W w	W w	ng - wing
J j	J j	i - isle	V v	V v	v - vase	R r	R r	r - row
O o	O o	oi - oil	C c	C c	ch - chin	R r	R r	hr - welsh
U u	U u	u - us.	J j	J j	j - jade	K k	K k	ch - german.
W w	W w	ow - owl.	T t	T t	th - thin			

Beside the above letters there are these three vowel marks,
 ' = h, ` = y, r - = w only found over vowels, hence their names.
 These marks are often found united over vowels, thus
 uā = uhwa sij. ashes; ūā = wuhya sij. a door; ūā = wuhwa sij. tinder of birds' down. The effect of these marks always precedes the vowels over which they are found.

Fig. 8: A printed chart of the later orthography, in Bridges's printed sketch of Yahgan grammar (Bridges 1894:53).

Alphabetic Key.

A a, a in <i>haze</i> .	E e, e in <i>men</i> .	Ɛ e, ea in <i>each</i> .	I i, i in <i>ill</i> .
ʌ a, a in <i>flusk</i> .	A˘ a, a in <i>at</i> .	Θ e, a in <i>all</i> .	O o, o in <i>ox</i> .
U u, oo in <i>food</i> .	U u, oo in <i>foot</i> .	Ɔ e, oi in <i>oil</i> .	ʔ i, i in <i>isle</i> .
Q o, oe in <i>hoe</i> .	U u, u in <i>us</i> .	Ɔ s, ou in <i>our</i> .	Š s, er in <i>herd</i> .

[N.B.—This last vowel is written Š s, and is only used in foreign words in translations or otherwise introduced, and is sounded as *ear* in *earth*. Its printed form might be represented by Š as a capital and s as a small letter.]

ALL the consonants of English, save *x* and *q*, are in use, and have their *proper* sounds *only*; thus, *c* is hard like *k*, *g* as in 'lag'; 's is always sharp. Also, the combinations of letters used in English are not used in Yahgan, but for these we have separate letters; thus, Ɔ *q* is *ch* in 'chap,' Ɔ *f* is *sh* in 'she,' Ɔ *t* is *th* in 'thin' and Ɔ *d* *th* in 'the,' K *k* is the *ch* of the Germans, Ɔ *l* the *ll* of the Welsh, Ɔ *r* is an aspirated and trilled *r*, Ɔ *n* is an aspirated *n* (almost *kn*), Ɔ *ŋ* is *ng* in 'sing,' Ɔ *z* is *s* in 'pleasure,' or the *j* of French; whilst Z *z* is the common *z*. Three marks, written over the vowels only, (and their sounds *always* precede them) are: ' = *h*, ' = *y*, ' = *w*. These sometimes unite, as: ' = *hw*, and ^ = *hy*. Samples in English words: Ɔ, worth; Ɔz, years; Ɔ, ewe or you or yew; Ɔ, Hugh, or hew or hue; Ɔ, who; Ɔ, hay; Ɔ, way or weigh; Ɔ, yea; Ɔs, hair or hare; Ɔs, ware or wear, Ɔs, where; uz, ooze; Ɔz, yews or use; Ɔz, whose; Ɔt, hot; Ɔf, wash; Ɔq, watch; Ɔt, what.

Fig. 9: An excerpt from Bridges's letter (Bridges 1898:[6]), illustrating the use of <q> and <s> in the transcription of English r-sounds. Photo courtesy of Alejandra Regúnaga.

y = j de Francia, q = ar (Euf) Ɔ = ir, er, ur
or, and ar, x yz (Euf), como, - You are well
Ɔ q el. Use your arms Ɔ x Ɔ q mx.

Fig. 10: An excerpt from Lucas Bridges's chart of the orthography for Ona (Lucas Bridges 1901), illustrating the proposed character *ł*, the existing character *ś*, the proposed character *ķ*, and the trigraph <ctl>. Photo courtesy of Alejandra Regúnaga.

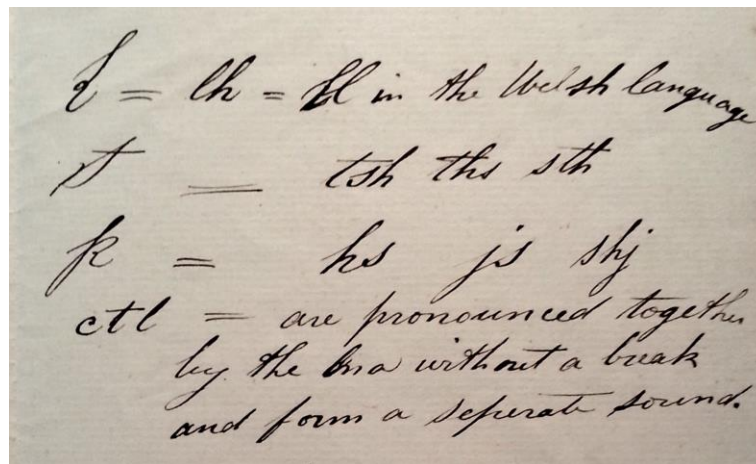


Fig. 11: Another excerpt from Lucas Bridges's Ona orthography, showing the handwritten forms and descriptions of <k> and <j>, on which the fused character *ķ* is based.

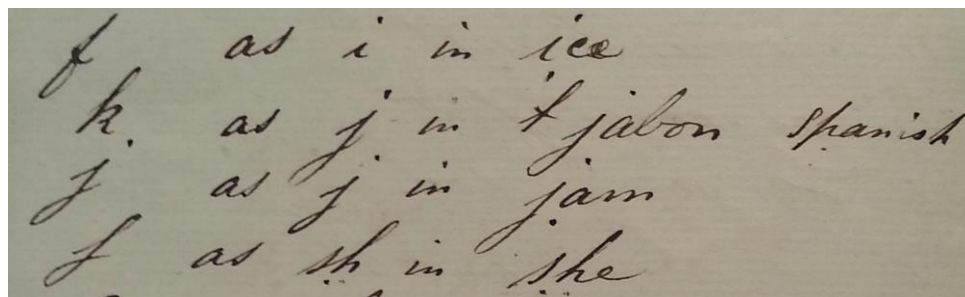


Fig. 12: Examples of printed text in Bridges's later orthography. John 12:24 (Bridges 1886), showing the diacritic *ô* (in the English word *wheat*), and the letter *ŗ*; Acts 20:23–24 (Bridges 1883), showing the acute diacritic (= /h/) placed to the left of a capital letter, and two instances of *ŗ*; Acts 24:17, showing the placement of a diacritic overlapping a capital letter, and an instance of *ŗ* with a grave diacritic (= /y/), in the English word *year*).

24 Ūn sananima áàgigjata, Tula ét xià agumu-
çainu tanupj, tul ařinurdunu, cetupan cuā ēasa, tul
ařinatu, cunjin cja ūrunata.

23 Ɔma Cuspik ía cumuni àgigíata, unna siti í muf
muni tumɛamasəa, í muf muni tumutuqrugateə.

24 Cutupí élap arugataūna úlu, éla annunaūna
àmanamutupí úlu, sabagudua áā ūləastegatalagunəa
ía cuqigalíkgíatacun ūstagu, Lərd Jezus ía gqíligafin

17 Ɔru š ānašingí ušpan átuūnegatūda mutaūgat
ímupí š uši àmanancíja, àman' ía àtašín tuímupí.

Fig. 13: Titles for the printed versions of the biblical translations (Bridges 1881, 1883, 1886), in all-caps Phonotypic writing. Note that the macron in <Ā> marks the tense /a/, while the macron over <U> stands for a preceding /w/. Note the different forms of the capitalized u.

GOSPL L4C ECAMANACI
GOSPEL JON ECAMANĀCI
APOSŁ'NDĚAN ŪZTĀGŪ

Fig. 14: a. An extract from the Lord's Prayer, b. the fifth, sixth, and seventh commandments, handwritten by Bridges in phonetic English using the later orthography, from the addendum to the grammar, written in 1895 (Bridges 1866a:149). Instances of *s* and of *ō* are marked. Note underdot marking stress in the Lord's Prayer. Note a missing macron diacritic (= /w/) over the <i> of witness <i>itnes> in the seventh commandment, an example of a spelling error by Bridges.

149
The Lord's Prayer (The Lord's Prayer)
O God tey art in evn, hlod be
dj nam, dj cizdum cum, dj il
be du on st, az it iz in evn.

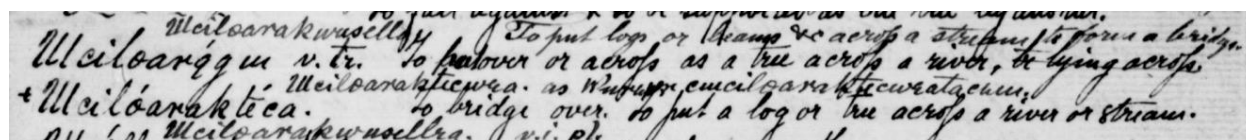
The fifth Commandment. (The fifth commandment)
O ns dj fod and dj mud, dat dj
dar ma be long in de land, tey de
Lord dj God givet de.
For sicut. For salt de no ms ds.
" sevent. For salt not be ex fols itnes
ageust dj nabs.
T.B. Feb. 1895

Fig. 15: Excerpts from Bascopé and Domínguez (2023), transcribing the additional Ona characters and an extract from the wordlist in L. Bridges (1901), showing a usage of ʃk.

l	= lh = ll in the welsh language	
ʃ	= tsh ths sth	
ʃk	= hs js shj	
Ctl	=are pronounced together by the ona with out a break and form a separate sound.	

Cilʃ tqrf	Casa del Sr. Menendez Rio Grande	C ^a de S ^{te} Menendez R ^o Grande
Ceen	Mission Rio Grande	Mision - R ^o Grande
'oöl ʃk ke	Cabo Penas	Cabo Penas
kj kil ʃilan Tuemj	Cabo Inés	Cabo Ines

Fig. 16: An excerpt from Bridges's dictionary (1879a, f. 38v), and its transliteration into the Anthropos phonetic alphabet in the printed edition (Bridges 1933:78–79). Note the correspondences <c>:<k>, <u>:<ö>, <k>:<x>, <ʃ>:<rʒ>, etc.



ūkilqar-axwösell-a, ū.-a.-īa i. pl.
To put logs or beams, etc. across
a stream to form a bridge. ū.-āgū
tr. To put over, or across, as a
tree across a river. ū.-axtek-a To
bridge over. To put a log or tree
across a river or stream. ū.-a.-wīa;
wörurʒ k-ū.-a.-w.-takun.

Fig. 17: The preface to Bridges (1866a), with Phonotypic characters transcribed into resemblant existing Unicode ones, in a website (Prieto 2012).

The order of the letters as used in this dictionary is as follows, **a e i u a e i o u a e o r w o** vowels. **ç ŋ f [?] b c d f g h j k l m n p r s t v w y z**. 39 letters in all, 16 vowels and 23 consonants. The reasons for adopting the above order of using the letters are -

1st. It is a natural way, the long vowels coming first, then the short ones, and next the broad vowels or diphthongs, then following next the additional consonants of Alex. Ellis's Phonetic System, in wh[ich] system this work is written, and then the other consonants in the same order as in the Roman Alphabet. The sound of each letter is always, in all words the same, and all that is required to most satisfactorily fix the pronunciation of all words is the acute accent ' marked over the vowel on which it falls. The sounds of the above letters may be seen most accurately defined in any book printed in Ellis's Phonetic System, all therefore that is necessary for me to say is that the letter **k**, as is appointed, is used for the aspirated **ch** of the Germans, and **hr** is a sound that is common in the Welsh Language. All the other sounds of this language which by the natives is called **Cwtāna**, in opposition to **Bumāna**, the language of the Foot Indians [Onas / Selknam, Ed.], and **Cenaca**, the language of the **Alōcōlōf** people, are common to English, save **l m n r w** and **y** aspirated.

9. Acknowledgments

Kirk Miller read the proposal and offered constructive and useful comments. Alejandra Regúnaga kindly provided some of the manuscript photos. The font used for the samples of the new characters is based on Theano Modern, by Alexander Kryukov.

10. Bibliography

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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://www.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://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

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

A. Administrative

1. Title: *Proposal to encode in the UCS extensions to Ellis's Phonotypic Alphabet for writing Yahgan and Ona*
2. Requester's name: *Yoram Meroz, Karl Pentzlin*
3. Requester type (Member body/Liaison/Individual contribution): *Individual*
4. Submission date: *2026-09-20*
5. Requester's reference (if applicable):
6. Choose one of the following:
- This is a complete proposal: *Yes*
- (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*
- Proposed name of script:
- b. The proposal is for addition of character(s) to an existing block: *Yes*
- Name of the existing block: *Combining Diacritical Marks Extended, Latin Extended-G*
2. Number of characters in proposal: *8*
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? *Yoram Meroz*
- b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): *Yoram Meroz (yoram.meroz@gmail.com)*
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,

¹ Form number: N3702-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)

presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?	Yes
<i>See text.</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 http://www.unicode.org/Public/UNIDATA/UCD.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.	

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	No
If YES explain	
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?	Linguists, historians
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:	Linguists, historians
4. The context of use for the proposed characters (type of use; common or rare)	Specialist
Reference:	Linguists, historians
5. Are the proposed characters in current use by the user community?	Yes
If YES, where? Reference:	By linguists, historians
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)?	No
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 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?	Yes
If YES, is a rationale for such use provided?	Yes
If YES, reference:	see section 4.4, page 4.
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 character(s)?		No
If YES, is the equivalent corresponding unified ideographic character(s) identified?		
If YES, reference:		

UnicodeData.txt

```
1 1AF4; COMBINING LEFT-JOINED ACUTE-MACRON;Mn;230;NSM;;;;;N;;;;;
2 1DFA7;LATIN SMALL LETTER L WITH MIDDLE LOOP;Ll;0;L;;;;;N;;;;;
3 1DFA8;LATIN SMALL LETTER N WITH MIDDLE LOOP;Ll;0;L;;;;;N;;;;;
4 1DFA9;LATIN SMALL LETTER R WITH MIDDLE LOOP;Ll;0;L;;;;;N;;;;;
5 1DFAA;LATIN SMALL LETTER W WITH MIDDLE LOOP;Ll;0;L;;;;;N;;;;;
6 1DFAB;LATIN SMALL LETTER Y WITH MIDDLE LOOP;Ll;0;L;;;;;N;;;;;
7 1DFAC;LATIN SMALL LETTER PHONOTYPIC SYLLABIC R;Ll;0;L;;;;;N;;;;;
8 1DFAD;LATIN SMALL LETTER ESH-K;Ll;0;L;;;;;N;;;;;
9
10
11
+11
```