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Typotheque

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Typotheque North American Syllabics

Proposed changes to the representative glyphs of the Unified Canadian Aboriginal Syllabics code charts

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1 PROPOSED CHANGES

The following proposal requests 186 changes to the representative glyphs in the official code charts of the Unified Canadian Aboriginal Syllabics main and extended blocks. The proposed representative glyph changes have been provided in the following section with associated code points and corresponding character names with annotations, following the current code chart names list. In order to organize multiple issue categories pertaining to the proposed representative glyph changes, a colour coding system has been applied to each code chart showing in this document to identify and group such issues for clarity during the review process. A legend has been provided at the foot of each code chart page for easy reference to the colour coding system used.

This proposal requests the disunified Carrier and Sayisi characters be denoted with specific subheadings in the code chart names list, as suggested in the names list provided in the following section. The descriptor "Dene" has been applied to certain subheadings in cases where the disunified Carrier and Sayisi characters are shared with other Dene Syllabics orthographies in the names list in this section.

In addition to the proposed representative glyph changes, this document suggests that the vertical positioning of the Carrier finals characters should be noted in the Core Spec. An example of the correct vertical positioning of Carrier finals glyphs has been provided in the following section.

The author has prepared a style-matched font for the purpose of implementing into the code charts.

14DF

	140	141	142	143	144	145	146	147	148	149	14A	14B	14C	14D
0	1400	·Å	1420	1430	·>>	1450	<u>ن</u> -	d	· b	L 1490	: U	14B0	1400	14D0
1	V	Ÿ.	U	٨	→	Ċ	·C	ď	Ь·	j	L L	Ļ	ở	U
2	1401 Å	· >	1421	1431	•>	¹⁴⁵¹	1461	b	:b	•1491	14A1 J	14B1 •	1401	14D1
3	1402	1412	1422	1432	1442 > •	1452	1462	b	1482 b	1492	14A2	14B2 -	1402	14D2
3	1403	1413	1423	1433	1443	1453	1463	1473	1483	1493	14A3	14B3	14C3	14D3
4	1404	· >	1424	1434	·<)	<u>.</u>	• Q	d	· C	14.84	•	_ _	14D4
5	1405	>	1425	>	← 1445	1455	1465	Q •	QI	C •	14A5	 14B5	ن	14D5
6	Ď	Ċ	II	>	÷.	Ċ	c	φ.	ρι	٠Ļ	Ė	·L	قـ	ċ
7	; ;	· ব	1426	1436	1446 ~	·U	U	ρ.	d	<u>†</u> ••	14A6	1486	1406	14D6
8	1407	<u>1417</u>	1427	1437	*	1457	1467	· p	b ^I	·J	14A7	14B7 •	14C7	14D7
9	1408	· d	1428	1438	1448	1458	1468	ρ .	1488	J.	14A8	14B8	1408	14D8
Α	1409	1419	1429 T	1439	1449	1459	1469	•d	1489 Č	ال·	14A9	1489	1409	14D9
В	140A	141A	142A	143A	144A	145A	146A	d.	148A	j.	L L	14BA	14CA	i4DA
С	140B	141B	142B	143B	144B	145B	¹⁴⁶⁸ ဝို	147B • d	148B	149B	14AB	14BB	14CB	14DB
	140C	141C	142C	143C	144C	145C	146C	147C	148C	149C	14AC	14BC	14CC	14DC
D	140D	0 ^O	142D	143D	144D	.	P	d •	J	U •	14AD	14BD	14CD	14DD
Е	·V	Δ	Ą	ķ	\cap	$\dot{\bigcirc}$	ρ̈́	٠Ь	j	ڹ	·Γ	2	ġ.	
F	140E	141E	142E	143E	144E	145E - 145F	146E d 146F	b. 147E	148E J 148F	149E	14AE	14BE 2 14BF	14CE	14DE

legend

Vertical position change (finals)

15AF

	14E	14F	150	151	152	153	154	155	156	157	158	159	15A
0	ن -	ز 14F0	· 5	1510	<u>ن</u> .	4 •	+	1550	6	1570	۶ ဝုံ	ዲ ሶ 1590	ک
1	ن -،	ل ے 14F1	5.	J 1511	· 少	- }	X	>	1561	1571	5d 1581	م ل	خ _{15A1}
2	<u></u>	ن م	· 5	j	∽ .	} -	U	>	6	5	٩ ن	مئ 1592	, 15A2
3	• 14E3	نم 14F3	5 .	~	· ن	• ,	U	V	i	1573	5 b	مل	, 15A3
4	ن:	5	:5	$\dot{\sim}$	نې.	۲٠.	ላ	٨	೨	Q.	٩̈́b	من	C
5	<u>ن</u> -	14F4 5	1504	1514	1524	· ປ	¹⁵⁴⁴	6	<u>1564</u>	, p	1584 Sb	1594 Q	15A4
6	· C	. \	1505 S	¹⁵¹⁵	4	7 ·	1545	1555 6 \	1565	j.	9	1595 QQ	15A5
7	14E6	14F6	1506	· ①	1526	· ત	1546 ∴	9	1566	d*	R	1596 C	4
8	<u>.</u> ن-	_{14F7}	1507	1 517	1527	ૻ	P 1547	\$	<u>.</u>	d	1587	P	15A7
9	نځ:	14F8 -J.	1508	1518	1528	· >	†	1558	<u>ن</u> .	1578 1578	K	1598 d	15A8
Α	14E9	نړ.	1509 d	1519 J ••	1529	5 39	5	1559	1569	1579 b	1589	b	† †
В	14EA	_{14FA}	150A	.j	152A	153A • j	154A	155A	156A	157A 1 5	158A	159A	± 15AA
С	14EB	14FB	150B	151B	152B	153B	154B	155B	156B	157B	158B	159B	15AB 5
D	14EC	14FC	150C	151C	152C	153C	1540	155C	156C	157C	1580	159C	15AC 5
E	ار 14ED	الم. نم.	150D	151D	152D	153D	154D • Ġ	1550	156D	^{157D} ်	158D എ	159D	15AD
F	14EE	اء 14FE	150E	151E	152E	153E	154E	155E	156E	157E	158E	159E	15AE
٠,	14EF	14FF	150F	151F	152F	153F	154F	155F	156F	157F	158F	159F	15AF

legend

Vertical position change (finals)

167F

,	15B	15C	15D	15E	15F	160	161	162	163	164	165	166	167
0	15B0	1500	V	15E0	15F0	1600	1610	1620	D	1640	3	1660	ዲ ባ
1	15B1	15C1	15D1	15E1	3	V	1611	et 1621	1631	1641	3	W	ዲ ך
2	L	15C2	> 15D2	15E2	3	1602	1612	1622	5	1 642	3	1	ዲ ሶ 1672
3	9	15C3	→	15E3	3 15F3	1603	Q 1613	1623	C	1643	E 1653	1663	مع ی 1673
4	F 15B4	15C4	→ 15D4	15E4	15F4	1604	5	1624	<u>ت</u>	3	Ж	B	می ن
5	1 5B5	1505	15D5	15E5	15F5	1605	1615	1625	<u>1635</u>	1645	M	1665	مر 1675
6	L	1506	15D6	15E6	15F6	1606	1616	1626	1 636	Z	B	1666	هر ن
7	1 5B7	1507	15D7	15E7	B 15F7	1607	1617	1627	1637	2	B	1667	4.
8	15B8	1508	15D8	15E8	B 15F8	1608	1618	1628	1638	1648	B	QQ	≱.
9	1589	1509	15D9	15E9	15F9	1609	1619	1629	1639	1649	1659	1669	1 679
Α	15BA	15CA	15DA	15EA	15FA	3 160A	161A	162A	3	164A	\$	B	₹. 167A
В	1 588	A 15CB	€	15EB	15FB	B 160B	CI	162B	<u>C2</u>	164B	165B	166B	₹. 167B
С	M	D	U	D	m	3	ठ	り	ß	Ð	Ж	æ	ラ・
D	15BC	15CC	15DC	15EC	15FC	160C	161C	162C	1630	164C	165C B	166C	┾
E	15BD	15CD	15DD	15ED	15FD	160D	161D	162D	163D	164D	165D B	166D X	167D ‡
F	15BE M	15CE	15DE	15EE	15FE	160E	161E	162E	163E	164E	165E 165F	166E SQ 166F	167E

legend

- Glyph shape / proportion change
- Character orientation revision
- Vertical position change (finals)

ì	18B	18C	18D	18E	18F
0	^	۱BCO	٠ <u>ـُــ</u>	JHE0	E.
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2	ن 1882	·%	ن 18D2	نے	QI.
3	,	۲,	٠,ς	6.	1
4	\$	18C3	1803	G .	18F3
5	1884	r r	1804	1864	18F4 S
6	.\$	·o	P	jaes	18F5
7	1986	O .	1806	Ė	
8	ъ в	· ö	1807	я·	
9	- b	о .	1808	Ġ	
A	1889	1809	1809	_{18E9}	
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	1888	1808	18ĎB •▲	18EB	
С	18BC	18CC	18DC	18EC	
D	1880	_ .	18DD	₩.	
E	18BE	18CE	180E	in the second se	
F	5 188F	℃	18DF	L 18EF	

- Glyph shape / proportion change
- Vertical position change (finals)
- Character orientation revision

1400

Unified Canadian Aboriginal Syllabics

160E

min at	C	Name and Constant		м	
Final	tor L	Pene and Carrier	15E2	Ŋ	CANADIAN SYLLABICS CARRIER TTU
•••			15E3	Д	CANADIAN SYLLABICS CARRIER TTO
144B	h	CANADIAN SYLLABICS CARRIER H	15E4	D	CANADIAN SYLLABICS CARRIER TTE
		vertically centered at midline	15E5	${f D}$	CANADIAN SYLLABICS CARRIER TTEE
		variation of the control of the cont	15E6	Σ	CANADIAN SYLLABICS CARRIER TTI
			15E7	\Box	CANADIAN SYLLABICS CARRIER TTA
Final	for C	Carrier	15E8	Ħ	CANADIAN SYLLABICS CARRIER PU
			15E9	Д	CANADIAN SYLLABICS CARRIER PO
14D1	U	CANADIAN SYLLABICS CARRIER NG	15EA	D	CANADIAN SYLLABICS CARRIER PE
		vertically centered at midline	15EB	D	CANADIAN SYLLABICS CARRIER PEE
		Vertically certicized defination	15EC	D	CANADIAN SYLLABICS CARRIER PI
			15ED	D	CANADIAN SYLLABICS CARRIER PA
Final	for D	Pene and Carrier	15EE	1	CANADIAN SYLLABICS CARRIER P
					 vertically centered at midline
1506	s	CANADIAN SYLLABICS ATHAPASCAN S	15EF	W	CANADIAN SYLLABICS CARRIER GU
		vertically centered at midline	15F0	m	CANADIAN SYLLABICS CARRIER GO
		vertically certicized definitions	15F1	3	CANADIAN SYLLABICS CARRIER GE
			15F2	∃	CANADIAN SYLLABICS CARRIER GEE
Syllai	oles	for Dene and Sayisi	15F3	3	CANADIAN SYLLABICS CARRIER GI
•••			15F4	E	
15C0	Λ	CANADIAN SYLLABICS SAYISI HE	15F5	\square	CANADIAN SYLLABICS CARRIER GA
15C1	Γ	CANADIAN SYLLABICS SAYISI HI		m	CANADIAN SYLLABICS CARRIER KHU
15C2	J	CANADIAN SYLLABICS SAYISI HO	15F6		CANADIAN SYLLABICS CARRIER KHO
		• Sayisi (HU)	15F7	В	CANADIAN SYLLABICS CARRIER KHE
15C3	N	CANADIAN SYLLABICS SAYISI HA	15F8	₿	CANADIAN SYLLABICS CARRIER KHEE
			15F9	В	CANADIAN SYLLABICS CARRIER KHI
		for Carrier	15FA	В	CANADIAN SYLLABICS CARRIER KHA
15C4	A	CANADIAN SYLLABICS CARRIER GHU	15FB	M	CANADIAN SYLLABICS CARRIER KKU
15C5	Α	CANADIAN SYLLABICS CARRIER GHO	15FC	M	CANADIAN SYLLABICS CARRIER KKO
15C6	➤	CANADIAN SYLLABICS CARRIER GHE	15FD	₽	CANADIAN SYLLABICS CARRIER KKE
15C7	⋗	CANADIAN SYLLABICS CARRIER GHEE	15FE	₽	CANADIAN SYLLABICS CARRIER KKEE
15C8	∢	CANADIAN SYLLABICS CARRIER GHI	15FF	₽	CANADIAN SYLLABICS CARRIER KKI
15C9	⋖	CANADIAN SYLLABICS CARRIER GHA	1600	8	CANADIAN SYLLABICS CARRIER KKA
15CA	\forall	CANADIAN SYLLABICS CARRIER RU	1601	V	CANADIAN SYLLABICS CARRIER KK
15CB	Α	CANADIAN SYLLABICS CARRIER RO			 vertically centered at midline
15CC	\triangleright	CANADIAN SYLLABICS CARRIER RE	1602	U	CANADIAN SYLLABICS CARRIER NU
15CD	\triangleright	CANADIAN SYLLABICS CARRIER REE	1603	\cap	CANADIAN SYLLABICS CARRIER NO
15CE	⊳	CANADIAN SYLLABICS CARRIER RI	1604	つ	CANADIAN SYLLABICS CARRIER NE
15CF	⋖	CANADIAN SYLLABICS CARRIER RA	1605	つ	CANADIAN SYLLABICS CARRIER NEE
15D0	Ψ	CANADIAN SYLLABICS CARRIER WU	1606	$\overline{\cdot}$	CANADIAN SYLLABICS CARRIER NI
15D1	Λ	CANADIAN SYLLABICS CARRIER WO	1607	C	CANADIAN SYLLABICS CARRIER NA
15D2	>	CANADIAN SYLLABICS CARRIER WE	1608	W	CANADIAN SYLLABICS CARRIER MU
15D3	≽	CANADIAN SYLLABICS CARRIER WEE	1609	η	CANADIAN SYLLABICS CARRIER MO
15D4	>	CANADIAN SYLLABICS CARRIER WI	160A	3	CANADIAN SYLLABICS CARRIER ME
15D5	<	CANADIAN SYLLABICS CARRIER WA	160B	В	CANADIAN SYLLABICS CARRIER MEE
15D6	\forall	CANADIAN SYLLABICS CARRIER HWU	160C	3	CANADIAN SYLLABICS CARRIER MI
15D7	A	CANADIAN SYLLABICS CARRIER HWO	160D	٤	CANADIAN SYLLABICS CARRIER MA
15D8	→	CANADIAN SYLLABICS CARRIER HWE	160E	9	CANADIAN SYLLABICS CARRIER YU
15D9	€	CANADIAN SYLLABICS CARRIER HWEE	160F	ด	CANADIAN SYLLABICS CARRIER YO
15DA	`	CANADIAN SYLLABICS CARRIER HWI	1610	و. ق	CANADIAN SYLLABICS CARRIER YE
15DB	€	CANADIAN SYLLABICS CARRIER HWA	1611	و ق	CANADIAN SYLLABICS CARRIER YEE
15DC	Ū	CANADIAN SYLLABICS CARRIER THU	1612	o o	CANADIAN SYLLABICS CARRIER YI
15DC	۵	CANADIAN SYLLABICS CARRIER THO	1613	6	CANADIAN SYLLABICS CARRIER YA
15DE	D	CANADIAN SYLLABICS CARRIER THE	1614	5	CANADIAN SYLLABICS CARRIER JU
15DE	D	CANADIAN SYLLABICS CARRIER THEE	.014	_	Athapascan (ZA), Sayisi (TZO),
15E0	Ð	CANADIAN SYLLABICS CARRIER THE			South Slavey (DHA)
	اط D				Jodin Jiavey (DNA)
15E1	Ū	CANADIAN SYLLABICS CARRIER THA			

160F

Unified Canadian Aboriginal Syllabics

166C

Svlla	bles	for Dene and Sayisi	1642	ລ	CANADIAN SYLLABICS CARRIER ZE
1615		CANADIAN SYLLABICS SAYISI JU	1643	\mathfrak{D}	CANADIAN SYLLABICS CARRIER ZEE
		Athapascan (ZO), Sayisi (TZU),	1644	\supset	CANADIAN SYLLABICS CARRIER ZI
		South Slavey (DHO)	1645	\subset	CANADIAN SYLLABICS CARRIER ZA
Sylla	hlac	for Carrier	1646	z	CANADIAN SYLLABICS CARRIER Z
1616	9	CANADIAN SYLLABICS CARRIER JO			 vertically centered at midline
1617	p	CANADIAN SYLLABICS CARRIER JE	1647	Ż	CANADIAN SYLLABICS CARRIER INITIAL Z
1618	lo lo	CANADIAN SYLLABICS CARRIER JEE			 vertically centered at midline
1619	Ю	CANADIAN SYLLABICS CARRIER JI	1648	${\tt v}$	CANADIAN SYLLABICS CARRIER DZU
			1649	Ω	CANADIAN SYLLABICS CARRIER DZO
-		for Dene and Sayisi	164A	Ð	CANADIAN SYLLABICS CARRIER DZE
161A	19	CANADIAN SYLLABICS SAYISI JI	164B	Ð	CANADIAN SYLLABICS CARRIER DZEE
		Athapascan (ZE), Sayisi (TZE),	164C	Ξ	CANADIAN SYLLABICS CARRIER DZI
		South Slavey (DHE)	164D	Œ	CANADIAN SYLLABICS CARRIER DZA
Sylla	bles	for Carrier	164E	ឃ	CANADIAN SYLLABICS CARRIER SU
161B	ପ	CANADIAN SYLLABICS CARRIER JA	164F	\mathfrak{M}	CANADIAN SYLLABICS CARRIER SO
		 Athapascan (ZI), Sayisi (TZI), 	1650	\exists	CANADIAN SYLLABICS CARRIER SE
		South Slavey (DHI)	1651	\mathbb{B}	CANADIAN SYLLABICS CARRIER SEE
161C	ପ	CANADIAN SYLLABICS CARRIER JJU	1652	Ξ	CANADIAN SYLLABICS CARRIER SI
161D	ର	CANADIAN SYLLABICS CARRIER JJO	1653	\approx	CANADIAN SYLLABICS CARRIER SA
161E	ര	CANADIAN SYLLABICS CARRIER JJE	1654	ដ	CANADIAN SYLLABICS CARRIER SHU
161F	ര	CANADIAN SYLLABICS CARRIER JJEE	1655	Ж	CANADIAN SYLLABICS CARRIER SHO
1620	ಣ	CANADIAN SYLLABICS CARRIER JJI	1656	$\mathfrak B$	CANADIAN SYLLABICS CARRIER SHE
1621	લ	CANADIAN SYLLABICS CARRIER JJA	1657	${\mathbb B}$	CANADIAN SYLLABICS CARRIER SHEE
1622	U	CANADIAN SYLLABICS CARRIER LU	1658	${\mathbb B}$	CANADIAN SYLLABICS CARRIER SHI
1623	Ω	CANADIAN SYLLABICS CARRIER LO	1659	${\tt B}$	CANADIAN SYLLABICS CARRIER SHA
1624	$^{\circ}$	CANADIAN SYLLABICS CARRIER LE	165A	\$	CANADIAN SYLLABICS CARRIER SH
1625	5	CANADIAN SYLLABICS CARRIER LEE			 vertically centered at midline
1626	<u>5</u>	CANADIAN SYLLABICS CARRIER LI	165B	Ж	CANADIAN SYLLABICS CARRIER TSU
1627	C	CANADIAN SYLLABICS CARRIER LA	165C	\mathfrak{R}	CANADIAN SYLLABICS CARRIER TSO
1628	Q	CANADIAN SYLLABICS CARRIER DLU	165D	${\mathbb B}$	CANADIAN SYLLABICS CARRIER TSE
1629	Ω	CANADIAN SYLLABICS CARRIER DLO	165E	${\mathbb B}$	CANADIAN SYLLABICS CARRIER TSEE
162A	פ	CANADIAN SYLLABICS CARRIER DLE	165F	${\mathbb B}$	CANADIAN SYLLABICS CARRIER TSI
162B	ŋ	CANADIAN SYLLABICS CARRIER DLEE	1660	\mathfrak{B}	CANADIAN SYLLABICS CARRIER TSA
162C	り	CANADIAN SYLLABICS CARRIER DLI	1661	\mathfrak{U}	CANADIAN SYLLABICS CARRIER CHU
162D	C	CANADIAN SYLLABICS CARRIER DLA	1662	\mathfrak{M}	CANADIAN SYLLABICS CARRIER CHO
162E	Ω	CANADIAN SYLLABICS CARRIER LHU	1663	\exists	CANADIAN SYLLABICS CARRIER CHE
162F	Ω	CANADIAN SYLLABICS CARRIER LHO	1664	\mathbb{B}	CANADIAN SYLLABICS CARRIER CHEE
1630	\Box	CANADIAN SYLLABICS CARRIER LHE	1665	\mathbb{B}	CANADIAN SYLLABICS CARRIER CHI
1631	\mathfrak{O}	CANADIAN SYLLABICS CARRIER LHEE	1666	Ξ	CANADIAN SYLLABICS CARRIER CHA
1632	\mathfrak{S}	CANADIAN SYLLABICS CARRIER LHI	1667	\mathfrak{A}	CANADIAN SYLLABICS CARRIER TTSU
1633	C	CANADIAN SYLLABICS CARRIER LHA	1668	\mathfrak{M}	CANADIAN SYLLABICS CARRIER TTSO
1634	Ω	CANADIAN SYLLABICS CARRIER TLHU	1669	\mathbb{B}	CANADIAN SYLLABICS CARRIER TTSE
1635	Ω	CANADIAN SYLLABICS CARRIER TLHO	166A	\mathbb{B}	CANADIAN SYLLABICS CARRIER TTSEE
1636	\Box	CANADIAN SYLLABICS CARRIER TLHE	166B	\mathbf{B}	CANADIAN SYLLABICS CARRIER TTSI

•••

166C

€ CANADIAN SYLLABICS CARRIER TTSA

 C

1639

1637 D CANADIAN SYLLABICS CARRIER TLHEE

CANADIAN SYLLABICS CARRIER THLA

CANADIAN SYLLABICS CARRIER ZU

1638 O CANADIAN SYLLABICS CARRIER THLI

163A W CANADIAN SYLLABICS CARRIER TLU
163B W CANADIAN SYLLABICS CARRIER TLO
163C CANADIAN SYLLABICS CARRIER TLE
163D CANADIAN SYLLABICS CARRIER TLE
163E CANADIAN SYLLABICS CARRIER TLI
163F CANADIAN SYLLABICS CARRIER TLA

1641 Ω CANADIAN SYLLABICS CARRIER ZO

18B0 Unified Canadian Aboriginal Syllabics Extended

18F5

Syllables for Cree and Ojibway

•••

18DB • CANADIAN SYLLABICS OJIBWAY SH

• should follow i-vowel orientation position

18DC ' CANADIAN SYLLABICS EASTERN W

18DD A. CANADIAN SYLLABICS WESTERN W

...

Syllables for Beaver Dene, Hare Dene, and Chipewyan Dene

Syllables for Dene and Carrier

...

18EC J CANADIAN SYLLABICS SAYISI HOO

• Chipewyan Dene (GU)

18ED W. CANADIAN SYLLABICS CARRIER GWO

• Beaver Dene (CHYE)

18EE 3 CANADIAN SYLLABICS CARRIER GEE

• Chipewyan Dene (CHU)

18EF É CANADIAN SYLLABICS CARRIER GAA

• Beaver Dene (CHAI)

18F0 E. CANADIAN SYLLABICS CARRIER GWA

• Hare Dene (SHYA)

18F1 さ CANADIAN SYLLABICS SAYISI JUU

• Chipewyan Dene (TSU)

18F2 CH CANADIAN SYLLABICS CARRIER JWA

• Beaver Dene (TSYE)

Finals for Dene and Carrier

...

18F5 S CANADIAN SYLLABICS CARRIER DENTAL S

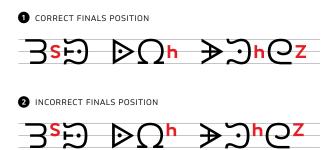
• vertically centered at midline

Addition

1.1 CARRIER CHARACTER NOTES FOR CORE SPEC

This proposal suggests noting the vertical positioning behaviour of the Carrier finals characters in the Unicode Core Specification. In the Carrier syllabics, finals are expected to appear vertically positioned at the centre point between the full height of the syllabic characters and the baseline. This is opposed to the standard vertical positioning within ucas for finals characters, where finals are always positioned at the top position.

The diagram below demonstrates the correct Carrier finals vertical positioning (1), and the way the distinct Carrier finals are incorrectly positioned in the current chart font for UCAS (2):



- Glyph shape / proportion change
- Vertical position change (finals)
- Glyph orientation change

2 CHANGES FOR CARRIER

This proposal requests revisions to the following representative glyphs for Carrier, which corrects errors in the proportions of the character shapes, character orientation, and the vertical positioning of the final consonant marks, restoring the intention of the original script encoding committee for the disunified Carrier characters in UCAS.

h	1	V	U	Z	Z	S	S	\$			
h	р	kk	ng	Z	Ζ	S	<u>S</u>	sh			
\forall	Α	\triangleright	⋗	∢	⋖	\forall	Δ	\triangleright	\triangleright	⊳	4
ghu	gho	ghe	ghee	ghi	gha	ru	ro	re	ree	ri	ra
V	\	>	→	→	<	A	A	→	→	→	€
wu M	WO	we	wee	wi	wa	hwu	hwo	hwe	hwee	hwi	hwa
ttu	۵ tto	∑ tte	ttee	∑ tti	 tta	U	D po	D pe	D pee	D pi	G
W	m	3	3	3	Ε	\Box	m	8	₿	В	В
gu	go	ge	gee	gi	ga	khu	kho	khe	khee	khi	kha
Ш	M	B	Ξ	Ξ	B	U	7	つ	D	Ð	C
kku	kko	kke	kkee	kki	kka	nu	no	ne	nee	ni	na
w	η	٤	В	3	3	9	ର	5	Э	O	6
mu	mo	me	mee	mi	ma	yu	уо	ye	yee	yi	ya
9	5	В	Id	ю 10	a	G	ର	ଗ	ତ	ଚ	લ
ju	jo	je	jee	ji C	ja	jju	jjo	jje	jjee	jji	jja
U	Ω lo) le	lee	5 I	C la	℧ dlu	Q dlo	D dle	<u>n</u> dlee	<u>n</u>	C dla
Ω	Ω	b	Ð	b	C	77	Ω	b	D	b	C
lhu	lho	lhe	lhee	lhi	lha	tlhu	tlho	tlhe	tlhee	tlhi	tlha
α	Ω	B	\mathbb{B}	13	Ξ	ប	Ω	ລ	Э	\supset	\subset
tlu	tlo	tle	tlee	tli	tla	zu	ZO	ze	zee	zi	za
${f U}$	Ω	Ð	Ξ	Ξ	Œ	ឃ	\mathfrak{M}	Ξ	\mathbb{H}	Ξ	Ξ
dzu	dzo	dze	dzee	dzi	dza	su	SO	se	see	si	sa
Ж	Ж	${\tt B}$	\mathbb{B}	${\mathbb B}$	\mathfrak{B}	\mathfrak{A}	\mathfrak{R}	\mathbb{B}	田	${\mathbb B}$	\mathfrak{B}
shu	sho	she	shee	shi	sha	tsu	tso	tse	tsee	tsi	tsa
₩	∭ cho	₿ che	⊞ chee	∄ chi	E cha	M	M	##50	₩ ttsee	B	B
W.	3	Ė	E.		UIId	ttsu	ttso	ttse	usee	ttsi	ttsa
gwu	ゴ gee	gaa	gwa	Ol· jwa							

The Carrier Syllabics should appear uniform in height and width – without variation between full size and medium size characters, and the final pure consonant marks should be vertically positioned at the centre point between the top height of the full syllabics, and the baseline. (figures 1, 4 and 8) An example of the correct and incorrect vertical position of Carrier finals is shown on p 21. Additionally, there are two errors in representative glyph orientation that have been proposed for changing. (figure 5)

In order to provide clarity for implementers towards the correct vertical positioning of the 9 Carrier finals glyphs, annotations have been provided in the names list on pp 8–10 for the applicable glyphs. Additionally, note that some of the characters discussed in this section are also used by other Dene orthographies in UCAS in the same manner as is preferred by Carrier.

The requested changes to the code chart font have been illustrated on pp 12–17, with attestations and descriptions in the sections to follow. Additionally, comments have been made in section 2.5 on p 23 to indicate the correct design of Carrier glyphs.

$\label{lem:continuous} \textbf{Guide to figures for proposed representative glyph changes for Carrier}$

4445		CANADIAN CYLLADICC CADDIED II	(EIC 1 0 0 10 10 10 17 17 17)		~	54448444 6VII. 48V65 6488V58 335	(5)5 0 40 47)
144B 14D1	h U	CANADIAN SYLLABICS CARRIER H CANADIAN SYLLABICS CARRIER NG	(FIG. 1, 8, 9, 10, 12, 13, 14, 15, 17)	161E	ଗ	CANADIAN SYLLABICS CARRIER JJE	(FIG. 9, 10, 17)
1506	s	CANADIAN SYLLABICS CARRIER NG	(FIG. 9, 10, 12) (FIG. 6, 7, 8, 9, 10, 11, 12, 13, 16, 17)	161F 1620	ത ത	CANADIAN SYLLABICS CARRIER JJEE CANADIAN SYLLABICS CARRIER JJI	(FIG. 1, 9, 10) (FIG. 9, 10)
15C4	A	CANADIAN SYLLABICS CARRIER GHU	(FIG. 9, 10)	1621	ଥ	CANADIAN SYLLABICS CARRIER JJA	(FIG. 9, 10)
15C5	À	CANADIAN SYLLABICS CARRIER GHO	(FIG. 9, 10)	1622	ũ	CANADIAN SYLLABICS CARRIER LU	(FIG. 9, 10)
15C6	>	CANADIAN SYLLABICS CARRIER GHE	(FIG. 9, 10)	1623	Ω	CANADIAN SYLLABICS CARRIER LO	(FIG. 9, 10, 17)
15C7	⋗	CANADIAN SYLLABICS CARRIER GHEE	(FIG. 9, 10)	1624	כ	CANADIAN SYLLABICS CARRIER LE	(FIG. 9, 10, 13, 15)
15C8	∢	CANADIAN SYLLABICS CARRIER GHI	(FIG. 9, 10)	1625	9	CANADIAN SYLLABICS CARRIER LEE	(FIG. 8, 9, 10, 15)
15C9	₹	CANADIAN SYLLABICS CARRIER GHA	(FIG. 9, 10)	1626	<u>ອ</u>	CANADIAN SYLLABICS CARRIER LI	(FIG. 9, 10, 13, 17)
15CA 15CB	A	CANADIAN SYLLABICS CARRIER RU CANADIAN SYLLABICS CARRIER RO	(FIG. 9, 10) (FIG. 9, 10)	1627 1628	C C	CANADIAN SYLLABICS CARRIER LA CANADIAN SYLLABICS CARRIER DLU	(FIG. 9, 10, 11, 12, 13, 15) (FIG. 5, 8, 9)
15CC	Ď	CANADIAN SYLLABICS CARRIER RE	(FIG. 9, 10)	1629	Ω	CANADIAN SYLLABICS CARRIER DLO	(FIG. 9, 10)
15CD	⊳	CANADIAN SYLLABICS CARRIER REE	(FIG. 9, 10)	162A	פ	CANADIAN SYLLABICS CARRIER DLE	(FIG. 9, 10)
15CE	▶	CANADIAN SYLLABICS CARRIER RI	(FIG. 9, 10)	162B	<u>n</u>	CANADIAN SYLLABICS CARRIER DLEE	(FIG. 1, 9, 10, 13)
15CF	∢	CANADIAN SYLLABICS CARRIER RA	(FIG. 9, 10, 12)	162C	<u>n</u>	CANADIAN SYLLABICS CARRIER DLI	(FIG. 9, 10, 16)
15D0	V	CANADIAN SYLLABICS CARRIER WU	(FIG. 9, 10)	162D	C	CANADIAN SYLLABICS CARRIER DLA	(FIG. 9, 10, 17)
15D1	Λ	CANADIAN SYLLABICS CARRIER WO CANADIAN SYLLABICS CARRIER WE	(FIG. 9, 10)	162E 162F	Ω	CANADIAN SYLLABICS CARRIER LHU CANADIAN SYLLABICS CARRIER LHO	(FIG. 9, 10)
15D2 15D3	> >	CANADIAN SYLLABICS CARRIER WE CANADIAN SYLLABICS CARRIER WEE	(FIG. 9, 10) (FIG. 9, 10)	1630	b	CANADIAN SYLLABICS CARRIER LHO CANADIAN SYLLABICS CARRIER LHE	(FIG. 9, 10) (FIG. 9, 10)
15D4	é	CANADIAN SYLLABICS CARRIER WI	(FIG. 9, 10)	1631	ອ	CANADIAN SYLLABICS CARRIER LHEE	(FIG. 9, 10)
15D5	<	CANADIAN SYLLABICS CARRIER WA	(FIG. 9, 10)	1632	Ð	CANADIAN SYLLABICS CARRIER LHI	(FIG. 9, 10)
15D6	\forall	CANADIAN SYLLABICS CARRIER HWU	(FIG. 9, 10)	1633	C	CANADIAN SYLLABICS CARRIER LHA	(FIG. 9, 10)
15D7	A	CANADIAN SYLLABICS CARRIER HWO	(FIG. 9, 10)	1634	ũ	CANADIAN SYLLABICS CARRIER TLHU	(FIG. 9, 10)
15D8	>	CANADIAN SYLLABICS CARRIER HWE	(FIG. 9, 10)	1635	Ω	CANADIAN SYLLABICS CARRIER TLHO	(FIG. 9, 10)
15D9 15DA	≯	CANADIAN SYLLABICS CARRIER HWEE CANADIAN SYLLABICS CARRIER HWI	(FIG. 9, 10)	1636 1637	р С	CANADIAN SYLLABICS CARRIER TLHE CANADIAN SYLLABICS CARRIER TLHEE	(FIG. 9, 10)
15DA	€	CANADIAN SYLLABICS CARRIER HWA	(FIG. 9, 10) (FIG. 9, 10, 12)	1638	b	CANADIAN SYLLABICS CARRIER THEE	(FIG. 9, 10) (FIG. 2, 9, 10)
15DC	Ò	CANADIAN SYLLABICS CARRIER THU	(FIG. 9, 10, 11)	1639	ä	CANADIAN SYLLABICS CARRIER THLA	(FIG. 9, 10)
15DD	Ω	CANADIAN SYLLABICS CARRIER THO	(FIG. 9, 10)	163A	ω	CANADIAN SYLLABICS CARRIER TLU	(FIG. 9, 10)
15DE	D	CANADIAN SYLLABICS CARRIER THE	(FIG. 9, 10, 11)	163B	Ω	CANADIAN SYLLABICS CARRIER TLO	(FIG. 5, 9, 10)
15DF	D	CANADIAN SYLLABICS CARRIER THEE	(FIG. 9, 10)	163C	B	CANADIAN SYLLABICS CARRIER TLE	(FIG. 9, 10, 14)
15E0	D	CANADIAN SYLLABICS CARRIER THI	(FIG. 9, 10)	163D	S S	CANADIAN SYLLABICS CARRIER TLEE	(FIG. 9, 10)
15E1 15E2	a	CANADIAN SYLLABICS CARRIER THA CANADIAN SYLLABICS CARRIER TTU	(FIG. 9, 10, 11, 12) (FIG. 9, 10)	163E 163F	а В	CANADIAN SYLLABICS CARRIER TLI CANADIAN SYLLABICS CARRIER TLA	(FIG. 9, 10) (FIG. 9, 10, 11, 13)
15E2	۵ a	CANADIAN SYLLABICS CARRIER TTO	(FIG. 9, 10)	1640	ช	CANADIAN SYLLABICS CARRIER TLA	(FIG. 9, 10, 11, 13)
15E4	Ď	CANADIAN SYLLABICS CARRIER TTE	(FIG. 9, 10)	1641	ŭ	CANADIAN SYLLABICS CARRIER ZO	(FIG. 9, 10)
15E5	Ð	CANADIAN SYLLABICS CARRIER TTEE	(FIG. 9, 10, 13, 15)	1642	\supset	CANADIAN SYLLABICS CARRIER ZE	(FIG. 1, 9, 10)
15E6	Ð	CANADIAN SYLLABICS CARRIER TTI	(FIG. 9, 10, 15)	1643	Ð	CANADIAN SYLLABICS CARRIER ZEE	(FIG. 9, 10)
15E7	α α	CANADIAN SYLLABICS CARRIER TTA	(FIG. 9, 10, 11, 12, 13, 17)	1644	ລ	CANADIAN SYLLABICS CARRIER ZI	(FIG. 9, 10)
15E8 15E9	А	CANADIAN SYLLABICS CARRIER PU CANADIAN SYLLABICS CARRIER PO	(FIG. 9, 10) (FIG. 9, 10)	1645 1646	C z	CANADIAN SYLLABICS CARRIER ZA CANADIAN SYLLABICS CARRIER Z	(FIG. 9, 10) (FIG. 6, 7, 8, 9, 10, 13, 15, 18)
15EA	D	CANADIAN SYLLABICS CARRIER PE	(FIG. 9, 10, 11, 13)	1647	ż	CANADIAN SYLLABICS CARRIER INITIAL Z	(FIG. 9, 10)
15EB	D	CANADIAN SYLLABICS CARRIER PEE	(FIG. 9, 10, 14, 16)	1648	$\overline{\mathbf{u}}$	CANADIAN SYLLABICS CARRIER DZU	(FIG. 9, 10)
15EC	Ð	CANADIAN SYLLABICS CARRIER PI	(FIG. 9, 10, 16)	1649	Ω	CANADIAN SYLLABICS CARRIER DZO	(FIG. 9, 10)
15ED	D	CANADIAN SYLLABICS CARRIER PA	(FIG. 8, 9, 10, 11, 12, 13, 14, 16)	164A	Ð	CANADIAN SYLLABICS CARRIER DZE	(FIG. 9, 10)
15EE	1	CANADIAN SYLLABICS CARRIER P	(FIG. 9, 10, 13, 18)	164B	Ð	CANADIAN SYLLABICS CARRIER DZEE	(FIG. 9, 10)
15EF 15F0	W M	CANADIAN SYLLABICS CARRIER GU CANADIAN SYLLABICS CARRIER GO	(FIG. 9, 10) (FIG. 9, 10)	164C 164D	Ð	CANADIAN SYLLABICS CARRIER DZI CANADIAN SYLLABICS CARRIER DZA	(FIG. 9, 10) (FIG. 9, 10)
15F0 15F1	3	CANADIAN SYLLABICS CARRIER GO	(FIG. 8, 9, 10, 13, 17)	164E	ພ	CANADIAN SYLLABICS CARRIER SU	(FIG. 9, 10, 11)
15F2	3	CANADIAN SYLLABICS CARRIER GEE	(FIG. 9, 10)	164F	M	CANADIAN SYLLABICS CARRIER SO	(FIG. 9, 10)
15F3	3	CANADIAN SYLLABICS CARRIER GI	(FIG. 9, 10)	1650	≋	CANADIAN SYLLABICS CARRIER SE	(FIG. 9, 10, 17)
15F4	٤	CANADIAN SYLLABICS CARRIER GA	(FIG. 9, 10, 12, 13)	1651	€	CANADIAN SYLLABICS CARRIER SEE	(FIG. 9, 10, 13)
15F5	W W	CANADIAN SYLLABICS CARRIER KHU	(FIG. 9, 10)	1652	≋	CANADIAN SYLLABICS CARRIER SI	(FIG. 9, 10, 17)
15F6 15F7	m B	CANADIAN SYLLABICS CARRIER KHO CANADIAN SYLLABICS CARRIER KHE	(FIG. 9, 10) (FIG. 9, 10, 15)	1653 1654	ಜ	CANADIAN SYLLABICS CARRIER SA CANADIAN SYLLABICS CARRIER SHU	(FIG. 9, 10, 12, 15) (FIG. 9, 10)
15F8	В	CANADIAN SYLLABICS CARRIER KHEE	(FIG. 9, 10, 13)	1655	ж	CANADIAN SYLLABICS CARRIER SHO	(FIG. 9, 10)
15F9	В	CANADIAN SYLLABICS CARRIER KHI	(FIG. 9, 10)	1656	B	CANADIAN SYLLABICS CARRIER SHE	(FIG. 9, 10)
15FA	В	CANADIAN SYLLABICS CARRIER KHA	(FIG. 9, 10, 11, 12, 18)	1657	\mathbf{B}	CANADIAN SYLLABICS CARRIER SHEE	(FIG. 9, 10, 13)
15FB	M	CANADIAN SYLLABICS CARRIER KKU	(FIG. 9, 10)	1658	B	CANADIAN SYLLABICS CARRIER SHI	(FIG. 9, 10)
15FC	m	CANADIAN SYLLABICS CARRIER KKO	(FIG. 9, 10)	1659	E \$	CANADIAN SYLLABICS CARRIER SHA	(FIG. 9, 10, 12)
15FD 15FE	₽ ₽	CANADIAN SYLLABICS CARRIER KKE CANADIAN SYLLABICS CARRIER KKEE	(FIG. 9, 10, 13, 15, 17) (FIG. 9, 10, 17)	165A 165B	₩	CANADIAN SYLLABICS CARRIER SH CANADIAN SYLLABICS CARRIER TSU	(FIG. 9, 10, 12) (FIG. 9, 10)
15FF	B	CANADIAN SYLLABICS CARRIER KKI	(FIG. 9, 10)	165C	ж	CANADIAN SYLLABICS CARRIER TSO	(FIG. 9, 10)
1600	8	CANADIAN SYLLABICS CARRIER KKA	(FIG. 9, 10, 12)	165D	B	CANADIAN SYLLABICS CARRIER TSE	(FIG. 9, 10)
1601	v	CANADIAN SYLLABICS CARRIER KK	(FIG. 9, 10, 13, 17)	165E	${\mathbb B}$	CANADIAN SYLLABICS CARRIER TSEE	(FIG. 9, 10)
1602	\overline{C}	CANADIAN SYLLABICS CARRIER NU	(FIG. 9, 10, 14)	165F	B	CANADIAN SYLLABICS CARRIER TSI	(FIG. 9, 10)
1603 1604	<u>ر</u>	CANADIAN SYLLABICS CARRIER NO	(FIG. 9, 10, 13)	1660	Œ	CANADIAN SYLLABICS CARRIER TSA	(FIG. 9, 10, 11, 12, 13)
1604	J D	CANADIAN SYLLABICS CARRIER NE CANADIAN SYLLABICS CARRIER NEE	(FIG. 9, 10, 11, 15) (FIG. 9, 10, 14, 15)	1661 1662	M	CANADIAN SYLLABICS CARRIER CHU CANADIAN SYLLABICS CARRIER CHO	(FIG. 9, 10) (FIG. 9, 10)
1606	Ď	CANADIAN SYLLABICS CARRIER NI	(FIG. 1, 9, 10, 11, 15, 16, 17)	1663	8	CANADIAN SYLLABICS CARRIER CHE	(FIG. 9, 10, 17)
1607	\subset	CANADIAN SYLLABICS CARRIER NA	(FIG. 8, 9, 10, 12)	1664	\mathbb{B}	CANADIAN SYLLABICS CARRIER CHEE	(FIG. 9, 10)
1608	سا ش	CANADIAN SYLLABICS CARRIER MU	(FIG. 9, 10)	1665	æ	CANADIAN SYLLABICS CARRIER CHI	(FIG. 8, 9, 10, 13)
1609 160A	α	CANADIAN SYLLABICS CARRIER MO	(FIG. 9, 10)	1666	E	CANADIAN SYLLABICS CARRIER CHA CANADIAN SYLLABICS CARRIER TTSU	(FIG. 9, 10, 12)
160A 160B	3 3	CANADIAN SYLLABICS CARRIER ME CANADIAN SYLLABICS CARRIER MEE	(FIG. 9, 10, 13) (FIG. 9, 10, 11)	1667 1668	W W	CANADIAN SYLLABICS CARRIER TISO	(FIG. 9, 10) (FIG. 9, 10)
160B	3	CANADIAN SYLLABICS CARRIER MEE	(FIG. 9, 10, 11) (FIG. 9, 10, 13)	1669	B	CANADIAN SYLLABICS CARRIER TISE	(FIG. 9, 10, 11, 13, 17)
160D	٤	CANADIAN SYLLABICS CARRIER MA	(FIG. 9, 10)	166A	$\widetilde{\mathbb{B}}$	CANADIAN SYLLABICS CARRIER TTSEE	(FIG. 9, 10)
160E	9	CANADIAN SYLLABICS CARRIER YU	(FIG. 9, 10, 13)	166B	₽	CANADIAN SYLLABICS CARRIER TTSI	(FIG. 9, 10, 17)
160F	ഖ	CANADIAN SYLLABICS CARRIER YO	(FIG. 9, 10)	166C	8	CANADIAN SYLLABICS CARRIER TTSA	(FIG. 9, 10, 11, 12, 13)
1610	ව ව	CANADIAN SYLLABICS CARRIER YE	(FIG. 9, 10, 13, 15, 17)	18ED	W٠	CANADIAN SYLLABICS CARRIER GWO	(FIG. 19)
1611 1612	ම ම	CANADIAN SYLLABICS CARRIER YEE CANADIAN SYLLABICS CARRIER YI	(FIG. 9, 10, 13) (FIG. 9, 10, 13, 15, 17, 18)	18EE	Ė	Beaver Dene (CHYE) CANADIAN SYLLABICS CARRIER GEE	(FIG. 20)
1613	G	CANADIAN SYLLABICS CARRIER YA	(FIG. 8, 9, 10, 12, 13, 18)	.oll	_	Chipewyan Dene (CHU)	(1.13.20)
1614	5	CANADIAN SYLLABICS CARRIER JU	(FIG. 9, 10)	18EF	Ė	CANADIAN SYLLABICS CARRIER GAA	(FIG. 21)
		 Athapascan (ZA), Sayisi (TZO), 				Beaver Dene (CHAI)	
	_	South Slavey (DHA)	(515.0.10)	18F0	E.	CANADIAN SYLLABICS CARRIER GWA	(FIG. 22)
1615	ਠ	CANADIAN SYLLABICS SAYISI JU	(FIG. 9, 10)	1053	CI.	Hare Dene (SHYA) CANADIAN SYLLABUSE CARRIED 3WA	(EIC 21)
		Athapascan (ZO), Sayisi (TZU), South Slavey (DHO)		18F2	GI.	CANADIAN SYLLABICS CARRIER JWA • Beaver Dene (TSYE)	(FIG. 21)
1616	9	CANADIAN SYLLABICS CARRIER JO	(FIG. 9, 10)	18F5	s	CANADIAN SYLLABICS CARRIER DENTAL S	(FIG. 7, 9, 10)
1617	ค	CANADIAN SYLLABICS CARRIER JE	(FIG. 9, 10)				· · · · · · · · · · · · · · · · · · ·
1618	Ю	CANADIAN SYLLABICS CARRIER JEE	(FIG. 9, 10, 13)				
1619	Ю	CANADIAN SYLLABICS CARRIER JI	(FIG. 9, 10)				
161B 161C	ପ	CANADIAN SYLLABICS CARRIER JA	(FIG. 9, 10, 11, 17)				
161D	ଥ	CANADIAN SYLLABICS CARRIER JJU CANADIAN SYLLABICS CARRIER JJO	(FIG. 9, 10) (FIG. 9, 10)				
			· · · · · · · · · · · · · · · · · · ·				

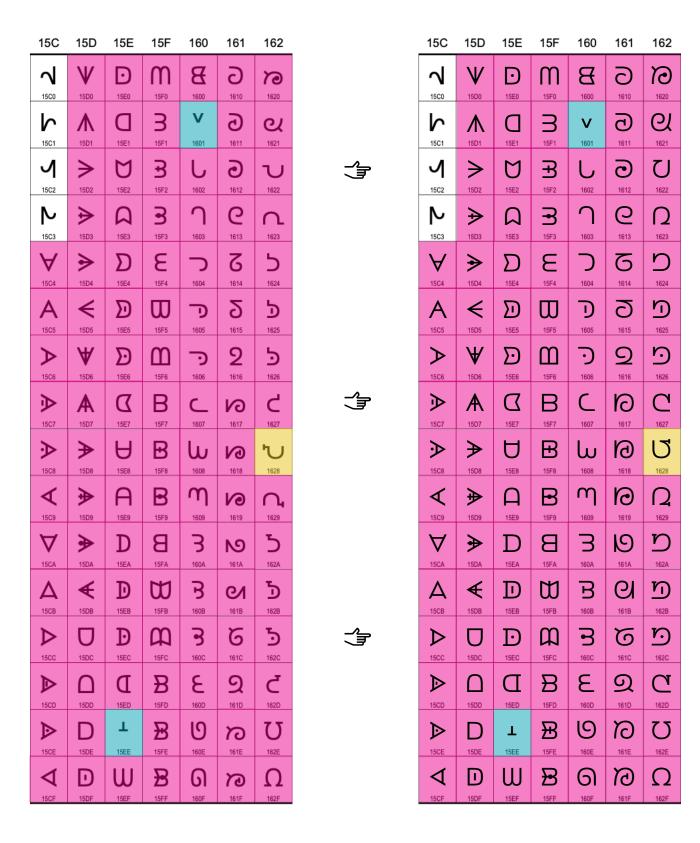
2.1 Proposed changes for Carrier

The following changes have been proposed to the code chart font in order to correct the issues with the representative glyphs for Carrier.

144	144	14D	14D	150	150
·>	·>	٩	٥	٠.	٠.
1440	1440	14D0	14D0	1500	1500
>	→	U	U	ا ج	ا ج٠
1441	1441	14D1	14D1	1501	1501
÷	÷	م ا	٩	ا بنے ا	ا بنے ا
1442	1442	14D2	14D2	1502	1502
> ⋅	÷	\neg	\neg	ا بر	ί γ.
1443	1443	14D3	14D3	1503	1503
·<	·<	اٿ	ٿ	:5	:5
1444	1444	14D4	14D4	1504	1504
 < ·	< ⋅	C	\subset	١ ٦	۱ ۲
1445	1445	14D5	14D5	1505	1505
·<	·<	<u> </u>	Ċ	S	S
1446	1446	14D6	14D6	1506	1506
 < ·	< ·	ر ا	_	۲	۲
1447	1447	14D7	14D7	1507	1507
4	*	ا خــ	خـ	1508	1508
1448	1448	14D8	14D8	5	5
1449	1449	14D9	<u>;</u>	1509	1509
ı	ı		_	6	6
144A	144A		14DA	150A	150A
h	 h	اخا	خ	١,	١,
144B	144B	14DB	14DB	150B	150B
U	U			さし	さし
144C	144C	14DC	14DC	150C	150C
Å	Å	→	→.	ابر	انر ا
144D	144D	14DD	14DD	150D	150D
\cap	\cap			įρ	٩٠٠
144E	144E	14DE	14DE	150E	150E
Ċ	$\dot{\cap}$	<u> </u>	<u> </u>	ا ^ب ال	ابال
144F	144F	14DF	14DF	150F	150F

legend

Vertical position revision (finals)



- Character shape / proportion revision
- Character orientation revision
- Vertical position revision (finals)

163	164	165	166
1630	U	3	4
Þ	1641	3	W
1631	1642	3	1662
1632 1633	1643	1653	B
Մ	コ	ដ	Ħ
1634	1644	1654 M	1664 B
1635 5	1645 Z	B	1665
1636 5	1646 Ž	1656 B	1666
1637	1647	1657 B	1667
1638	1648 Ω	1658 A	1668
1639 163A) 1649	\$	1669 28 166A
M	164A Э	165A	3
163B 163C	164B	165B	1668
Ē	164C	165C B	166C
163D	164D	165D B	166D X
163E	164E	165E 165F	166E SQ 166F

163	164	165	166
1630	<u>U</u>	3	E
1631	1641	3	U 1661
1632	<u> </u>	3	1
C	1643	1653	3
1634	ව	Ж	1664
Ω	1644	1655	æ
1635	Z	B	1665
1636	Ż	\mathbb{B}	M
1637	1647	1657 B	1667 QQ
1638 1639	1648	Œ	1668 B
ಭ	1649 5	\$	1669 B
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1638	164B	165B	166B
1630	1640	165C B	166C
163D	W 164D	165D B	166D
163E	164E	165E	166E SQ 166F

- Character shape / proportion revision
- Character orientation revision
- Vertical position revision (finals)







18E	18F					
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■ Character shape / proportion revision

Vertical position revision (finals)

2.2 Carrier community letters of support



30 March 2021

Regarding correcting the errors with the representative Carrier syllabics shapes in the Unified Canadian Aboriginal Syllabics

I, Francois Prince, have been utilising the Carrier syllabic system since 2007. My father Nicholas Prince has helped organise the original syllabic fonts when I was a youth. I learned syllabics from him when I was young and began to move more into teaching a few years after he passed.

I currently have contracts in school district 91, and 57. Which covers over 10 First Nations communities including, Lheidli (Prince George), Saik'uz (Stoney Creek), Nadleh, Stellat'en(Fraser Lake), Burns Lake Band (Ts'il k'az Koh), Lake Babine Nation(Nadot'en), Chestl'ada, Takla First Nations (Tatl'ah), Nak'azdli (Fort Saint James), Tl'azt'en, and Yekooche.

The Syllabics are adaptable to all of the dialects within the Carrier Nation and my hope is that a revision from the incorrect representative characters to the correct form we expect to see will help bring the Syllabic teaching to the forefront of our language revitalisation. There is only one other first nations person in all of these communities that is working at keeping the syllabics in high priority, his name is Dennis Cumberland. He and I work along side of each other to help bring syllabics awareness and documentation to every house in the Dakelh Language group. The Dakelh Syllabics are the Original Writing System for the Dakelh and we are the only tribe in British Columbia with a writing system. I have helped 6 communities decipher their syllabic writing on the old headstones and continue to fill in much material that has not been deciphered yet.

I feel that I had to add to this description to stress the need to help bring the original writing system of the Dakelhne to the forefront of our language revitalization. The way the current Carrier syllabics are represented in Unicode is not correct and are difficult to read. We expect our syllabics characters to look like the characters originally developed by Adrien-Gabriel Morice in the late 19th century. They should be uniform in height, and the final characters to be centered to the middle of each word. The current appearance of our characters make them very hard to read, and they do not capture the spirit of our language. This leads to the syllabics characters not being used in daily correspondences over email and text messaging, which leads to the decline in their use in the community.

I support the full proposal of Kevin King. He has worked diligently and painstakingly to bring the best and most complete system that can help Dennis and I train more people in the communities.

The staff in some of the school districts are signing their names in syllabics on their emails and I find it an eyesore and a disrespect to the original format, when I see the syllabics written in another unfriendly font. All of the 10 First Nation members of the Dakelhne (Carrier Nation) that I teach in expect the Dakelh Syllabics to appear only in the form of the system developed by Adrien-Gabriel Morice. בה לא האוכר לכה לא (correct characters) של האוכר לא האוכר ל

With that I do hope this letter can support Kevin and anyone willing to bring our Dakelh Language to the forefront of Language revitalisation.

Thank you for your time. Soo whenaoondleh (do your best)

Francois Prince
NEYUPS@outlook.com

figure 1 A letter of support dated 30 March 2021 from Francois Prince, expressing support and the context for the current proposal effort to revise the representative characters for the Carrier syllabics in the UCAS code charts.

The above letter shows attestation for the correct forms of U+162B 为, Carrier dlee, U+1606 ⊃ Carrier ni, U+1642 ⊃ Carrier ze, U+1604 ⊃ Carrier ne, and U+161F ᢙ Carrier jjee and the correct vertical positioning of final U+144B ▷ Carrier h.

From Francois Prince, 'Regarding correcting errors with the representative Carrier syllabics shapes in the Unified Canadian Aboriginal Syllabics.' Neyu Professional Services, 30 March 2021.

The Unicode Consortium P.O. Box 391476 Mountainview, CA 94039-1476 U.S.A.

7 April 2021

Regarding correcting the representative Carrier syllabics shapes in the Unified Canadian Aboriginal Syllabics in Unicode

Bundada Hoonzoo Good Morning,

To begin with, years ago as a young Native person I was taught Carrier or Dakelh Syllabics by the Late Elder Nick Prince. It was his dream or vision that this writing system would carry on. I took this message seriously and passed on what I had learned and shared whenever possible. Together with his son Francois Prince we taught Syllabics in the schools and colleges in Dakelh territory. As technology developed we came across a Dakelh keyboard system from a website called Language Geek which used the Keyman program and word programs, and were able to type and share the Dakelh writing system with the community. Having to use 2 or more programs made it difficult to share with other people although we did our best.

Although the font from the Language Geek website, OskiDakelh, shows the correct appearance of our syllabics characters, when we use our characters to write emails and send text messages in the available syllabics font, we see the wrong characters appear, which do not look the way we expect them to look. In

many of these cases, the characters not easy to identify as Dakelh Syllabics characters (for example: 5)

vs. $\stackrel{>}{>}$) and make texts in these versions of the characters hard to read. We expect our Dakelh Syllabics to appear in the way they looked in the original system created by Adrien-Gabriel Morice in 1885, where all of the Syllabics characters have the same height, and the small, final characters sit centered to the word.

When Kevin King contacted us and asked our input and concerns about fixing these issues with the Dakelh Syllabics in Unicode, we were very excited. If we were able to have accurate Dakelh syllabics fonts on all computer systems, it would help immensely in our work to teach Dakelh to our youth and our people. It would further allows us to prepare a better keyboard layout to use with these fonts, and improve our language revitalization and preservation efforts in the Dakelh Nation.

Kevin has kept us updated and we are very much in support of the Syllabic proposal. Our communities, our Dakelh Language, our Dakelh culture will greatly be enhanced by the development of our Dakelh syllabic writing system.

Musi,

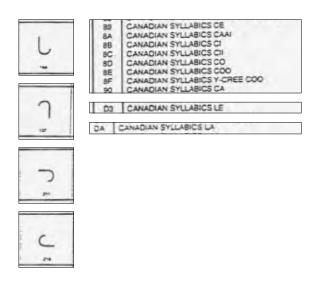
Dennis Cumberland
Dakelh Cultural Worker
dennis.cumberland@gmail.com
778 978 0677

figure 2 A letter of support dated 7 April 2021 from Dennis Cumberland, expressing support and the need for the current proposal effort to revise the representative characters for the Carrier syllabics in the UCAS code charts.

The above letter shows attestation for the correct form of U+1638 $\ \,$ $\ \,$ $\ \,$ Carrier tlhi.

From Dennis Cumberland, 'Regarding correcting the representative Carrier syllabics shapes in the Unified Canadian Aboriginal Syllabics in Unicode'. 7 April 2021.

2.3 Disunified Carrier glyphs in UCAS



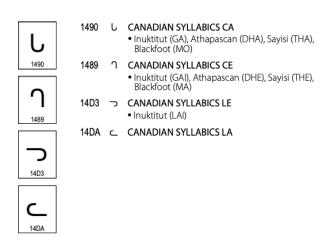


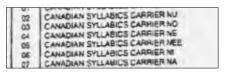
figure 3 Two showings above of ranges U+1490–U+14DA and U+1602–U+1607 from the UCAS main block–from L2/98–128, and the current UCAS main code charts for Unicode version 13.0, respectively–showing Carrier characters that were disunified from graphically-similar characters due to the distinct difference in proportions of the Carrier syllabics from the other syllabics orthographies supported in UCAS.

The script encoding committee that prepared the original UCAS main character repertoire (The Canadian Aboriginal Syllabics Encoding Committee) proposed disunified characters to meet the graphical requirements of the Carrier syllabics, where otherwise they would overlap with visually-similar characters used by other orthographies within UCAS.

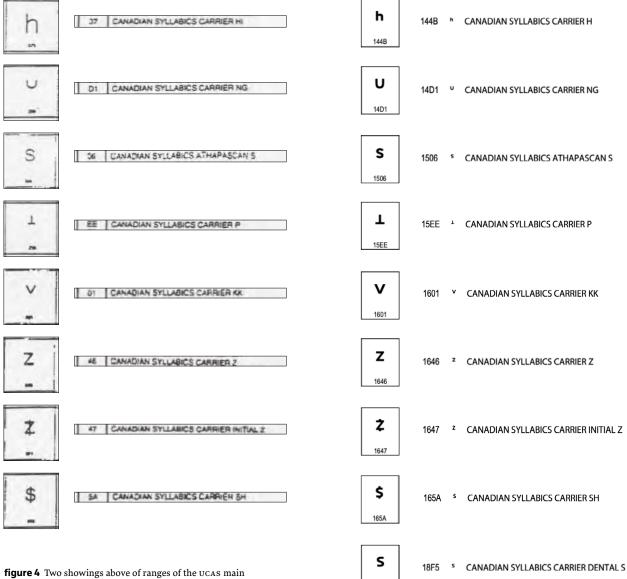
In later versions of the Unicode Standard, the chart font for UCAS misrepresented a large number of these distinct Carrier characters. This resulted in the current errors specified for revision in this document to the correct forms the Carrier community desires for their syllabic characters.

From L2/98–128, ISO/IEC 10646–1:1993, FDAM 11, 1998 and 'Unified Canadian Aboriginal Syllabics.' Range: 1400-167F, Version 13.0, The Unicode Consortium, copyright © 1999-2020









block—from L2/98–128, left, and the current UCAS main code charts for Unicode version 13.0, right, respectively—showing Carrier finals characters that were either disunified from graphically-similar finals characters, or, encoded as distinct Carrier finals as they were only required for the Carrier syllabics orthography.

In the Carrier syllabics, finals are expected to appear vertically positioned at the centre point between the full height of the syllabic characters and the baseline. This is opposed to the standard vertical positioning within UCAS for finals characters, where finals are always positioned at the top position. The diagram, right, titled 'Vertical positioning of Carrier finals' demonstrates the Carrier finals vertical positioning, and the way the distinct Carrier finals are positioned in the current chart font for UCAS.

As in the case of disunification for Carrier syllabics characters described in figure 2, the original script encoding committee provided one disunified character for Carrier in U+14D1 $\,^{\circ}$ Carrier ng, as well as provided the necessary distinct Carrier finals characters as shown in the above listings. As U+14D1 $\,^{\circ}$ Carrier ng is disunified from U+1421 $\,^{\circ}$ Canadian syllabics final bottom Half ring, and the distinct Carrier finals characters are only used for this orthography, these characters can be vertically positioned at the centre position to accommodate this Carrier syllabics orthography preference.

From L2/98–128, 1998 and 'Unified Canadian Aboriginal Syllabics.' Range: 1400–167F, Version 13.0, The Unicode Consortium, copyright © 1999–2020

Vertical positioning of Carrier finals

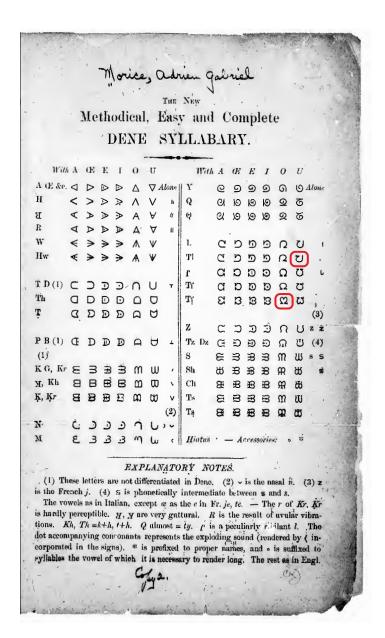
1 CORRECT FINALS POSITION



2 INCORRECT FINALS POSITION



2.4 Correct orientation of Carrier dlu and tlo glyphs



-: 12 --ට ට ට 0 0 Alone. 10 10 (a) 9 ত व व व 9 10 **1** 2 U りり 5 P D D 10 C C $^{"}\Omega$ S B \mathfrak{D} \odot z (1) E E U Ξ M 33 5 (2) 3 =517 W BB B M 出 Æ BBBB \mathfrak{A} Ξ 3 Ξ M W 3 田田 M 四 Before a proper noun:

figure 5 In conjunction with the issue of correct representative glyphs for Carrier in the UCAS code charts is the correct orientation of two code points' representative characters: U+1628 $\, \, \Box \, \,$ *Carrier dlu* and U+163B $\, \, \Box \, \,$ *Carrier tlo*. In the current representative glyphs for these code points in the UCAS main block charts, the orientation of these characters is incorrect, with both characters being reflected in opposition to their orientation they should take. The revised representative glyphs provided in this proposal on pages 15 and 16 show the correct orientation as is perferred by the Carrier community.

The above texts show two differing orientation schemes that were presented by Morice. The document above, left, shows the chart from Morice's 1890 publication *The new methodical, easy and complete Dene syllabary*, which shows orientations that differ for many of the current representative characters in UCAS, including U+1628 ℧ *Carrier dlu*, although showing the correct orientation for U+163B Ω *Carrier tlo*. The text above, right, shows a detail from Morice's Carrier Syllabics chart in his *Carrier reading-book*, published in 1894. The chart in this text shows a revised orientation scheme, which is the current orientation scheme that the entire Carrier Nation community follows for their Syllabics to the present day, showing attestation for the correct orientation of U+1628 ℧ *Carrier dlu* and U+163B Ω *Carrier tlo*.

From Adrien-Gabriel Morice's *The new methodical, easy and complete Dene syllabary,* 1890, and *Carrier reading-book*, 1894

2.5 Notes on the design of Carrier glyphs:

Carrier z and Athapascan s

figure 6 The example, right, depicts the contemporary Carrier Nation's preferred shaping of Carrier characters U+1646 ² Carrier z and U+1506 ⁵ Athapascan s, which is in the monolinear, sans serif style. This is in contrast to the design of these two glyphs in historical sources, which show these characters rendered in a Latin, serifed style form.

Preferred contemporary shaping of Carrier z and Athapascan s

U+1646 CANADIAN SYLLABICS CARRIER Z

S U+1506 CANADIAN SYLLABICS ATHAPASCAN S

Carrier Syllabics expert and historian Dennis
Cumberland noted in a phone conversation on 10 March
2021 with the author that Morice used multiple printing
presses as he upgraded his equipment during his time
at Stuart Lake Mission, which included his type supply.
This resulted in Morice borrowing sorts for lowercase
letters s and z from the Latin script typeface he used for
printing English and French text, in order to distinguish
U+1646 z Carrier z from U+1647 z Carrier initial z and
U+1506 s Athapascan s from U+18F5 5 Carrier dental s.

Note in example (3) the presence of both U+18F5 s Carrier dental s and U+1506 s Athapascan s in the same paragraph of text. In order for these characters to be distinguished, Morice made use of his roman type stock to render U+1506 s Athapascan s in a lowercase serifed s. This distinguished this character from the monolinear form of U+18F5 s Carrier dental s, both by shape and proportion.

In an email conversation on 21 April, 2021, Cumberland shared further that '... Morice used a couple of different printing presses as he upgraded [his equipment] ... it is possible he made adjustments [to the orthography as he worked] ... and he might of also made errors in some type sets [that he chose to work with] ...'.

In email correspondence with the author, both Cumberland and Prince confirmed that the Carrier community preferred the monolinear forms of these characters for the contemporary Syllabics orthography. They stated that the user community prefers the cohesiveness that the monolinear form offers to the whole system, and feel that there is no trouble distinguishing U+1646 ² Carrier z from U+1647 ² Carrier initial z and U+1506 ³ Athapascan s from U+18F5 ⁵ Carrier dental s.

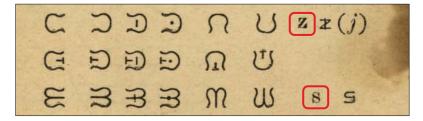
From Dennis Cumberland, 'Discussing the history of the Dakelh (Carrier) Syllabics.' 10 March 2021, Telephone interview with the author, Dennis Cumberland and Francois Prince, 'Question about Syllabics rotation in Morice document & single 's' and 'z' sound character shapes', 21 April 2021, 4:13 am EST and 23 April 2021, 11:43 am EST, Adrien-Gabriel Morice's D' D'S' S'S D'RD' D' D' / Carrier reading-book, 1894, and D'S' V'>T DC'2D / Carrier prayer book, 1901, and D'S' C') / Mission Papers, First edition (D' 1 D'S's), Volume 10 (D' 10 ED's), 1891

Historical form of Carrier z and Athapascan s

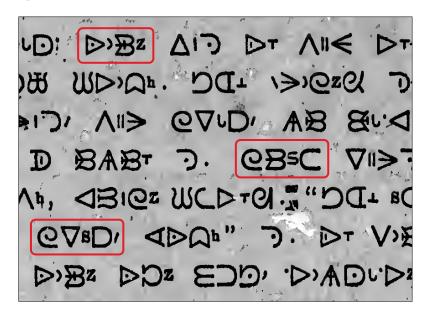












2.6 Attestations for Carrier

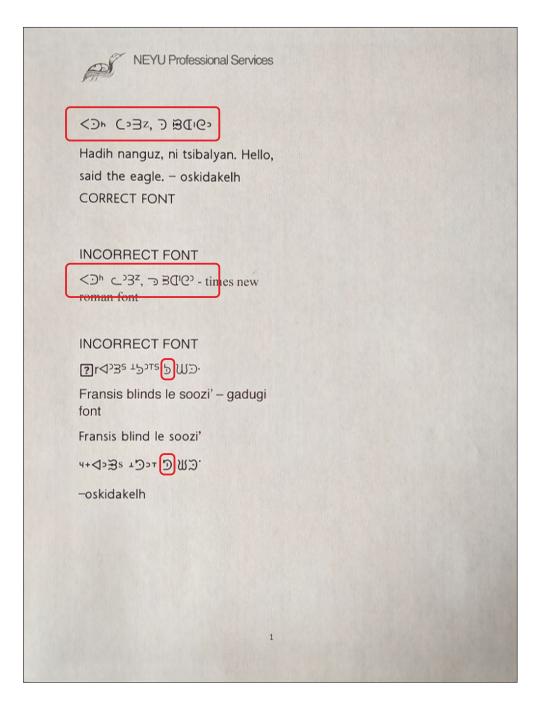


figure 8 A document prepared by Francois Prince to express the differences between the correct appearance of the Carrier syllabics characters, and the incorrect representation of the characters.

Note that Prince's showing—in the "correct font" example at the top of the document—clearly depicts the preferred form of the Carrier syllabic characters as uniform in height, without variation in height between full-size and medium-size characters (ex. $\mathfrak D$ vs $\mathfrak D$ for U+1625 $\mathfrak D$ Carrier lee). Additionally, Prince's showing depicts the preferred positioning of the finals characters at the mid line position, centered between the full height of the syllabics characters and the baseline (ex. $<\mathfrak D^h$ \subset >3z, $\mathfrak D$ $\mathfrak B\mathfrak U$ ($\mathcal D$) vs. $<\mathfrak D^h$ \subset >3z, $\mathfrak D$ $\mathfrak B\mathfrak U$ ($\mathcal D$).

Additionally, the above showings depict the correct

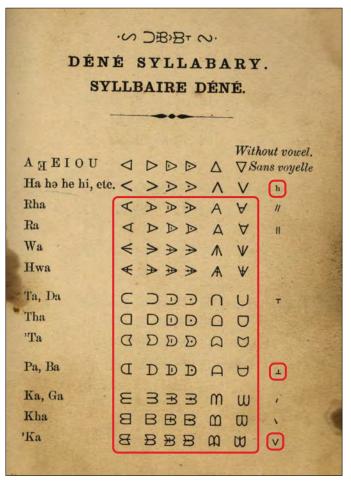
graphical distinction between U+14DA \subset *ca* and U+1607 \subset *Carrier na*, demonstrating the purpose these characters—as well as the entire Carrier n-series range (U+1602–U+1607)—were disunified from range U+1490–U+14DA in the original UCAS main block character repertoire.

The above document shows attestation for U+144B ▷ Carrier h, U+1607 ⊂ Carrier na, U+15F1 ∃ Carrier ge, U+1606 ⊃ Carrier ni, U+1665 ∃ Carrier chi, U+15ED □ Carrier pa, U+1613 ℮ Carrier ya, and U+162B ⅁ Carrier dlee. From Francois Prince, 'Correct form of the Dakelh syllabics', 2021

figure 9 Right, pages 11 and 12 from Father Adrien-Gabriel Morice's ⊃\$\alpha\$ \times \nabla \rangle \nabla \rangle \times \nabla \times \nabla \rangle \nabla \rangle \nabla \rangle \nabla \nabla \rangle \nabla \rang

ji, U+161B 🛭 Carrier U+144B h Carrier h. U+14D1 · Carrier ng, ja, U+161C & Carrier U+1506 s Athapascan s, jju, U+161D a Carrier jjo, U+161E & Carrier jje, U+161F & Carrier U+15C4 ∀ Carrier ghu, U+15C5 A Carrier gho, U+15C6 > Carrier ghe, jjee, U+1620 % Carrier U+15C7 ≯ Carrier ghee, jji, U+1621 U Carrier U+15C8 > Carrier ghi, U+15C9 < Carrier gha, jja, U+1622 U Carrier lu, U+1623 Ω Carrier U+15CA ∀ Carrier ru, lo, U+1624 D Carrier U+15CB A le, U+1625 D Carrier Carrier ro, lee, U+1626 ^⑤ Carrier li U+1627 ^ℂ Carrier la, U+15CC ▷ Carrier re, U+15CD ▷ Carrier ree, U+15CE ▶ Carrier ri, U+1628 U Carrier dlu, U+1629 Q Carrier dlo, U+162A ⊃ Carrier dle, U+15D1 ∧ Carrier wo, U+162B D Carrier dlee, U+15D2 > U+162C り Carrier dli, Carrier we, U+15D3 > U+162D C Carrier dla, Carrier wee. U+1630 D Carrier lhe, Carrier wi, U+15D4 > U+1631 D Carrier lhee, U+15D5 € Carrier wa, U+1632 © Carrier lhi, U+1633 C Carrier lha, U+15DC □ Carrier thu, U+15DD

☐ Carrier tho, U+15DE D Carrier the, U+15DF D Carrier thee, U+15E0 D Carrier thi, U+1636 D Carrier tlhe, U+15E1 @ Carrier tha, U+1637 D Carrier tlhee, U+1638 D Carrier thli, U+15E2 ♥ Carrier ttu. U+15E3 \(\text{Carrier tto}, U+1639 C Carrier thla, U+15E4 D Carrier tte, U+163A び Carrier tlu, U+15E5 D Carrier ttee, U+163B \ Carrier tlo, U+163C B Carrier tle, U+15E6 ⊅ Carrier tti, U+15E7 ⊄ Carrier tta, U+163D B Carrier tlee, U+15E8 ∀ Carrier pu, U+163E & Carrier tli, U+15E9 A Carrier po, U+15EA D Carrier pe, U+163F & Carrier tla, U+1640 U Carrier zu, U+15EB D Carrier pee, U+1641 \(\text{Carrier zo,} \) U+15EC D Carrier pi, U+1642 ⊃ Carrier ze, U+15ED Cl Carrier pa, U+1643 D Carrier zee, U+1644 D Carrier zi, U+15EE + Carrier p, U+15EF W Carrier gu U+1645 C Carrier za U+15F0 M Carrier go, U+1646 z Carrier z, U+15F1 ∃ Carrier ge, U+1647 ≠ Carrier initial z, U+15F2 3 Carrier gee, U+1648 [™] Carrier dzu, U+1649 ^Ω Carrier dzo, U+15F3 ∃ Carrier gi, U+15F4 € Carrier ga, U+164A Ð Carrier dze, U+15F5 W Carrier khu, U+164B D Carrier dzee, U+164C ∋ Carrier dzi, U+15F6 M Carrier kho, U+15F7 B Carrier khe, U+164D G Carrier dza, U+15F8 B Carrier khee, U+164E W Carrier su, U+15F9 B Carrier khi, U+164F M Carrier so, U+1650 ∃ Carrier se, U+15FA \(Carrier kha. \) U+15FD ≅ Carrier kke, U+1651 ∄ Carrier see, U+15FB W Carrier kku, U+1652 ∃ Carrier si, U+1653 € Carrier sa, U+1654 ₩ Carrier shu U+15FC \(\Omega\) Carrier kko, U+15FE B Carrier kkee, U+1655 A Carrier sho U+15FF B Carrier kki, U+1600 \ Carrier kka, U+1656 B Carrier she, U+1601 ∨ Carrier kk, U+1602 ∪ Carrier nu, U+1657 ℍ Carrier shee, U+1658 ℍ Carrier shi, U+1659 & Carrier sha, U+1603 Carrier no, U+1604 ⊃ Carrier ne, U+165A \$ Carrier sh, Carrier nee, U+165B ₩ Carrier tsu, U+165C 肸 Carrier tso, U+1605 U+1606 ⊃ Carrier ni, U+1607 C U+165D B Carrier tse, Carrier na, U+1608 W Carrier mu, U+165E B Carrier tsee, U+165F B Carrier tsi, U+1660 & Carrier tsa, U+160A 3 Carrier me. U+160B B U+1661 W Carrier chu, Carrier mee. U+160C ∃ U+1662 M Carrier cho Carrier mi, U+160D € Carrier ma, U+1663 B Carrier che, U+1664 ∄ Carrier chee, U+1665 ∄ Carrier chi, U+160E 9 Carrier vu. U+160F ର Carrier yo, U+1666 ≅ Carrier cha, U+1667 ੴ Carrier ttsu, U+1610 ට Carrier ye, U+1611 ∂ Carrier vee, U+1668 \ Carrier ttso, U+1612 ⊙ Carrier vi. U+1613 @ Carrier ya, U+1669 B Carrier ttse, U+1614 & Carrier ju, U+166A ℬ Carrier ttsee, U+1616 ♀ Carrier jo, U+1617 Ю Carrier je, U+166B B Carrier ttsi. U+166C & Carrier ttsa, U+1618 @ Carrier jee, U+18F5 5 Carrier dental s U+1619 @ Carrier



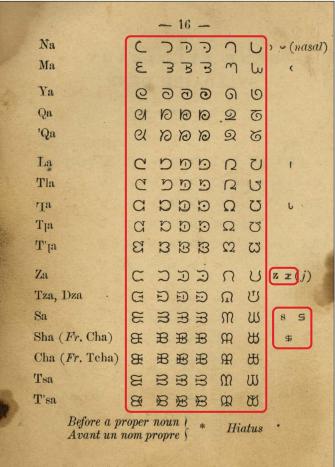
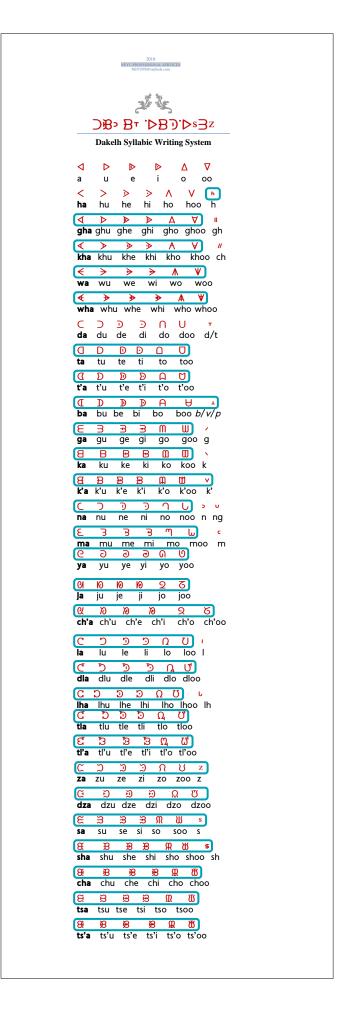


figure 10 Right, a contemporary Carrier (Dakelh) Syllabary chart, as composed by Francois Prince in his Syllabics book *Dakelh Syllabics writing system,* Neyu Professional Services, 2018. This chart shows consistency with the character forms in Morice's charts, which provide evidence of the Carrier Nation's current preferences for the appearance of their characters. Showing attestation for:

U+144B h Carrier h, ji, U+161B & Carrier U+14D1 ∪ Carrier ng, ja, U+161C ♂ Carrier U+1506 s Athapascan s, jjo, U+161E To Carrier U+15C4 ∀ Carrier ghu, U+15C5 A Carrier gho, jje, U+161F % Carrier U+15C6 > Carrier ghe, jjee, U+1620 🏿 Carrier jji, U+1621 U Carrier jja, U+1622 U Carrier U+15C7 ≯ Carrier ghee, U+15C8 > Carrier ghi. U+15C9 Carrier gha, lu, U+1623 Ω Carrier Carrier ru, U+15CA ∀ lo, U+1624 D Carrier U+15CB A Carrier ro, U+15CC ➤ Carrier re, le, U+1625 D Carrier lee, U+1626 D Carrier U+15CD ▶ li U+1627 C Carrier la, Carrier ree, U+15CE ▶ U+1628 ರ Carrier dlu, Carrier ri, U+15CF *← Carrier ra*, U+15D0 *∀ Carrier wi* U+1629 Q Carrier dlo, U+162A D Carrier dle, Carrier wu. U+162B D Carrier dlee, U+15D1 ∧ Carrier wo. U+15D2 ≥ U+162C 🗅 Carrier dli, Carrier we, U+15D3 ≯ Carrier wee, U+162D C Carrier dla, U+15D4 > Carrier wi. U+1630 D Carrier lhe, U+15D5 U+1631 D < Carrier wa, Carrier lhee, U+15DC □ Carrier thu, U+1632 🖸 Carrier lhi, U+1633 C Carrier lha, U+1634 び Carrier tlhu. U+15DE D Carrier the. U+15DF D Carrier thee, U+1635 Ω Carrier tlho, U+15E0 □ Carrier thi, U+1636 D Carrier tlhe, U+15E1 ☐ Carrier tha. U+1637 D Carrier tlhee. U+15E2 ♥ Carrier ttu, U+1638 D Carrier thli. U+15E3 \(\Omega\) Carrier tto, U+1639 C Carrier thla, U+15E4 D Carrier tte, U+163A び Carrier tlu, U+15E5 D Carrier ttee, U+15E6 D Carrier tti, U+163B \(\Omega\) Carrier tlo, U+163C \(\Omega\) Carrier tle, U+15E7 ☐ Carrier tta, U+163D Ɓ Carrier tlee, U+15E8 ∀ Carrier pu, U+163E 🖰 Carrier tli, U+15E9 A Carrier po, U+163F & Carrier tla, U+15EA D Carrier pe, U+1640 ป Carrier zu, U+15EB D Carrier pee, U+1641 ∩ Carrier zo, U+15EC D Carrier pi, U+1642 ⊃ Carrier ze, U+1643 D Carrier zee, U+1644 D Carrier zi, U+15ED Cl Carrier pa, U+15EE - Carrier p, U+15EF W Carrier gu U+1645 ⊂ Carrier za U+15F0 M Carrier go, U+1646 ^z Carrier z, U+15F1 ∃ Carrier ge, U+1647 ≠ Carrier initial z, U+1648 U Carrier dzu, U+15F2 ∃ Carrier gee. U+15F3 3 Carrier gi, U+1649 Ω Carrier dzo, U+15F4 ∈ Carrier ga, U+15F5 ₪ Carrier khu, U+164A 🖯 Carrier dze, U+164B D Carrier dzee, U+15F6 M Carrier kho, U+164C ∋ Carrier dzi, U+15F7 B Carrier khe, U+164D G Carrier dza, U+164E W Carrier su, U+164F M Carrier so, U+15F8 B Carrier khee, U+15F9 B Carrier khi. U+15FA & Carrier kha, U+1650 ∃ Carrier se, U+15FD ∃ Carrier kke, U+1651 B Carrier see, U+15FB W Carrier kku, U+1652 ∃ Carrier si, U+15FC \(\Omega\) Carrier kko. $U+1653 \in Carrier sa.$ U+15FE ∄ Carrier kkee, U+1654 \ Carrier shu U+1655 A Carrier sho U+15FF B Carrier kki, U+1656 ฿ Carrier she, U+1657 ฿ Carrier shee, U+1600 ∃ Carrier kka, U+1601 ∨ Carrier kk. U+1658 B Carrier shi, U+1602 ∪ Carrier nu, U+1603 ∩ U+1659 & Carrier sha, Carrier no, Carrier ne. U + 1604U+165A \$ Carrier sh. U+165B & Carrier tsu. U+1605 D Carrier nee. U+165C A Carrier tso, U+1606 Carrier ni, U+1607 ⊂ U+165D B Carrier tse, Carrier na, U+165E ฿ Carrier tsee, U+165F ฿ Carrier tsi, U+1608 W Carrier mu, U+1609 \(\text{Carrier mo,} \) U+160A ∃ U+1660 \ Carrier tsa, Carrier me, U+160B B Carrier mee, U+1661 W Carrier chu, U+1662 M Carrier cho U+1663 B Carrier che, U+160C 3 Carrier mi, U+160D € Carrier ma. U+1664 ₿ Carrier chee, U+160E 9 Carrier yu, U+160F ର Carrier yo, U+1665 ₿ Carrier chi, U+1666 ≅ Carrier cha, U+1667 ੴ Carrier ttsu, U+1610 ∂ Carrier ye, U+1611 ∂ Carrier yee, U+1612 ⊙ Carrier yi, U+1668 \ Carrier ttso, U+1669 Ɓ Carrier ttse, U+1614 & Carrier ju, U+166A

Carrier ttsee, U+1616 9 Carrier io. U+166B B Carrier ttsi. U+1617 lo Carrier je, U+166C & Carrier ttsa, U+1618 @ Carrier jee, U+18F5 5 Carrier dental s U+1619 @ Carrier



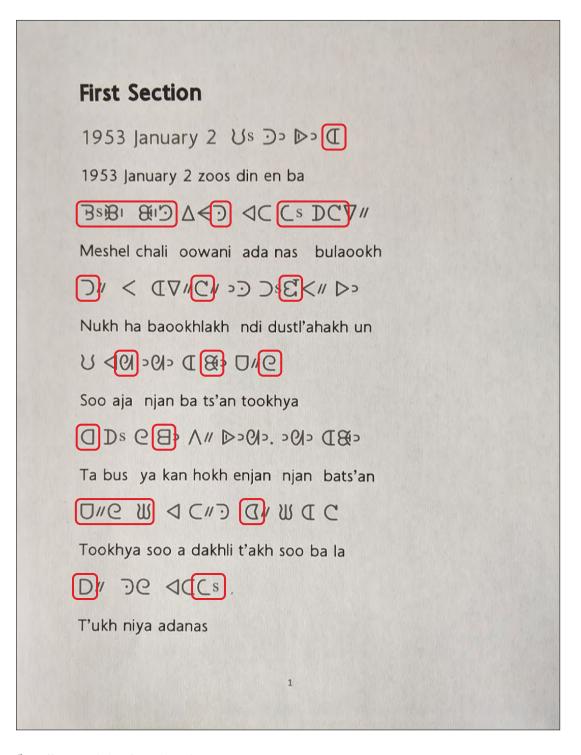


figure 11 A transcription of a Carrier tombstone prepared by Francois Prince, in both the syllabics and roman orthographic systems. Showing attestation for U+1506 s Athapascan s, U+15ED ☐ Carrier pa, U+160B ☐ Carrier mee, U+165D ☐ Carrier tse, U+1660 ☐ Carrier tsa, U+162C ☐ Carrier dli, U+1606 ☐ Carrier ni, U+1607 ☐ Carrier na, U+15EA ☐ Carrier ne, U+1627 ☐ Carrier la, U+1604 ☐ Carrier ne, U+163F ☐ Carrier tla, U+161B ☐ Carrier ne, U+166C ☐ Carrier tsa, U+1613 ☐ Carrier ya, U+15FA ☐ Carrier tha, U+164E ☐ Carrier tha, U+15ET ☐ Carrier tha, U+15ET ☐ Carrier tha, U+15ET ☐ Carrier tha, U+15DD ☐ Carrier tha, and U+15DC ☐ Carrier thu

Also, the modifications of each character take place internally and in conformity to logical and easily learned rules. To illustrate we will use the Ξ . The student who is familiar with the nine signs will recognise it by sight – through its double undulating curve – as a hard sibilant which, being affected by no modification, must be given the primary hissing sound Sa. Lets now insert the perpendicular line, when used as an internal accretion to a sign, corresponds to the h of the roman alphabet (as in \Box gha, \Box wha, \Box ta(tha), \Box ka (kha),) and we obtain \Box Sha. Should we cross the end of the horizontal line, we will thereby add a \lnot to that sign which will then become \Box cha (tsha). In like manner, \Box C Sa may be changed to \Box Tsa which, in its turn is liable to be transformed into \Box C ta, \Box C ta, \Box C ga etc. may also become \Box C ta, \Box C k'a.

In our system, all of the small signs are consonants without vowels and in no instance is any of them used in any other capacity. They always have the same value, and the method and logic which we have noticed in the formation of the main or syllabic signs have also presided to the composition of those which are merely consonantal. The importance of this reference is to ensure the meaning and translations stay true to its form and references. Thus the non syllabic gutturals are expressed by vertical lines (\prime g, \backslash k, \vee k'); the nasals by (\supset n, \bigcup ng, \subseteq m). Also note the transformation of \bigcup sh. through the insertion \bigcup n modified \bigcup h of the large characters.

We claim for our syllabary a greater synthesis which renders the writing shorter and, by avoiding the accumulation of non syllabic signs, making the reading easier. This syllabary can be easily studied at a leisurely pace

3

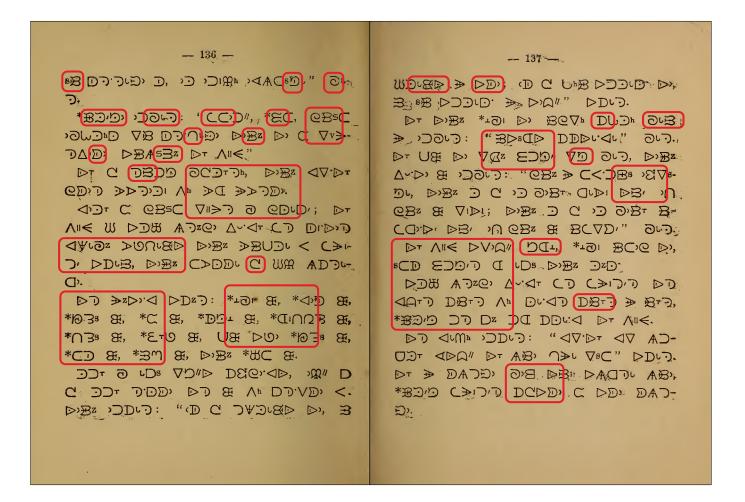
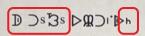


figure 13 From Morice's *Carrier reading-book* of 1894, showing the Carrier Syllabics characters in textual setting, rendered in the appearance preferred by the contemporary Carrier Nation.

Showing attestation for U+1506 s Athapascan s, U+1669 ₿ Carrier ttse, U+166C ឱ Carrier ttsa, U+1603 ↑ Carrier no, U+144B h Carrier h, U+15E5 D Carrier ttee, U+15E7 ☐ Carrier tta, U+1605 D Carrier nee, U+1606 D Carrier ni, U+1607 C Carrier na, U+15EA D Carrier pe, U+15ED ☐ Carrier pa, U+1627 ☐ Carrier la, U+1624 D Carrier le, U+162B D Carrier dlee, U+15F4 ∈ Carrier ga, U+15F1 ∃ Carrier ge, U+1601 ∨ Carrier kk, U+15FD ⊟ Carrier kke, U+15F8 B Carrier khee, U+1610 ∂ Carrier ye, U+1613 $\, \supseteq \, Carrier \, ya, \, U+1611 \, \, \supseteq \, Carrier \,$ vee, U+1612 O Carrier vi, U+160E O Carrier yu, U+1660 & Carrier tsa, U+1657 B Carrier shee, U+1626 D Carrier li, U+160A B Carrier tla, U+1618 $\$ Carrier jee, U+1652 $\$ Carrier si, U+1623 O Carrier lo, U+1646 z Carrier z, U+15EE [⊥] Carrier p, U+1663 [□] Carrier che, U+1665 B Carrier chi, and U+1651 B Carrier see.



Be dustl'us uts'odul'eh /Carrier Reading Book



Ndi dustl'us khinoolh'en ene ba.

Dit yusk'ut inle' da, be dustl'us uts'odul'eh Dakelhne ba uts'inla.

Tat hondut on'un ook'wunets'uzguz inle', et hoonts'i aoo'et ts'inla sulli'; et huwa doocha i dustl'us za buba nats'inla.

Andit tube nzoots'ulhtsi: lhendun hoonilyaz ook'wunets'uzguz cha uts'inla, ink'ez be tenazdutli i te, kadulik 'kohts'e be ts'ujun i te, t'ewhunoodzeh hoba Hoonzoo i te ook'wunets'uzguz cha uts'inla.

Et hoonts'i whunats'odoolnukh junnih : dustl'us buts'odul'eh hokwats'uninzun te, khuni soo udechoo ookw'uneusguz i ts'iyaooh soocho t'uznoozeh; ilho ootus ts'odooyilh junnih.

1

figure 14 Page 1 from Francois Prince's book ⊃®> B^T

▷BD'▷S∃z/Duchun k'ut 'uk'une'usguz/Dakelh syllabic writing system, showing attestation for U+1506 s Athapascan s, U+144B h Carrier h, U+1605 D Carrier nee,

U+1602 ∪ Carrier nu, U+15ED □ Carrier pa, and

U+15EB □ Carrier pee



DD C. ₩ €

1775 A. △Ð ♠z᠑

1840 △□ A. CzæÞ

W ▷ŒŒ C. Uɔə ∇Խ

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▷, ∀,ЭС ЭС Խ

ЭС ЭтЭ

HERE LIES THE REMAINS OF

GREAT CHIEF KWAH

BORN ABOUT 1755

DIED IN SPRING OF 1840

HE ONCE HAD,IN HIS HANDS, THE LIFE
OF JAMES DOUGLAS, BUT WAS GREAT
ENOUGH TO REFRAIN FROM TAKING IT

figure 15 Left, a 19th century Carrier tombstone for Chief Kwah, in Carrier syllabics and Latin script for the English text. Right, Francois Prince's transcription of the historical syllabics text into the modern-day Carrier language in syllabics, showing the continuity between the historical Carrier syllabics character forms, and the proportions the contemporary Carrier community prefers for their syllabics. Showing attestation for U+144B ↑ Carrier h, U+1506 ↑ Athapascan s, U+1604 ↑ Carrier ne, U+1610 ∂ Carrier ye, U+1627 ℂ Carrier la, U+1624 ℎ Carrier le, U+1625 ℎ Carrier lee, U+1626 ℎ Carrier li, U+15F7 ℍ Carrier khe, U+1605 ℩ Carrier nee, U+1606 ℩ Carrier ni, U+15FD ℍ Carrier kke, U+1612 ∂ Carrier yi, U+15E5 ℍ Carrier ttee, U+15E6 ℩ Carrier tti, U+1653 ℍ Carrier sa, and U+1646 ℩ Carrier z.

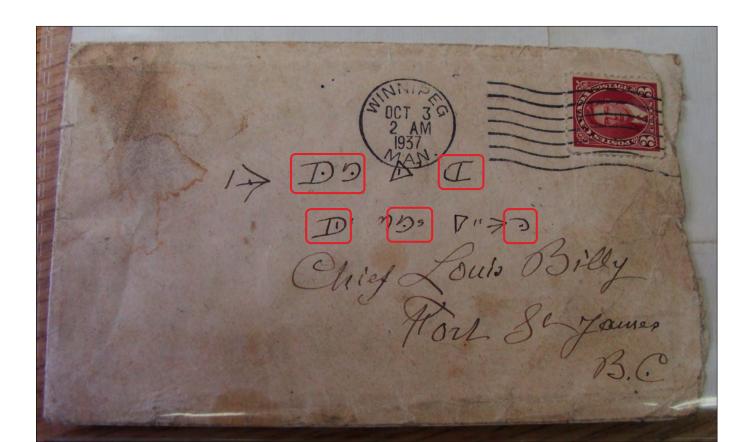


figure 16 An envelope for a letter from Adrien-Gabriel Morice to Chief Louis Billy Prince in Winnipeg, dated 3 October 1937, written in both Carrier syllabics and Latin script for the English text. Showing attestation for U+1506 s Athapascan s, U+1626 ⊃ Carrier li, U+1606 ⊃ Carrier ni, U+15EC □ Carrier pi, U+15EB □ Carrier pee, and U+15ED □ Carrier pa.

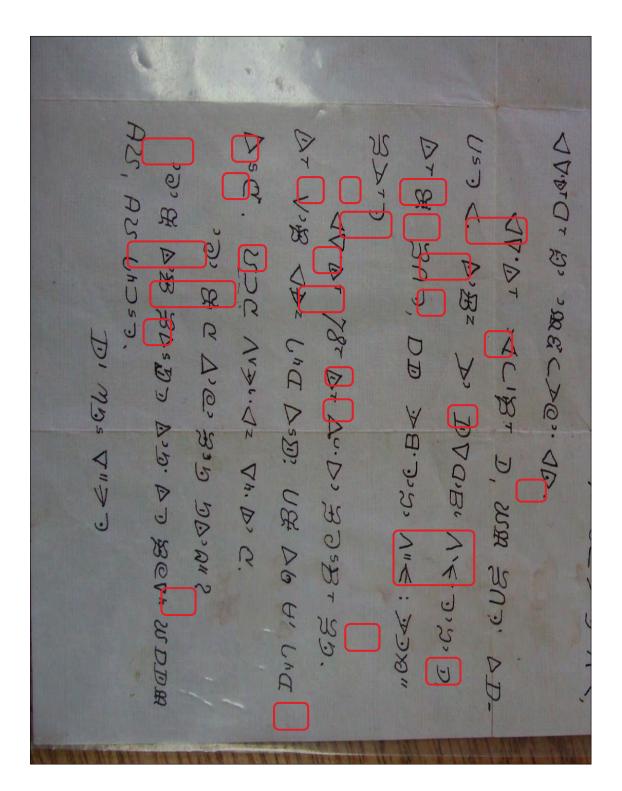


figure 17 A letter from Adrien-Gabriel Morice to Chief Louis Billy Prince in Winnipeg, dated 3 October 1937, written in both Carrier syllabics, showing attestation for U+1506 s Athapascan s, U+1626 D Carrier li, U+1606 D Carrier ni, U+15EC D Carrier pi, U+15EB D Carrier pee, U+15ED \square Carrier pa, U+144B \vdash Carrier h, U+1652 \exists Carrier si, U+1663 B Carrier che, U+166B B Carrier ttsi, U+1669 ₿ Carrier ttse, U+1660 ឱ Carrier tsa, U+162D C Carrier dla, U+161E % Carrier jje, U+1613 $\, \ominus \,$ Carrier ya, U+1610 $\, \ominus \,$ Carrier ye, U+1612 ∂ Carrier yi, U+15FD B Carrier $kke, U+1650 \ \exists \ Carrier se, U+1653 \ \Xi \ Carrier$ sa, U+1601 ∨ Carrier kk, U+15E7 ☐ Carrier tta, U+15FE

B Carrier kkee, U+15F1

∃ Carrier ge, U+1623 ∩ Carrier lo, and U+161B [⊙] Carrier ja.

Coach (chief)

Dayi, (a

Captain (big boss)

Doditi, س⊇D

Assistant Captain (little boss)

Moodiyaz, wigez

Captain, 🛛 ± D>

Assistant captain, **⊴∃**s □>⊤

figure 18 A translation document by Francois Prince rendering the titles of a local Carrier sports team in the syllabics, showing attestation for U+1506 s *Athapascan s*, U+1613 ⊖ *Carrier ya*, U+1612 ⊃ *Carrier yi*, U+1646 z *Carrier z*, U+15FA ⊟ *Carrier kha*, U+1613 ⊖ *Carrier ya*, and U+15EE ⊥ *Carrier p*.

67 Grud Pran Gi.

 \P פאס פייסס ארסיידם א בע הריעם פייסס פאס פייסס ארסיידם א בע הריעם פאס פייסס ארסיידם א בע הריעם פאס פאיסס אפא פאיטר. \P ארס שייסט איטר ער אר אפא פאייסם אפא פאייס אפא פאייס אפא פאייס אפא פאייס איטר.

ଏନ ୧୬୯ ୦୭ ୧୮୧୯୮, ୨.୬୬ ଏହି ଅଷ୍ଟ୍ର ୧୯୯୬ ଏହି ୧୬୯୬ ସହ୍ୟାଲେ ଏହି ୧୯୯୬ ସହ୍ୟାଲେ ବର୍ଷ ହେଥି ହେଥି । 2

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figure 19 From Garrioch's *Manual of devotion* of 1886, showing showing attestation for U+18F2 & Carrier jwa, and U+18ED & Carrier gwu.

Note that Garrioch's text, above, was printed in the Beaver language, using the Beaver Dene syllabics orthography. Everson and Harvey proposed in L2/08-342 to encode these characters with the corresponding character names "CANADIAN SYLLABICS CARRIER JWA" and "CANADIAN SYLLABICS CARRIER GWU", although listing it under "section 3, Additions for Beaver Dene."

From Garrioch, Manual of devotion in the Beaver Indian language, London, 1886.

figure 20 From Kirkby's *Manual of devotion and instruction* in the Chipewyan language, 1879, showing showing attestation for U+18EE $\stackrel{.}{\ni}$ Carrier Dene gee.

Note that the above text was printed in the Chipewyan language, using the Chipewyan Dene syllabics orthography. Everson and Harvey proposed in L2/08-342 to encode this character with the corresponding character name "CANADIAN SYLLABICS CARRIER DENE GEE", although listing it under "section 5, Additions for Chipewyan Dene."

From Kirkby, Manual of devotion and instruction in the Chipewyan language, 1879.

- 3 6"3 4878"25 907" 3 4"65, e.e 90 41"""e. 147?
- 5 6"3 ms defete, 9.0"3 4"6, a'em at dam at am a'em dem st an se
 - 6 4". DU END DN 619 DND, L'E "E U9 D2 ON 3 *
 - 7 d> D0 09 @"E DWJ' 9 3, 6"3 @040 6" doD6';
- 8 P.3 9.4 P.4.606. 92, 4.506.4; 40 P.4.606.4 4.00 92 92,
 - של של עבייפ שאיש העפי, אסשע שיפקי שלין *
 - 10 אים יסט ספ, אספה_ט פסיפי איים יסט ביי פיש איתויים אל איי מיים ישט פסיפי איים יים איים יים איים יים איים איי
- 11 איים פייעס פייעס פייטי פּד, אויס פייטי פּד, איים פּדיעס פייטי פּד, אייב פּדיעס פייטי פּדיעס פייטי פּדיע פּדע פּדיע פּדע פּדיע פּדיע פּדיע פּדע פּדיע פּדע פּדע פּדע
 - 12 an 3 en 20 duie. de bis lbisti ama de, 25 900. *
- $14\,$ ms $^{\circ}$ $^{\circ}$
- 15 'יס ייח סתיפֿר Δ , סחט פש ערפירט עיפריפ פידיי אשט פייש פש פייש פייש פאט אייף \star
- 18 6"3 mg 9.7 4"6, 40 6 03 020000 2205 6? 4900 03 0200, 0"360, 40 a'6 "6*

figure 21 From Garrioch's *The Gospel according to St. Mark*, 1886, showing attestation for U+18EF É *Carrier gaa*.

Note that the above text was printed in the Chipewyan language, using the Chipewyan Dene syllabics orthography. Everson and Harvey proposed in L2/08-342 to encode this character with the corresponding character name "CANADIAN SYLLABICS CARRIER GAA", although listing it under "section 3, Additions for Beaver Dene."

From Garrioch, *The Gospel according to St. Mark*, London, 1886.

FII, KFW, PF. FTII, KKW, PPI FT. 1°, T°". KK. K', Kş, Kş'. Z. V, J, JY. Z. DZ. II, et hiatus. "♥	ĞĞBNĞĞADGÇE).	ČECEUŢ9JAĐĄ	V S G R R U U U C	C U + O
------------------------------------------------------------------------------------------------------------	---------------	-------------	-------------------	------------------

Exemples d'écriture Déné tirés de deux fables Peaux de Lievre :

シイマナ、ピロマー dan, マピコ イレマm マ Tu-tsic -yan klane etse keitli, ék'n ten yeşa etchin yhe dn: トンマ、コーマ dn'n! トンマ、コーマ dud! ndi: se yane, duntic mlindi! se yane, set'one kodéyi!

Le fils du plongeon noir genissait sur le rivage, Alors sa mère, en chantant pour l'endormir, lui disait : Mon fils, c'est en vain que tu cries! Mon fils, car mes entrailles sont insensibles!

Cette talde roule sur un jeu de mots. Le plongeon à la peau trèsdure (bé l'oyé kodeyr), et c'est en usant de cette phrase dans un sens figure, que les l'eaux de Lièvre disent d'une mère qu'elle à le cour dur.

「NV C+ シイマ C+ Cシ Cհ"); トレゆっ、でち、 Kkwinpe tay t'utsié tay ta-l'u tayê"o: yadezen. T'atsaņ マンド: ロマ ハ ろもら 'ソロ'!? ベハ、マトC' 'ひら eņsiņ: nazekfwi yeykṣa l'ēk'intte! adi. Eyitta l'ekṣa マハ Cこつらしゅ マハ ししゃ くだ・ア、 běkfwi tadarnıkkaw běkfwi dekay adjia siņ.

Le plongeon arctique et le plongeon noir se promenaient sur une expansion de rivière; ils ctaient noirs tous deux. Lors le corbeau : « l'ourquoi nos têtes sont-elles toutes semblables? » dit-il. (Piqué de

D'antres mots dérivés sor t formés de la tr à laquelle on ajoute un i. Ainsi de yalt'i, il p lo parleur, le prieur (le prêtre), de tatti, il da danseuse. Mais ces mots ne sont usites q gnais et il ne faudrait pas en abuser.

Les Peaux de Lièvre forment quelques m tant a une racine on à la troisième person xi, xiè ou nxi, ni, ri. Ainsi de llaë, maladie ixta, il galope, ils font ixtaxiè, galop. Ges equivalent à des participes.

Les particules du, dè, di, dw; an, èn, in, o, uŋ, ko, kwo, kwè, kuŋ; tsè, so rencontrent les parties du discours. Mais elles no reçoi liant aux racines.

- 15. Les composés sont ou bien des compar la jonction de deux mots; v. g. na-fwn lule, ka-kual lacet à lièvre, tthi-danna; gue sons multiples et polysynthétiques, et ce se noms verbaux formés de l'impersonnel ou d verbe, comme il a éte dit plus haut; v. g. bé kuyè-kelaii, celui qui chasse on le chassem pêche ou le pêcheur.
- 16. Relativement à leur emploi dans en déné-dendjié, dix sortes de mots : l'affixe defini, le nom, l'adjectif, le pronom, le ver la postposition, la conjonction et l'interject

Nous divisons ce précis de grammaire e Dans la première nous étudions les quatre cours.

La seconde est entièrement occupée par parce que le verbe est le principal elemen en effet, toutes les autres parties du discour la conjugaison, et par la même perdent le cours; on bien elles rentrent dans la conjug dificatifs.

Enfin, dans la troisième partie, nous ét nières parties du discours, et disons un mo maticale.

figure 22 From Petitiot, Dictionnaire de la langue dènè-dindjié dialectes montagnais ou chippewayan, peaux de lièvre et loucheux, renfermant en outre un grand nombre de termes propres à sept autres dialectes de la même langue, 1867, showing attestation for U+18F0 € Carrier gwa.

Note that the above text was printed in the Chipewyan language, using the Chipewyan Dene syllabics orthography. Everson and Harvey proposed in L2/08-342 to encode this character with the corresponding character name "CANADIAN SYLLABICS CARRIER GWA", although listing it under "section 4, Additions for Hare Dene."

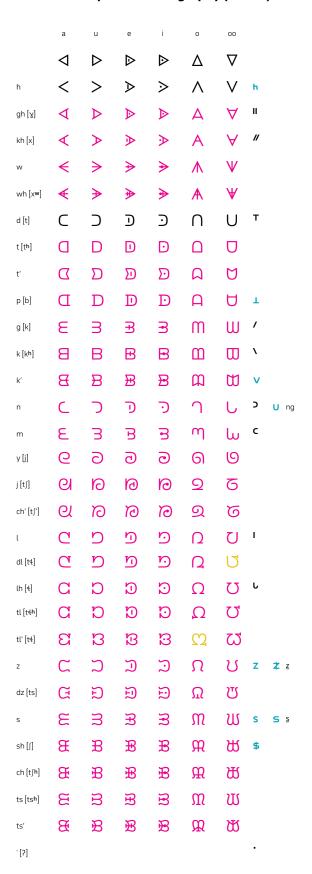
From Petitiot, Paris, 1876.

figure 23 The contemporary Carrier syllabary chart technical mapping, showing the proposed character revisions for Carrier, marked in the colours that group the respective issues that are being resolved.

Note that the unmarked finals characters are positioned at the syllabics top height line, as they share use with other syllabics orthographies within UCAS. A proposal for additions to UCAS has been prepared to request disunified finals characters for Carrier that would allow the unmarked finals to be correctly positioned at the vertical centre point, as is the preference for the Carrier syllabics.

The standard Carrier roman transcription system has been used for this chart. Additionally, IPA transcriptions have been provided where more clarity towards pronunciation is required for a syllabic series.

2.7 Carrier Syllabics orthography (⊃י∨<hB)



Proposed representative glyph changes for Sayisi

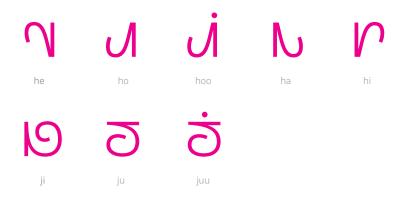
15C0	J	CANADIAN SYLLABICS SAYISI HE (figures 25, 26, 27, 28)
15C1	r	CANADIAN SYLLABICS SAYISI HI (figures 25, 26, 28)
15C2	J	CANADIAN SYLLABICS SAYISI HO • Sayisi (HU) (figures 25, 26, 28)
15C3	М	CANADIAN SYLLABICS SAYISI HA (figures 25, 26, 28)
1615	б	CANADIAN SYLLABICS SAYISI JU • Athapascan (ZO), Sayisi (TZU), South Slavey (DHO) (figures 25, 26, 27, 28)
161A	Ø	CANADIAN SYLLABICS SAYISI JI • Athapascan (ZE), Sayisi (TZE), South Slavey (DHE) (figures 25, 26, 27, 28)
18EC	J	CANADIAN SYLLABICS SAYISI HOO • Chipewyan Dene (GU) (figures 26)
18F1	ð	CANADIAN SYLLABICS SAYISI JUU • Chipewyan Dene (TSU) (figures 26)

legend

Glyph shape / proportion change

3 CHANGES FOR SAYISI

This proposal requests revisions to the following representative glyphs for Sayisi Dene. The proportions of these characters are incorrectly represented in the current ucas main and extended block code charts, and therefore produce incorrect results in the system-level typefaces Euphemia cas and Noto Syllabics in digital text transmission.



As a member of the Déné Syllabics-using languages, the Sayisi Dene community prefers the use of the Square Form Syllabics style, which has been used since the earliest Sayisi printing in the late 19th century, all of which featured Square Form proportions. (figure 24)

It should be noted that Sayisi syllabics have similar graphic proportion and shape preferences to that of the Carrier syllabics, which also present in the Square form style. As a result of this shared graphic preference, characters such as U+161A IO CANADIAN SYLLABICS SAYISI JI follow the same shape pattern as U+161B OL CANADIAN SYLLABICS CARRIER JA. Additionally — due to a common visual appearance—U+1615 OL CANADIAN SYLLABICS SAYISI JU and U+161A IO CANADIAN SYLLABICS SAYISI JI were ordered sequentially within the range of disunified Carrier characters in the UCAS main chart. In order to note their distinction as being used for Sayisi (and the other Dene Syllabics orthographies), the suggested names list additions on pages 8 and 9 provdes a subheading titled "Syllables for Dene and Sayisi" to separate them from the surrounding Carrier glyphs.

Additionally, note that some of the characters discussed in this section are also used by other Dene orthographies in UCAS in the same manner as is preferred by Sayisi.

The requested revisions to the code chart font have been depicted on pages 41–42, with descriptions and attestations in the sections and figures to follow.

3.1 Proposed changes for Sayisi

The following changes have been proposed to the code chart font in order to correct the issues with the representative glyphs for Sayisi.

	15B	15C		15B	15C	161	161
0	P 1580	1900		1580	1500	610	a
1	1581	1901		1581	1501	a	a
2	1582	1902	2	1582	J	1612	1612
3	9	1903	3	¶ 1583	N	<u>Q</u>	e
4	F 1584	1904		F 1584	1904	3	3
5	ل	A 1505	5	1586	A 1908	1615	1615
6	L	1908	€	L 1586	1908	2	2
7	1587	→	7	1587	1907	1617	1617
8	1588	→	ε	1558	≫	1618	1618
9	1580	1509	٤	1580	1909	1619	1619
Α	ل 1584	∀ 15CA	,	h 158A	∀	NO 161A	161A
В	4	1508	E	ا	A 1508	M	C1
С	Y	D _{1SCC}	c	1590	1500	6	6
D	1580	1500		1990	1500	9	9
E	1588	D 1SCE	E	158E	▶	70 161E	761E
F	M 158F	₫	F	: M	₫	70 161F	7 0

legend

■ Glyphs shape / proportion change

18E	18F	18E	18F
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(€) ©.	r	<u>e</u> .	
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9.		9.	
j		d	
j		J J	
W.		W	
ż		ż	
* w. * ∰ * · w *		Ė	

legend

■ Glyph shape / proportion change

3.2 Comparing the Round and Square form syllabics styles

figure 24 A comparison of the Round form (top) and the Square form (bottom), two differing styles within syllabics-using communities across North America. The Round Form (*Kâ-wâwiyêyaki* in Nêhiyawêwin) is commonly used for the Algonquian and Eskaleut language families, and geographically in eastern syllabics-using communities. The Square Form (*Kâ-ayisawêyaki* in Nêhiyawêwin) is used primarily for the Déné languages in the west of Canada, where these orthographies prefer to have their syllabics represented in the Square form style, including the Sayisi Dene Syllabics orthography.

The requested revisions to the Sayisi characters specified in this proposal are intended to return these characters to their correct Square form shapes, which is the appearance that the Sayisi user community expects for these shapes.

N90441

Δ 6"46 Þ, 27 700, 07 σΜ, -Ξ΄. ΥΑ ΘΔΔ ∇U, Uσ ΔΔΑ Ε΄ "∇, Ν ∇Ξ ΘΠΠΔ ΔΝ ΘΠΠ Θ. Uσ ΘΘ Θ ΔΘΘ Ε΄ ΣΥ ΣΘΘ Ε΄.

SQUARE FORM

ROUND FORM

በવቢԿ4ባ

 Δ΄
 Θ΄
 <

3.3 Attestations for Sayisi

figure 25 The Sayisi Dene syllabics technical mapping, as seen in version 2.7 of the Sayisi Dene language learning app *Sayisi Dene dictionary*, 2017, from Binasii Inc. Showing attestation for U+15C0 \cap *Sayisi he*, U+15C1 \cap *Sayisi hi*, U+15C2 \cup *Sayisi ho*, U+15C3 \cup Sayisi ha, U+1615 \bigcirc *Sayisi ju*, and U+161A \cup *Sayisi ji*



			Lyllabar	ium.		
NITIALS.	a	е	i	0	u	FINALS.
	٥	∇	Δ	\triangleright	>	·⊲wa,·⊽we
b	<	V	^	> ,	>	·△wi,·⊳wo
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d	C	U	\cap	\supset	Ċ	⊂ d
\mathbf{g}	2	η	n	U	ü	∨g
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figure 26 The Sayisi Dene syllabary chart from Kirkby's Manual of devotion and instruction in the Chipewyan language, for the Indians of Churchill, 1879, showing attestation for U+15C0 ∩ Sayisi he, U+15C1 V Sayisi hi, U+15C2 ∪ Sayisi ho, U+15C3 N Sayisi ha, U+1615 ⊙ Sayisi ju, U+161A ⊗ Sayisi ji, U+18EC ∪ Sayisi hoo, and U+18F1 ⊙ Sayisi juu.

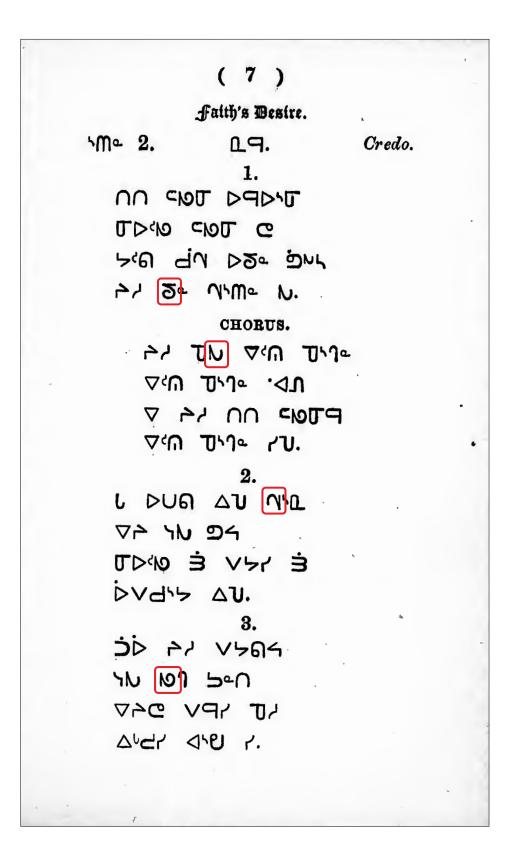


figure 27 Page 7 from Kirkby's Manual of devotion and instruction in the Chipewyan language, for the Indians of Churchill, 1879, showing attestation for U+15C0 ¬ Sayisi he, U+15C3 ¬ Sayisi ha, U+1615 ¬ Sayisi ju, U+161A ¬ Sayisi ji.

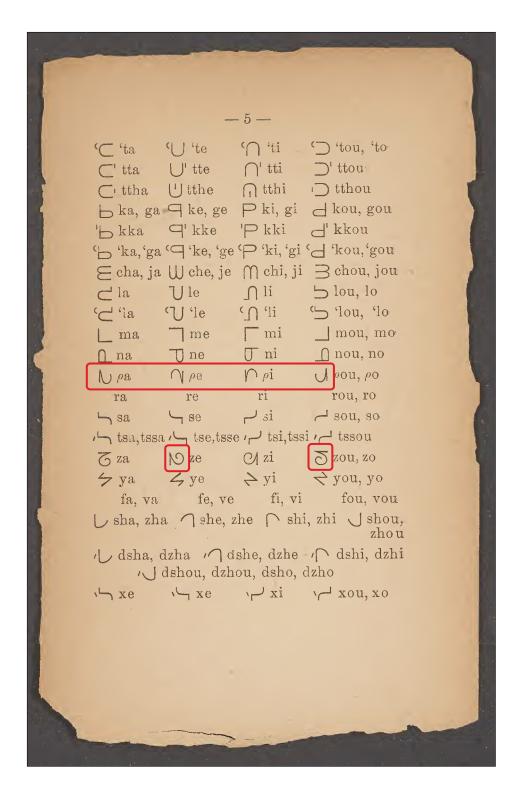


figure 28 From Père LeGoff, ๒๖ภง บฃฯ กงภฯ / Livre de prières en langue Montagnaise. C. O. Beauchemin & Fils, Libraires-Imprimeurs, 1890, showing attestation for U+15C0 \ Sayisi he, U+15C1 \ Sayisi hi, U+15C2 \ Sayisi ho, U+15C3 No Sayisi ha, U+1615 Sayisi ju, and U+161A 19 Sayisi ji.

figure 29 The following technical chart mapping shows the Sayisi Syllabics's orthography, with proposed revised characters marked in red.

In the case of characters U+1615 $\cite{\circ}$ Sayisi ju and U+161A $\cite{\circ}$ Sayisi ji, the correct shapes for these representative glyphs are graphically related to the similar proposed revisions to the Carrier representative characters U+1614 $\cite{\circ}$ Carrier ju and U+161B $\cite{\circ}$ Carrier ja, with the only difference being the orientation of the syllabics to accommodate the Sayisi vowel and consonant structure.

Note that the syllabary chart, right, shows a row representing the *u* vowel, which does not appear in contemporary mappings of the Sayisi Dene syllabics orthography, such as the chart depicted in figure 11, from the *Sayisi Dene Dictionary* language learning app.

3.4 Sayisi Syllabics orthography

	а	е	i	0	u	
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b	<	٧	٨	>	>	
ch	Ε	W	m	3	Ė	
d	C	U	\cap	C	Ċ	-
g	N	η	N	J	υİ	I
k	Ь	Р	Р	Ь	d	١
kl	R	Я	R	В	Ь	
l	2	U	J	5	5	1
m	L	٦	Γ	L	ڶ	c
n	О	U	σ	Д	ف	כ
s	5	Υ	ہ	٦	نم	n
sh	Ь	9	ρ	٩	ال	
t	و	ପ	ด	ඉ	ۼ	b
th	L	ገ	٢	J	j	J
tth	E	U	\cap	Э	Ė	
tz	6	ପ	19	ಶ	ਠਂ	
У	^ታ	4	7	4	ڔٙ	
yē						x
ai						+
r						U
0						0
00						

Proposed representative glyph changes for Ojibway

18DB CANADIAN SYLLABICS OJIBWAY SH (figures 33, 34, 36)

18DC △ CANADIAN SYLLABICS EASTERN W (figures 33, 36)

18DD • CANADIAN SYLLABICS WESTERN W (figures 33, 35)

legend

- Character orientation revision
- Glyph shape / proportion change

4 CHANGES FOR OJIBWAY

This proposal requests a revision to the representative character of U+18DB CANADIAN SYLLABICS OJIBWAY SH, U+18DC CANADIAN SYLLABICS EASTERN W, and U+18DD CANADIAN SYLLABICS WESTERN W in the UCAS Extended code chart.



These characters were proposed for inclusion into UCAS in L2/08-132 in 2008, which requested encoding the unique variant of the *sh* final, as well as the variations in the final form of *w* in some Northern Ojibway-speaking communities, particularly those in the eastern portion of the region. Everson and Harvey identified the correct forms of these characters, and supplied the correct representative characters in L2/08-132. Despite this, the current extended block code chart font contains the incorrect representative characters for U+18DB CANADIAN SYLLABICS OJIBWAY SH, U+18DC CANADIAN SYLLABICS EASTERN W, and U+18DD CANADIAN SYLLABICS WESTERN W. (figure 33)

The requested revisions to the code chart font have been illustrated on p 50, with descriptions attestations in the sections and figures to follow.

4.1 Proposed changes for Ojibway

The following changes have been proposed to the UCAS extended code chart font in order to correct the errors in the representative glyphs for Ojibway.

	18B	18C	18D	18E	18F
Ō	<u>و</u> ک	2°	÷	JŪ.	٤.
j	۾ کي	ŝ	÷	5	2
2	÷	·.'	÷	نے	GV.
3	, Š	ر ب	٠ς	e).	1
4	>	ئ	٨	e.	r
5	< <	Å	n	Ū.	5
6	\$.0	P	ė	
7	Ĉ	Q.	L	Ė	
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9	ъ́b	ġ.	o-	Ġ	
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1	18B	18C	18D	18E	1BF
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1	4	ŝ	٠	5	2
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2	å	ŝ.	Ċ	خ	OI.
	187	1802	1800	1862	5872
3	·4	4	٠ς	6.	1
	-0/	(EC)	1805	HEA	957
4	>	ا	A	6 .	I.
11	2				
5	<	ŝ	U	UJ.	5
	1095	acr.	1600	(85)	366
5	.>	·σ	P	Ė	
	HBE	907	1806	1865	2222
7	Ċ	σ.	r	Ė	
	168/	1807	1600.	967	10000
В	b	·Ġ	r	Я٠	
н	1894	908	1606	1859	14.14.
9	·P	ġ.	6	B	
П	181	901	1829	(82)	
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legend

Character orientation revision

■ Glyph shape / proportion change

4.2 Orientation schemes for Northern Ojibway Syllabics finals

The following section provides figures depicting the variation in orientation schemes for Ojibway finals, focusing on the particular variation found in Syllabics-using communities in the Northern Ontario dialect region.

figure 30 Although the correct representative character was proposed for U+18DB CANADIAN SYLLABICS OJIBWAY SH in L2/08-132, a change was made to the representative character in the chart font for the UCAS, resulting in the incorrect o-vowel position orientation (1) that is present in the current code chart for UCAS extended, as seen in the image, right, from the official code chart from Unicode 13.0.

In the correct orientation scheme for these representative characters, U+1525 ° CANADIAN SYLLABICS SH, follows the a-vowel orientation (3), while U+18DB ° CANADIAN SYLLABICS OJIBWAY SH, should follow the i-vowel orientation (2).

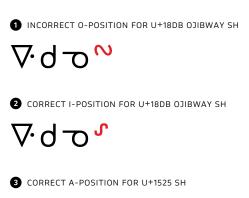




figure 31 In L2/08-132, Everson and Harvey proposed the correct form composition for U+18DC $^{\Delta}$ Canadian syllabics eastern w and U+18DD $^{\Delta}$ Canadian syllabics western w (2), however, the current chart font for UCAS extended incorrectly composes these glyphs (1).

The composition that Everson and Harvey proposed for their representative glyphs for these encoded characters in L2/08-132 follows the conventional pattern of the w dot mark (U+1427 · CANADIAN SYLLABICS FINAL MIDDLE DOT) as it is composed in conjunction with vowel (Δ or Δ) or syllable characters (\cdot 0. or \cdot 0.), centered at the midline of the glyph, between the baseline and topline. Attestation for this positioning of the middle dot in these finals is shown in figure 34.











figure 32 The table, right, shows the two orientation schemes that are found in Northern Ojibway dialect communities in Ontario, which vary between following the i-vowel or a-vowel orientation position. The i-vowel position orientation scheme has been highlighted in the table to show the pattern that U+18DB * Ojibway sh is required to fit into.

For a depiction of the entire Ojibway Syllabics orthography that shows the a-vowel and i-vowel syllable orientation schemes, please see figure 37 on p 55 in section 4.4.

A comparison of the i-vowel and a-vowel orientation positioning of finals in Northern Ojibway communities:

	I-POSITION	A-POSITION
sh	ſ	ω
n	σ	٥
k	ρ	ь
р	٨	<
d	n	c
m	г	L
S	ų.	5

4.3 Attestations for Ojibway

8. Additional finals for Ojibway (U+A9EE..U+A9F7). And Prove $\frac{\Delta \Delta}{p} / \frac{k}{k} /$

figure 33 Detail from page 2 of L2/08-132, *Proposal to encode 39 Unified Canadian Aboriginal Syllabics in the UCS*, 2008, showing the correct representative character that Everson and Harvey proposed for U+18DB ** *Ojibway sh*, U+18DC ** *Eastern w*, and U+18DD ** *Western w*. The text introducing these characters, above, provides a description by the authors on the preference that some Northern Ojibway dialects have towards using superscript finals following the i-vowel orientation. The current chart font has changed the representative form to an incorrect o-vowel orientation. Additionally, the current chart font has changed the correct positioning of the dot mark in relation to the closed triangle shape in U+18DC ** *Eastern w*, and U+18DD ** *Western w* to an incorrect position at the top of the closed triangular form.

Both the a- and i-vowel orientation schemes represent the same final pure consonant sound, however, certain user communities across the Northern Ojibway dialect region prefer to follow one scheme over another for stylistic purposes.

The primary issue with the current representative character in the UCAS code charts for U+18DB $^{\mathfrak{o}}$ *Ojibway sh* is that it follows the o-vowel orientation, which does not match the schematic for the other Ojibway i-position finals ranging U+18D4 – U+18DB in the UCAS extended block that Everson and Harvey proposed in L2/08-132.

Note that this text example also shows all finals following the i-vowel orientation scheme, which is supported by UCAS in the extended block character range U+18D4–U+18DD.

24 ρ° Γ\\ α\α\ο. Δ. Ενουριών τος διανουριών τος δι

This sample shows attestation for the correct representative character that Everson and Harvey proposed for U+18DD $^{\Delta}$ Western w, with the dot mark centered to the closed triangle final shape. This pattern was also used for the representative character for U+18DC $^{\Delta}$ Eastern w.

Consonant	Vowels				Finals		
	е	1/11	0/00	a/aa	West	East a-series	East i-series
none/h/?	▽	Δ	D .	△	"	, II	/2/ A
w (West)	▽.•	Δ.	٥.	٥٠	•		
(East)	• 🗸	• •	• Þ	٠.		0	° or ·Δ
P	· V	^	>	<	•	<	^
t	U	n		C	1	c	n
k	9	ρ	٩	Ь	,	•	Р
С	1	٢	J	L	1	L.	r
m	٦	Г	٦	L	c	L	Г
n	٥	, σ	م	٥	,	٩	o-
s	٠, ٠	٦	نم	5	1		٠
š	ı	S	دم	67	U	6	ı
У	. 4	٦	٧	۶		۰ ۲	Δ
r (West)	3 ♥	3 △	३ ▷	3 ◁	3		
(East)	٧.	~	5	5		۲	
1 (West)	₹ ▽	₹ △	. ₹▷	₹ <	ŧ		
(East)		-	د .	ے	د	**;	
sk					5	8	
hk	*				×		
		4. j	9.18				

figure 36 The technical mapping of the Ojibway syllabary chart, presenting local community orthographic preferences in Western and Eastern regions of the Northern Ontario dialect of Ojibway. Showing attestation for the correct orientation of U+18DB $^{\circ}$ Ojibway sh, as well as the correct composition for the representative character for U+18DC $^{\circ}$ Eastern w.

There is variation in the preferred orientation of finals in Northern Ojibway communities, following the position of either the a- or i- vowel series in the orthography. The chart, above right, in the final two columns, shows the contrast between the two positional orientations across the shared finals characters in Nothern Ojibway communities. Typically, the Ojibway and Oji-Cree communities that use "Western" finals (finals shapes / orientations that follow the Western Cree shaping for finals) use the same scheme across all language communities. Communities that prefer the use of the Eastern finals (which follow the Eastern Cree orthographic structure of using superscripted versions of the a-position syllabic orientation) show variation in the orientation scheme they choose to follow, notably between the a-or i-series position.

From Fiero, 'Style manual for syllabics', pp 95–104, 1985

4.4 Ojibway Syllabics orthography (Φσ√αVJ·Δn)

figure 37 A technical mapping of the Ojibway Syllabics, with finals characters shown in the i-position orientation, for the Northern dialect of Ojibway. The correct orientation for U+18DB * Ojibway sh is shown marked blue, following the shape of the full-size syllabic character shi. Additionally, the chart shows the correct representative characters for U+18DC * Eastern w, and U+18DD * Western w.

Everson and Harvey's proposal in L2/08-132 requested the necessary characters that were required to satisfy this finals orientation scheme, with the Ojibway i-finals characters becoming part of the UCAS extended block, code points ranging 18D4–18DB). This proposal also provided the correct representative characters for U+18DC 'A Eastern w, and U+18DD 'A Western w. Although Everson and Harvey provided the correct representative character in their proposal, the currect chart font for UCAS renders these characters incorrectly.

The Ojibway double vowel transcription system has been used for the following chart, developed by Charles Fiero and used by the majority of Ojibway communities in Canada and the United States, including the Northern Ojibway dialects.



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 Second edition, Stuart's Lake Mission, 1894
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ADRIEN-GABRIEL MORICE, The new methodical, easy and complete Dene syllabary. Stuart's Lake Mission, 1890

LOUISE PERRAULT, *Prières, cantiques et catechisme en langue Montagnaise ou Chipeweyan.* Pauperes Evangelizantur, Montréal, 1857

ÉMILE FORTUNÉ STANISLAS JOSEPH PETITIOT, Dictionnaire de la langue dènè-dindjié dialectes montagnais ou chippewayan, peaux de lièvre et loucheux, renfermant en outre un grand nombre de termes propres à sept autres dialectes de la même langue. Edited by Ernest Leroux, Libraire des sociétés asiatiques de Paris, de Calcutta, de New-Haven (États-Unie), de Shanghai (Chine), de l'école des langues orientales vivantes, de la société philologique, etc., Paris, 1876

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Typotheque

Prepared by Kevin King kevin@typotheque.com www.typotheque.com 07/07/21

Summary of document changes

1 The black box markers have been removed, along with the legend reference "Glyphs affecting other Dene Syllabics orthographies in UCAS" entirely from the code charts on.

Changes to pages 6-9, 12-15, 17, and 45-47.

2 Added a note to the text on page 12 (section 2, Carrier) to describe the effect on the other Dene orthographies:

'Additionally, note that some of the characters discussed in this section are also used by other Dene orthographies in UCAS in the same manner as is preferred by Carrier.'

Changes to page 12.

3 Added a note to the text on page 40 (section 3, Sayisi) to describe the effect these changes have on the other Dene orthographies: 'Additionally, note that some of the characters discussed in this section are also used by other Dene orthographies in UCAS in the same manner as is preferred by Sayisi.'

Changes to page 40.

4 Textual changes were made to the code chart names list on pages 8–10. The multiple markers for "additions" were removed and simplified to one colour to denote additions instead (purple). Additionally, the green colour reference to "subheading change" was removed, and the purple "addition" reference was applied to this proposed change, with a red-coloured strike through to indicate the context of the change.

Changes to pages 8–10.