

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

**Doc Type: Working Group Document****Title: Proposal to encode 39 Unified Canadian Aboriginal Syllabics in the UCS****Source: UC Berkeley Script Encoding Initiative (Universal Scripts Project)****Authors: Michael Everson and Chris Harvey****Status: Individual Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Date: 2008-05-11**

**1. Summary.** This document requests 39 additional characters to be added to the UCS and contains the proposal summary form.

**1. Syllabics hyphen (U+1400).** Many Aboriginal Canadian languages use the character U+1428 CANADIAN SYLLABICS FINAL SHORT HORIZONTAL STROKE, which looks like the Latin script hyphen. Algonquian languages like western dialects of Cree, Oji-Cree, western and northern dialects of Ojibway employ this character to represent /tʃ/, /c/, or /j/, as in Plains Cree ᐃᐃᐃᐃ /anohc/ ‘today’. In Athabaskan languages, like Chipewyan, the sound is /d/ or an alveolar onset, as in Sayisi Dene ᐃᐃᐃᐃ /t’at’ú/ ‘how’. To avoid ambiguity between this character and a line-breaking hyphen, a SYLLABICS HYPHEN was developed which resembles an equals sign. Depending on the typeface, the width of the syllabics hyphen can range from a short = to a much longer =. This hyphen is line-breaking punctuation, and should not be confused with the Blackfoot syllable internal-w final proposed for U+167F. See Figures 1 and 2.

**2. DHW- additions for Woods Cree (U+1677..U+167D).** ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ /ðwē/ /ðwi/ /ðwī/ /ðwo/ /ðwō/ /ðwa/ /ðwā/. The basic syllable structure in Cree is (C)(w)V(C)(C). Like all syllabics characters in western dialects of Cree, where the /w/ occurs between the initial consonant and the vowel a mid-dot is placed after the syllabics character. Thus ‘it is good’ in Plains, Woods, and Western Swampy Cree: ᐃᐃᐃᐃ ᐃᐃᐃᐃ *miywāsin*, ᐃᐃᐃᐃ ᐃᐃᐃᐃ *miðwāsin*, ᐃᐃᐃᐃ ᐃᐃᐃᐃ *minwāsin*. Currently the UCAS Canadian Syllabics range has these syllable-internal /w/ syllabics for most consonant series, but not for Woods Cree’s ð-series. Thus U+153C ᐃᐃᐃᐃ WEST-CREE YWAA and U+14CE ᐃᐃᐃᐃ WEST-CREE NWAA are encoded as single characters; but ᐃᐃᐃᐃ is not yet encoded. See Figure 3.

**3. NW- additions for General Cree and Ojibway (U+A9E0..U+A9E7).** ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ /nwi/ /nwi/ /nwī/ /nwī/ /nwo/ /nwo/ /nwō/ /nwō/. The UCAS range only has half of the syllable-internal /w/ syllabics for the n-series: U+14C9..U+14CE. The characters listed above are currently absent. See Figures 3 and 4.

**4. RW- additions for General Cree and Ojibway (U+A9E8..U+A9ED).** ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ ᐃᐃᐃᐃ /rwē/ /rwi/ /rwī/ /rwo/ /rwo/ /rwō/ /rwa/. The UCAS range only has the character ᐃᐃᐃᐃ /rwā/. The languages which place the mid-dot after the base syllabic character do not typically use this r-series; therefore the right-dotted characters (e.g. \*ᐃᐃᐃᐃ \*ᐃᐃᐃᐃ ...) have not been proposed here. See Figure 4.

**5. Additional final for Woods Cree (U+167E).** \* /ð/. This symbol is used to indicate the “th” sound /ð/ in Woods Cree when there is no vowel sound following. For example, ᐃᐃᐃᐃ is pronounced /mīð/. See Figures 5 and 6.



- 14A5 CANADIAN SYLLABICS MI
  - Blackfoot (TE)
- 14A7 CANADIAN SYLLABICS MO
  - Inuktitut (MU), Sayisi (MU), Blackfoot (TI)
- 14AA CANADIAN SYLLABICS MA
  - Blackfoot (TO)
- 14ED CANADIAN SYLLABICS SE
  - Inuktitut (SAI), Blackfoot (SA)
- 14EF CANADIAN SYLLABICS SI
  - Blackfoot (SE)
- 14F1 CANADIAN SYLLABICS SO
  - Inuktitut (SU), Sayisi (SU), Blackfoot (SI)
- 14F4 CANADIAN SYLLABICS SA
  - Blackfoot (SO)
- 1526 CANADIAN SYLLABICS YE
  - Inuktitut (YAI), Blackfoot (YA)
- 1528 CANADIAN SYLLABICS YI
  - Blackfoot (YE)
- 152A CANADIAN SYLLABICS YO
  - Inuktitut (YU), Blackfoot (YI)
- 152D CANADIAN SYLLABICS YA
  - Blackfoot (YO)
  
- A9F9 CANADIAN SYLLABICS FINAL RAISED DOT
  - Carrier (GLOTTAL STOP)

## 7. Unicode Character Properties.

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1400;CANADIAN SYLLABICS HYPHEN;Pd;0;ON;;;;;N;;;;;
1677;CANADIAN SYLLABICS WOODS-CREE THWEE;Lo;0;L;;;;;N;;;;;
1678;CANADIAN SYLLABICS WOODS-CREE THWI;Lo;0;L;;;;;N;;;;;
1679;CANADIAN SYLLABICS WOODS-CREE THWII;Lo;0;L;;;;;N;;;;;
167A;CANADIAN SYLLABICS WOODS-CREE THWO;Lo;0;L;;;;;N;;;;;
167B;CANADIAN SYLLABICS WOODS-CREE THWOO;Lo;0;L;;;;;N;;;;;
167C;CANADIAN SYLLABICS WOODS-CREE THWA;Lo;0;L;;;;;N;;;;;
167D;CANADIAN SYLLABICS WOODS-CREE THWAA;Lo;0;L;;;;;N;;;;;
167E;CANADIAN SYLLABICS WOODS-CREE TH;Lo;0;L;;;;;N;;;;;
167F;CANADIAN SYLLABICS BLACKFOOT W;Lo;0;L;;;;;N;;;;;

A9E0;CANADIAN SYLLABICS NWI;Lo;0;L;;;;;N;;;;;
A9E1;CANADIAN SYLLABICS OJIBWAY NWI;Lo;0;L;;;;;N;;;;;
A9E2;CANADIAN SYLLABICS NWII;Lo;0;L;;;;;N;;;;;
A9E3;CANADIAN SYLLABICS OJIBWAY NWII;Lo;0;L;;;;;N;;;;;
A9E4;CANADIAN SYLLABICS NWO;Lo;0;L;;;;;N;;;;;
A9E5;CANADIAN SYLLABICS OJIBWAY NWO;Lo;0;L;;;;;N;;;;;
A9E6;CANADIAN SYLLABICS NWOO;Lo;0;L;;;;;N;;;;;
A9E7;CANADIAN SYLLABICS OJIBWAY NWOO;Lo;0;L;;;;;N;;;;;
A9E8;CANADIAN SYLLABICS RWE;Lo;0;L;;;;;N;;;;;
A9E9;CANADIAN SYLLABICS RWI;Lo;0;L;;;;;N;;;;;
A9EA;CANADIAN SYLLABICS RWII;Lo;0;L;;;;;N;;;;;
A9EB;CANADIAN SYLLABICS RWO;Lo;0;L;;;;;N;;;;;
A9EC;CANADIAN SYLLABICS RWOO;Lo;0;L;;;;;N;;;;;
A9ED;CANADIAN SYLLABICS RWA;Lo;0;L;;;;;N;;;;;
A9EE;CANADIAN SYLLABICS OJIBWAY P;Lo;0;L;;;;;N;;;;;
A9EF;CANADIAN SYLLABICS OJIBWAY T;Lo;0;L;;;;;N;;;;;
A9F0;CANADIAN SYLLABICS OJIBWAY K;Lo;0;L;;;;;N;;;;;
A9F1;CANADIAN SYLLABICS OJIBWAY C;Lo;0;L;;;;;N;;;;;
A9F2;CANADIAN SYLLABICS OJIBWAY M;Lo;0;L;;;;;N;;;;;
A9F3;CANADIAN SYLLABICS OJIBWAY N;Lo;0;L;;;;;N;;;;;
A9F4;CANADIAN SYLLABICS OJIBWAY S;Lo;0;L;;;;;N;;;;;
A9F5;CANADIAN SYLLABICS OJIBWAY SH;Lo;0;L;;;;;N;;;;;
A9F6;CANADIAN SYLLABICS EASTERN W;Lo;0;L;;;;;N;;;;;
A9F7;CANADIAN SYLLABICS WESTERN W;Lo;0;L;;;;;N;;;;;
A9F8;CANADIAN SYLLABICS FINAL SMALL RING;Lo;0;L;;;;;N;;;;;
A9F9;CANADIAN SYLLABICS FINAL RAISED DOT;Lo;0;L;;;;;N;;;;;
A9FA;CANADIAN SYLLABICS BEAVER DENE L;Lo;0;L;;;;;N;;;;;
A9FB;CANADIAN SYLLABICS BEAVER DENE R;Lo;0;L;;;;;N;;;;;
A9FC;CANADIAN SYLLABICS CARRIER DENTAL S;Lo;0;L;;;;;N;;;;;

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## 8. Bibliography.

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**9. Acknowledgements.** This project was made possible in part by a grant from the the U.S. National Endowment for the Humanities, which funded the which funded the Universal Scripts Project (part of the Script Encoding Initiative at UC Berkeley) in respect of the Canadian Syllabics encoding.

Figures.

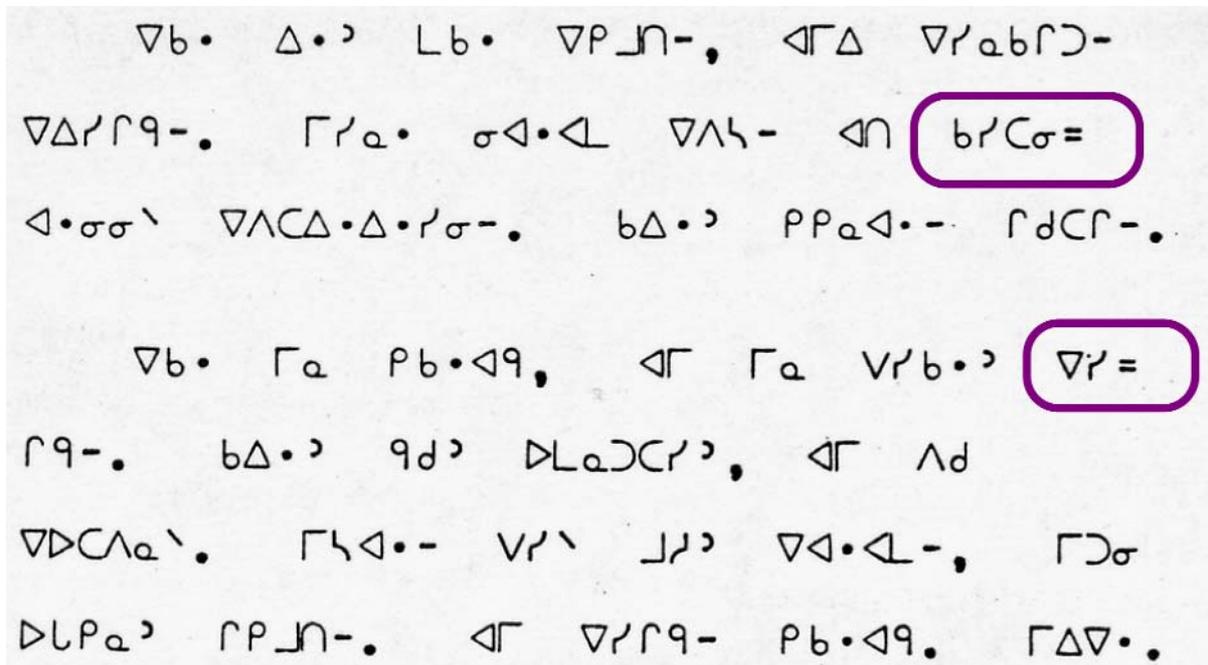


Figure 1. Sample in Oji-Cree from Fiero 1976:104 showing CANADIAN SYLLABICS HYPHEN in  $bʹCσ=$  *kasitani-waninik* and  $∇ʹ=$  *esi-čikeč*.

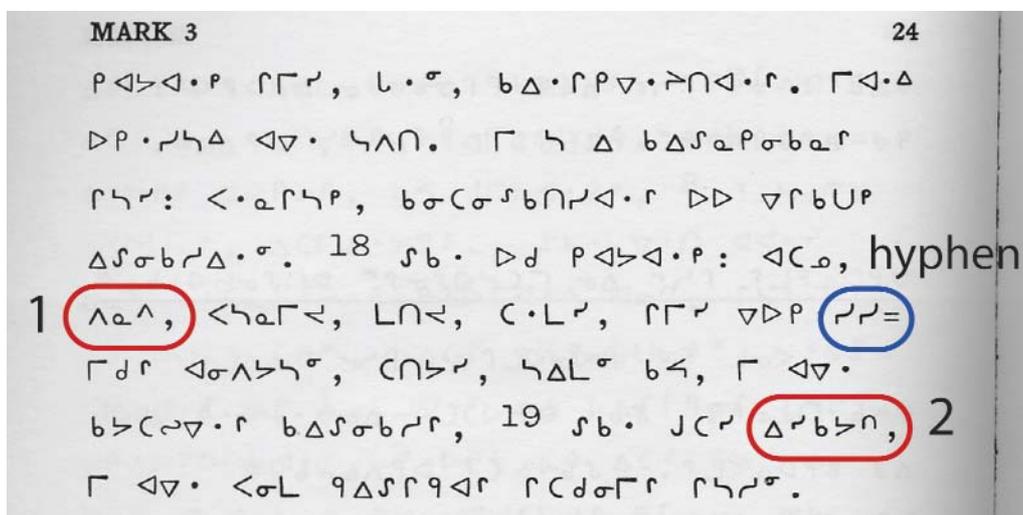


Figure 2. Sample in Northern Ojibway from Canadian Bible Society 1974:24 showing CANADIAN SYLLABICS HYPHEN and CANADIAN SYLLABICS OJIBWAY S in  $ʹʹ=$  *sisi-mikoč*; CANADIAN SYLLABICS OJIBWAY P in  $Λα^$  *pinap* 'Philip'; and CANADIAN SYLLABICS OJIBWAY S and CANADIAN SYLLABICS OJIBWAY T in  $Δʹb>ʹ$  *iskayat* 'Iscaariot'.

**ᓵᐅᐅᐅᐅᐅ / cahkipēhikana**  
**Western Cree and Saulteaux Syllabics Inventory**

Vowels	ē	i	ī	o	ō	a	ā	Finals
w	wē	wi	wī	wo	wō	wa	wā	
Syllabics	▽ ē	△ i	△̇ ī	▷ o	▷̇ ō	◁ a	◁̇ ā	° w
	▽• wē	△• wi	△̇• wī	▷• wo	▷̇• wō	◁• wa	◁̇• wā	
p	▽ pē	△ pi	△̇ pī	> po	>̇ pō	< pa	<̇ pā	' p
pw	▽• pwē	△• pwi	△̇• pwī	>• pwo	>̇• pwō	<• pwa	<̇• pwā	
t	U tē	∩ ti	∩̇ tī	⋈ to	⋈̇ tō	⊂ ta	⊂̇ tā	' t
tw	U• twē	∩• twi	∩̇• twī	⋈• two	⋈̇• twō	⊂• twa	⊂̇• twā	
k	q kē	p ki	ṗ kī	d ko	ḋ kō	b ka	ḃ kā	' k
kw	q• kwē	p• kwi	ṗ• kwī	d• kwo	ḋ• kwō	b• kwa	ḃ• kwā	
c	ᓵ cē	ᓵ ci	ᓵ̇ cī	ᓵ co	ᓵ̇ cō	ᓵ ca	ᓵ̇ cā	- c
cw	ᓵ• cwē	ᓵ• cwi	ᓵ̇• cwī	ᓵ• cwo	ᓵ̇• cwō	ᓵ• cwa	ᓵ̇• cwā	
m	ᓵ mē	ᓵ mi	ᓵ̇ mī	ᓵ mo	ᓵ̇ mō	ᓵ ma	ᓵ̇ mā	° m
mw	ᓵ• mwē	ᓵ• mwi	ᓵ̇• mwī	ᓵ• mwo	ᓵ̇• mwō	ᓵ• mwa	ᓵ̇• mwā	
n	ᓵ nē	ᓵ ni	ᓵ̇ nī	ᓵ no	ᓵ̇ nō	ᓵ na	ᓵ̇ nā	' n
nw	ᓵ• nwē	ᓵ• nwi	ᓵ̇• nwī	ᓵ• nwo	ᓵ̇• nwō	ᓵ• nwa	ᓵ̇• nwā	
s	ᓵ sē	ᓵ si	ᓵ̇ sī	ᓵ so	ᓵ̇ sō	ᓵ sa	ᓵ̇ sā	' s
sw	ᓵ• swē	ᓵ• swi	ᓵ̇• swī	ᓵ• swo	ᓵ̇• swō	ᓵ• swa	ᓵ̇• swā	
š	ᓵ šē	ᓵ šī	ᓵ̇ šī	ᓵ šo	ᓵ̇ šō	ᓵ ša	ᓵ̇ šā	' š
šw	ᓵ• šwē	ᓵ• šwi	ᓵ̇• šwī	ᓵ• šwo	ᓵ̇• šwō	ᓵ• šwa	ᓵ̇• šwā	
y	ᓵ yē	ᓵ yi	ᓵ̇ yī	ᓵ yo	ᓵ̇ yō	ᓵ ya	ᓵ̇ yā	' y
yw	ᓵ• ywē	ᓵ• ywi	ᓵ̇• ywī	ᓵ• ywo	ᓵ̇• ywō	ᓵ• ywa	ᓵ̇• ywā	
th	ᓵ thē	ᓵ thi	ᓵ̇ thī	ᓵ tho	ᓵ̇ thō	ᓵ tha	ᓵ̇ thā	' th
thw	ᓵ• thwē	ᓵ• thwi	ᓵ̇• thwī	ᓵ• thwo	ᓵ̇• thwō	ᓵ• thwa	ᓵ̇• thwā	
ε l		ᓵ r		" h		* hk		ᓵ nk

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**Figure 3.** Syllabics chart showing CANADIAN SYLLABICS NWI, CANADIAN SYLLABICS NWII, CANADIAN SYLLABICS NWO, and CANADIAN SYLLABICS NWOO, as well as CANADIAN SYLLABICS WEST-CREE THWEE, CANADIAN SYLLABICS WEST-CREE THWI, CANADIAN SYLLABICS WEST-CREE THWII, CANADIAN SYLLABICS WEST-CREE THWO, CANADIAN SYLLABICS WEST-CREE THWOO, CANADIAN SYLLABICS WEST-CREE THWA, and CANADIAN SYLLABICS WEST-CREE THWAA.

The words have been put in syllabic order, *not* Roman alphabetical order. The order, from left to right, is:

∇	Δ	Δ̇	▷	▷̇	◁	◁̇	
·∇	·Δ	·Δ̇	·▷	·▷̇	·◁	·◁̇	◦
V	Λ	Λ̇	>	>̇	<	<̇	
·V	·Λ	·Λ̇	·>	·>̇	·<	·<̇	<
U	∩	∩̇	∩	∩̇	C	Ċ	
·U	·∩	·∩̇	·∩	·∩̇	·C	·Ċ	c
q	p	ṗ	d	ḋ	b	ḃ	
·q	·p	·ṗ	·d	·ḋ	·b	·ḃ	b d
ŋ	ɾ	ɾ̇	J	J̇	ɬ	ɬ̇	
·ŋ	·ɾ	·ɾ̇	·J	·J̇	·ɬ	·ɬ̇	ɬ
ɫ	ɮ	ɮ̇	ɭ	ɭ̇	L	L̇	
·ɫ	·ɮ	·ɮ̇	·ɭ	·ɭ̇	·L	·L̇	ɭ
σ	σ	σ̇	σ	σ̇	σ	σ̇	
·σ	·σ̇	·σ̇	·σ̇	·σ̇	·σ	·σ̇	σ
τ	τ	τ̇	τ	τ̇	τ	τ̇	
·τ	·τ	·τ̇	·τ	·τ̇	·τ	·τ̇	τ
ϋ	ϋ	ϋ̇	ϋ	ϋ̇	ϋ	ϋ̇	
·ϋ	·ϋ	·ϋ̇	·ϋ	·ϋ̇	·ϋ	·ϋ̇	ϋ
ς	ς	ς̇	ς	ς̇	ς	ς̇	
·ς	·ς	·ς̇	·ς	·ς̇	·ς	·ς̇	ς
Ϙ	Ϙ	Ϙ̇	Ϙ	Ϙ̇	Ϙ	Ϙ̇	
·Ϙ	·Ϙ	·Ϙ̇	·Ϙ	·Ϙ̇	·Ϙ	·Ϙ̇	Ϙ
ϙ	ϙ	ϙ̇	ϙ	ϙ̇	ϙ	ϙ̇	
·ϙ	·ϙ	·ϙ̇	·ϙ	·ϙ̇	·ϙ	·ϙ̇	ϙ
Ϛ	Ϛ	Ϛ̇	Ϛ	Ϛ̇	Ϛ	Ϛ̇	
·Ϛ	·Ϛ	·Ϛ̇	·Ϛ	·Ϛ̇	·Ϛ	·Ϛ̇	Ϛ

**Figure 4.** Syllabics chart for East Cree from the Cree School Board 1987:xiii showing CANADIAN SYLLABICS NWI, CANADIAN SYLLABICS NWII, CANADIAN SYLLABICS NWO, and CANADIAN SYLLABICS NWOO, as well as CANADIAN SYLLABICS RWEI, CANADIAN SYLLABICS RWII, CANADIAN SYLLABICS RWI, CANADIAN SYLLABICS RWO, CANADIAN SYLLABICS RWOI, CANADIAN SYLLABICS RWII, CANADIAN SYLLABICS RWO, CANADIAN SYLLABICS RWOI, and CANADIAN SYLLABICS RWA.

**MORE SYLLABLE WORDS WITH ENDINGS**

kīwīw	ᑭᑦᑦᑦᑦ	nīmāw	ᑎᑦᑭᑦ
pōnam	ᑭᑦᑦᑦᑦ	kitāw	ᑭᑦᑦᑦᑦ
mātow	ᑭᑦᑦᑦᑦ	kāsim	ᑭᑦᑦᑦᑦ
wāpos	ᑭᑦᑦᑦᑦ	mīth	ᑭᑦᑦᑦᑦ
asām	ᑭᑦᑦᑦᑦ	asam	ᑭᑦᑦᑦᑦ
nīpin	ᑭᑦᑦᑦᑦ	pipon	ᑭᑦᑦᑦᑦ
pikīs	ᑭᑦᑦᑦᑦ	sōkāw	ᑭᑦᑦᑦᑦ
nipiy	ᑭᑦᑦᑦᑦ	pimiy	ᑭᑦᑦᑦᑦ
thōtin	ᑭᑦᑦᑦᑦ	ocīk	ᑭᑦᑦᑦᑦ
piyak	ᑭᑦᑦᑦᑦ	otōt	ᑭᑦᑦᑦᑦ
thīkaw	ᑭᑦᑦᑦᑦ	wāpan	ᑭᑦᑦᑦᑦ

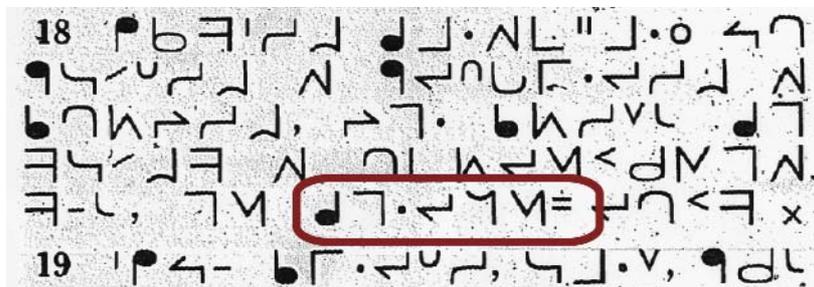
**Figure 5.** Sample in Woods Cree from Charles [s.d.], showing CANADIAN SYLLABICS WOODS-CREE TH in ᑭᑦᑦᑦᑦ *mīth*.

becoming common in the west are modifications of the y syllabic symbols, alternation of Woods Cree [ō] with Plains Cree [y]:

ᑭ = yē ; ᑭ = thī ; \* = final y ; \* = final th

These examples illustrate not only the th syllabic symbols, but also another r

**Figure 6.** Sample in Woods Cree from Wolvengrey 2001:xxiii, showing CANADIAN SYLLABICS WOODS-CREE TH.



**Figure 7.** Sample in Blackfoot from Stocken [1888]:10 showing CANADIAN SYLLABICS BLACKFOOT W in ᑭᑦᑦᑦᑦ = *it<sup>s</sup>ayinak<sup>w</sup>a*.

# BLACKFOOT SYLLABARIUM

VOWELS have Continental Values

	FINAL	a	e	i	o
P	o	⊖	⊖	⊖	⊖
T	i	⊏	⊏	⊏	⊏
K	<	⊍	⊍	⊍	⊍
M	∩	⊔	⊔	⊔	⊔
N	∪	⊕	⊕	⊕	⊕
S	∩	⊕	⊕	⊕	⊕
Y	.	⊕	⊕	⊕	⊕
W	=	⊕	⊕	⊕	⊕

(a) at the END of the syllable

/	= i as	⊍/	= kai
\	= o as	⊍\	= kau
	= h as	⊍	= kah
	= kh as	⊍	= kakh
x	= full stop		

(b) read in CENTRE of character it follows

.	= s as	⊍.	= ksa
<	= y as	⊍<	= kya
=	= w as	⊍=	= kwa

Figure 8. Sample in Blackfoot from Stocken [1888]:3 showing CANADIAN SYLLABICS BLACKFOOT W.

CO	sab	net	sabiig	nets
WO	asab		asabiig	
SC	anapiy		anapiyak	
	◁ <u>α</u> .Λ°		◁ <u>α</u> .Λ°	
CO	mtig	tree	mtigoog	trees
WO	mitig		mitigoog	
SC	mistik		mistikwak	
	Γ°Π°		Γ°Π°-b°	

**Figure 9.** Sample in Swampy Cree from Ministry of Education 2002:20, showing CANADIAN SYLLABICS FINAL SMALL RING in ◁α.Λ° *anapiy*.

CO	Zhaanh gii-waabmaan	John saw Fred.
	Panaaswen.	
WO	John ogii-waabamaan Fredan.	
SC	Cwân kî-wâpamew Freda.	
	·i° p° ·◁◁Γ° <3∇C.	

**Figure 10.** Sample in Swampy Cree from Ministry of Education 2002:21, showing U+1424 CANADIAN SYLLABICS FINAL RING in ◁◁◁Γ° *gî-wâpamew*.

## APPENDAGES.

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> = n, as in p<sup>°</sup>, it is cold.  
 <sup>°</sup> = m, " Λ<sup>°</sup>, sun.  
 ° = s, " α∇<sup>°</sup>, boy.  
 i = p, " <sup>°</sup><sup>°</sup>, duck.  
 \ = k, " σαbΠ°, he leaves me.  
 / = t, " ΓΛ°, tooth.  
 - = ch, " α^Λ°, very.  
 . = w, when placed immediately to the right of a syllable,  
 as in σ<sup>°</sup>., my wife.  
 · = i, when placed higher to the right, as in σ^°dC<sup>°</sup>·, my  
 coat.

**Figure 11.** Sample in Plains Cree from McDougall [1890]:6 showing CANADIAN SYLLABICS FINAL RAISED DOT in σ^°dC<sup>°</sup>· *niskotākay* ‘my coat’.

L'ae Δb'op' bPΓ' /  
 ▽◁•d PΓL'aeΔb' q'z'ab  
 U' PC'k>Λ'z' ▽d'z'  
 CΓ'◁•'aeCσ'°  
  
 Lb σ'ae° PΓL'PaeΔb'  
 bPq DC PC'z° ◁'p'x  
 ▽b• Δ'◁'n'ae◁• ▽b• bP'z°  
 ◁σ'L ◁'p'+ **Pb•**  
 ▽▷ΛP'z'Lb'

ae' σ'CV•U' DL  
 PΓ'CΓ'▷Δ• σae° ◁b'c'L'p'  
 ▽P▷Γ VC' DC DL  
 ▷PΔ•z'σ'bU' ▽◁•d DL  
 Γσ'N' b'aeC q'z'bCL'

**Figure 12.** Sample in Plains Cree from SICC 1976, showing a kerned CANADIAN SYLLABICS FINAL RAISED DOT in Pb•' *kīkway* 'what'.

b'z' **aeLPb•** ◁'h'z'Δ•'  
 b'z' PΓL'σσΔ•° La  
 ▽b'x ▽◁•σΔq' C◁•'bΔ•'  
 Λd U'z'ΛL'z' b'z'  
 PΓ'aeσΔ•' Pb'x ▽σ'c'c'  
 CΛ'd- ▽•◁'z'z'

**Figure 13.** Sample in Plains Cree from SICC 1976, showing an unkerneled CANADIAN SYLLABICS FINAL RAISED DOT in aeLPb•' *namakīkway* 'nothing'.

<p>MARK 1 4</p> <p><b>▽◁b•'z'</b> ◁◁ r'z', <b>▷P◁•c'c'σ</b> ΔΔ P'z'P</p> <p>▽◁σ'c'P'z'bσ'P. s'b• ▷P◁•c'L'σ Δσ P'z'Lσ)σ</p> <p>▷C'c'dσ ▽Λaeσ'z', ◁•Λ'c'Γ'P ▽Δ'z'ae'd'z'σ'</p> <p>▽Λ&gt;σ'h'c'd'z', ▽Λ'z's'b'd'z'. 11 s'b• P'U'Λ'c'b•σ</p> <p>Δ•Δ•σ P'z'd'z': P'σ Δ'h' <b>σ'P•'z'</b> z'z'P'Δe'σ,</p> <p>P'σ bae'▽C'Γ'Δ'z'σ. 8</p> <p>3 12 <b>z'LP</b> <b>ΔC'z'</b> ▽σ'd'z' ▷P'L'z'σ's'b'd'σ r'z' Δσ</p> <p>P'z'Lσ)σ ▷C'c'dσ, ▽•N' Λb•C'b'Γ'b'P ▽P'Δ'z'L'c'z'.</p> <p>13 Γ C'z' ΔΔL b'Δ'z'σ'Γ'cae'c'z'd'z'σ' Λb•C'b'Γ'b'P,</p> <p>▽P'b'q•r'Δ'd'z' Δσ L'z'Lσ)σ, h'c'σ ▽Δ'z'σ'b'z'σ'.</p>	<p>4</p> <p>5</p> <p>▽Δ'P'z'z': Γ</p> <p>P'z'Lσ) r'▷P'L'c'</p> <p>▷▷ Γae'z'J'Δ•σ</p> <p>16 Γ C'z' z'</p> <p>h'b'Δ'b'σ'P, baeσ</p> <p>◁•c'L'Δ σ'z'σ ▷</p> <p>b'c' ◁C'z'σ, ▽P</p> <p>◁d'Λ'◁•◁•Δ ▷C</p> <p>5 bae'z' ◁◁ r'z'z'</p> <p><b>P'b'P'P'z'c'J'σ'σ'Γ</b></p>
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**Figure 14.** Sample in Northern Ojibway from the Canadian Bible Society 1974:4 showing CANADIAN SYLLABICS OJIBWAY K in ▽◁b•'z' *eākwazič* 'as he is sick'; CANADIAN SYLLABICS OJIBWAY N in ▷P◁•c'c'σ *ogī-wābandan* 'he saw it'; CANADIAN SYLLABICS OJIBWAY S in σ'P•'z' *nigwizis* 'my son'; CANADIAN SYLLABICS OJIBWAY N in z'LP *šemag* 'immediately'; CANADIAN SYLLABICS OJIBWAY SH in ΔC'z' *idaš* 'so'; and CANADIAN SYLLABICS OJIBWAY M in P'b'P'P'z'c'J'σ'σ'Γ *giga-gikinōhamoninim* 'I will teach you something'.

24 p̄ r̄ ē ā ō .̄ .̄ .̄ !̄ <̄ σ̄ ∇̄ ∇̄ <<̄ ∇̄ σ̄ ∇̄ ?̄  
 p̄ ∇̄ ∇̄ ∇̄ ā σ̄ ā .̄ ∇̄ L̄ r̄ ∇̄ ∇̄ .̄ p̄ r̄ σ̄ ∇̄ .̄ ā r̄ ∇̄ ∇̄ ?̄  
 p̄ p̄ q̄ σ̄ ∇̄ p̄ ∇̄ ∇̄ .̄ ∇̄ 9̄ p̄ ∇̄ L̄ σ̄ ∇̄ ∇̄ ∇̄ ā b̄ ā r̄ =̄  
 ∇̄ ∇̄ σ̄ ∇̄ .̄ b̄ ā σ̄ **PC̄ ∇̄ !̄** p̄ ∇̄ ∇̄ p̄ ∇̄ ∇̄ .̄ .̄ 25 r̄ r̄ r̄  
 ∇̄ ∇̄ ∇̄ ∇̄ ∇̄ ∇̄ ∇̄ .̄ :̄ ∇̄ ∇̄ !̄ 9̄ d̄ 9̄ d̄ ∇̄ ∇̄ ∇̄ !̄

Figure 15. Sample in Northern Ojibway from the Canadian Bible Society 1974:7 showing CANADIAN SYLLABICS WESTERN W in PC̄ ∇̄ *gī-daw* ‘he said’.

Chart 1. Eastern and Western Syllabaries

Consonant	Vowels				Finals		
	e	i/i1	o/oo	a/aa	West	East a-series	East i-series
none/h/?	∇	Δ	▷	◁	"	"	/ʔ/ Δ
w (West)	∇·	Δ·	▷·	◁·	°		1
(East)	·∇	·Δ	·▷	·◁		°	° or .Δ
p	∇	∧	>	<	'	<	∧
t	U	∩	∪	∩	/	c	∩
k	9	p	d	b	\	b	p 2
c	∩	r	j	l	-	l	r
m	∩	∩	∩	∩	c	l	∩
n	o	q	b	p	>	p	q
s	∩	∩	∩	∩	>	∩	∩
š	∩	∩	∩	∩	c	∩	∩
y	<	∩	<	∩	·	∩	∩
r (West)	∩∇	∩Δ	∩▷	∩◁	∩	3	
(East)	∩	∩	∩	∩		∩	
l (West)	∩∇	∩Δ	∩▷	∩◁	∩		
(East)	∩	∩	∩	∩	∩		
sk					b	b	
hk					x		

Figure 16. Chart for Northern Ojibway from Fiero 1976:98 showing CANADIAN SYLLABICS EASTERN W, CANADIAN SYLLABICS OJIBWAY P, CANADIAN SYLLABICS OJIBWAY T, CANADIAN SYLLABICS OJIBWAY K, CANADIAN SYLLABICS OJIBWAY C, CANADIAN SYLLABICS OJIBWAY M, CANADIAN SYLLABICS OJIBWAY N, CANADIAN SYLLABICS OJIBWAY S, CANADIAN SYLLABICS OJIBWAY SH, and CANADIAN SYLLABICS FINAL SMALL RING.



(12) Chart of the Normative Carrier Syllabics

C\V	a	ʌ	e	i	o	u	isolated
b	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
t	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
d	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
t'	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
k	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
g	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
k'	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
č	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
j	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
č'	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
ts/ts	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
dz/dz	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
ts'/ts'	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
n	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
m	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
ŋ							ᑲ
l	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
ł	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
tl	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
dl	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
tl'	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
s	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
ᑲ							ᑲ
z	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
ᑲ							ᑲ
š	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
x	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
ɣ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
h	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ
w	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
x <sup>w</sup>	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
y	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
none	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	ᑲ	
?							ᑲ

Figure 20. Chart of Carrier syllabics, from Poser 2003:14, showing CANADIAN SYLLABICS CARRIER DENTAL S and CANADIAN SYLLABICS FINAL RAISED DOT.

## A. Administrative

1. Title

**Proposal to encode 39 Unified Canadian Aboriginal Syllabics in the UCS**

2. Requester's name

**Michael Everson**

3. Requester type (Member body/Liaison/Individual contribution)

**Individual contribution.**

4. Submission date

**2008-05-11**

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

**Yes.**

6b. More information will be provided later

**No.**

## B. Technical – General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

**No.**

1b. Proposed name of script

1c. The proposal is for addition of character(s) to an existing block

**Yes and No.**

1d. Name of the existing block

**Unified Canadian Aboriginal Syllabics and Unified Canadian Aboriginal Syllabics Extended-A**

2. Number of characters in proposal

**39.**

3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)

**Category A.**

4a. Is a repertoire including character names provided?

**Yes.**

4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?

**Yes.**

4c. Are the character shapes attached in a legible form suitable for review?

**Yes.**

5a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?

**Michael Everson.**

5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

**Michael Everson, Fontographer.**

6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

**Yes.**

6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?

**Yes.**

7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?

**Yes.**

8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database <http://www.unicode.org/Public/UNIDATA/UnicodeCharacterDatabase.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

**See above.**

## C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

**No.**

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

**Yes.**

2b. If YES, with whom?

**Chris Harvey has worked in partnership with the First Nations' University, one of the northern Saskatchewan Cree Education boards, and a Plains Cree community in Alberta. He also consulted and received guidance from the Dene language centre in the North West Territories.**

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

**People in Canada.**

4a. The context of use for the proposed characters (type of use; common or rare)

**Common.**

4b. Reference

5a. Are the proposed characters in current use by the user community?

**Yes.**

5b. If YES, where?

**In Canada.**

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

**Yes.**

6b. If YES, is a rationale provided?

**Yes.**

6c. If YES, reference

**Contemporary use, accordance with the Roadmap, and to keep these with the other Syllabics characters which are in the BMP.**

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

**No.**

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

**No, since they conform to the unification model for Canadian Syllabics.**

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

**No.**

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

**No.**

10b. If YES, is a rationale for its inclusion provided?

10c. If YES, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

**No.**

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

**No.**

11e. If YES, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

**No.**

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

**No.**

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?