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.
Typotheque
Proposed representative character revisions of the Unified Canadian Aboriginal Syllabics

1 Proposed changes

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- Vertical position change (finals)
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**Legend**

- **Vertical position change (finals)**
**Typotheque**

Proposed representative character revisions of the Unified Canadian Aboriginal Syllabics

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**Legend**

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

Proposed representative character revisions of the Unified Canadian Aboriginal Syllabics

1 proposed changes

Uniform Canadian Aboriginal Syllabics Extended

18B0 18FF

Legend
- Glyph shape / proportion change
- Vertical position change (finals)
- Character orientation revision
Unified Canadian Aboriginal Syllabics

Final for Dene and Carrier
...
144B ✕ CANADIAN SYLLABICS CARRIER H
  • vertically centered at midline
...
Final for Carrier
...
14D1 ⚯ CANADIAN SYLLABICS CARRIER NG
  • vertically centered at midline
...
Final for Dene and Carrier
...
1506 S CANADIAN SYLLABICS ATHAPASCAN S
  • vertically centered at midline
...
Syllables for Dene and Sayisi
...
15C0 ⇨ CANADIAN SYLLABICS SAYISI HE
15C1 ⇨ CANADIAN SYLLABICS SAYISI HI
15C2 ♝ CANADIAN SYLLABICS SAYISI HO
  • Sayisi (HU)
15C3 ♝ CANADIAN SYLLABICS SAYISI HA

Syllables for Carrier
15C4 ∀ CANADIAN SYLLABICS CARRIER GHU
15C5 A CANADIAN SYLLABICS CARRIER GHO
15C6 ➤ CANADIAN SYLLABICS CARRIER GHE
15C7 ➤ CANADIAN SYLLABICS CARRIER GHEE
15C8 ➤ CANADIAN SYLLABICS CARRIER GHI
15C9 ≪ CANADIAN SYLLABICS CARRIER GHA
15CA ∀ CANADIAN SYLLABICS CARRIER RU
15CB ▲ CANADIAN SYLLABICS CARRIER RO
15CC ➤ CANADIAN SYLLABICS CARRIER RE
15CD ➤ CANADIAN SYLLABICS CARRIER REE
15CE ➤ CANADIAN SYLLABICS CARRIER RI
15CF ≪ CANADIAN SYLLABICS CARRIER RA
15D0 ∀ CANADIAN SYLLABICS CARRIER WU
15D1 ▲ CANADIAN SYLLABICS CARRIER WO
15D2 ➤ CANADIAN SYLLABICS CARRIER WE
15D3 ➤ CANADIAN SYLLABICS CARRIER WEE
15D4 ➤ CANADIAN SYLLABICS CARRIER WI
15D5 ≪ CANADIAN SYLLABICS CARRIER WA
15D6 ∀ CANADIAN SYLLABICS CARRIER HWU
15D7 ▲ CANADIAN SYLLABICS CARRIER HWO
15D8 ➤ CANADIAN SYLLABICS CARRIER HWE
15D9 ➤ CANADIAN SYLLABICS CARRIER HWEE
15DA ➤ CANADIAN SYLLABICS CARRIER HWI
15DB ≪ CANADIAN SYLLABICS CARRIER HWA
15DC ▲ CANADIAN SYLLABICS CARRIER THU
15DD ▲ CANADIAN SYLLABICS CARRIER THO
15DE ▲ CANADIAN SYLLABICS CARRIER THE
15DF ▲ CANADIAN SYLLABICS CARRIER THEE
15E0 ▲ CANADIAN SYLLABICS CARRIER THI
15E1 ▲ CANADIAN SYLLABICS CARRIER THA
15E2 ☐ CANADIAN SYLLABICS CARRIER TTU
15E3 ☐ CANADIAN SYLLABICS CARRIER TTO
15E4 ☐ CANADIAN SYLLABICS CARRIER TTE
15E5 ☐ CANADIAN SYLLABICS CARRIER TTEE
15E6 ☐ CANADIAN SYLLABICS CARRIER TTI
15E7 ☐ CANADIAN SYLLABICS CARRIER TTA
15E8 ⚰ CANADIAN SYLLABICS CARRIER PU
15E9 ⚰ CANADIAN SYLLABICS CARRIER PO
15EA ⚰ CANADIAN SYLLABICS CARRIER PE
15EB ⚰ CANADIAN SYLLABICS CARRIER PEE
15EC ⚰ CANADIAN SYLLABICS CARRIER PI
15ED ⚰ CANADIAN SYLLABICS CARRIER PA
15EE ⚰ CANADIAN SYLLABICS CARRIER P
  • vertically centered at midline
15EF ☐ CANADIAN SYLLABICS CARRIER GU
15F0 ☐ CANADIAN SYLLABICS CARRIER GO
15F1 ☐ CANADIAN SYLLABICS CARRIER GE
15F2 ☐ CANADIAN SYLLABICS CARRIER GEE
15F3 ☐ CANADIAN SYLLABICS CARRIER GI
15F4 ☐ CANADIAN SYLLABICS CARRIER GA
15F5 ☐ CANADIAN SYLLABICS CARRIER KHU
15F6 ☐ CANADIAN SYLLABICS CARRIER KHO
15F7 ☐ CANADIAN SYLLABICS CARRIER KHE
15F8 ☐ CANADIAN SYLLABICS CARRIER KHEE
15F9 ☐ CANADIAN SYLLABICS CARRIER KHI
15FA ☐ CANADIAN SYLLABICS CARRIER KHA
15FB ☐ CANADIAN SYLLABICS CARRIER KUU
15FC ☐ CANADIAN SYLLABICS CARRIER KKE
15FD ☐ CANADIAN SYLLABICS CARRIER KKEE
15FE ☐ CANADIAN SYLLABICS CARRIER KKI
1600 ☐ CANADIAN SYLLABICS CARRIER KKA
1601 ☐ CANADIAN SYLLABICS CARRIER KK
  • vertically centered at midline
1602 ☐ CANADIAN SYLLABICS CARRIER NU
1603 ☐ CANADIAN SYLLABICS CARRIER NO
1604 ☐ CANADIAN SYLLABICS CARRIER NE
1605 ☐ CANADIAN SYLLABICS CARRIER NEE
1606 ☐ CANADIAN SYLLABICS CARRIER NI
1607 ☐ CANADIAN SYLLABICS CARRIER NA
1608 ☐ CANADIAN SYLLABICS CARRIER MU
1609 ☐ CANADIAN SYLLABICS CARRIER MO
160A ☐ CANADIAN SYLLABICS CARRIER ME
160B ☐ CANADIAN SYLLABICS CARRIER MEE
160C ☐ CANADIAN SYLLABICS CARRIER MI
160D ☐ CANADIAN SYLLABICS CARRIER MA
160E ☐ CANADIAN SYLLABICS CARRIER YE
160F ☐ CANADIAN SYLLABICS CARRIER YO
1610 ☐ CANADIAN SYLLABICS CARRIER YI
1611 ☐ CANADIAN SYLLABICS CARRIER YEE
1612 ☐ CANADIAN SYLLABICS CARRIER Y1
1613 ☐ CANADIAN SYLLABICS CARRIER YA
1614 ☐ CANADIAN SYLLABICS CARRIER JU
  • Athapascan (2A), Sayisi (T2O),
    South Slavey (DHA)
Unified Canadian Aboriginal Syllabics

**Syllables for Dene and Sayisi**

- 1615 ☉ CANADIAN SYLLABICS SAYISI JU
  - Athapascan (ZJ), Sayisi (TZI), South Slavey (DHO)

**Syllables for Carrier**

- 1616 ☉ CANADIAN SYLLABICS CARRIER JO
- 1617 ☉ CANADIAN SYLLABICS CARRIER JE
- 1618 ☉ CANADIAN SYLLABICS CARRIER JEE
- 1619 ☉ CANADIAN SYLLABICS CARRIER JI

**Syllables for Dene and Sayisi**

- 161A ☉ CANADIAN SYLLABICS SAYISI JI
  - Athapascan (ZE), Sayisi (TZE), South Slavey (DHE)

**Syllables for Carrier**

- 161B ☉ CANADIAN SYLLABICS CARRIER JA
  - Athapascan (ZI), Sayisi (TZII), South Slavey (DHI)
- 161C ☉ CANADIAN SYLLABICS CARRIER JIU
- 161D ☉ CANADIAN SYLLABICS CARRIER JIO
- 161E ☉ CANADIAN SYLLABICS CARRIER JIE
- 161F ☉ CANADIAN SYLLABICS CARRIER JII
- 1620 ☉ CANADIAN SYLLABICS CARRIER LI
- 1621 ☉ CANADIAN SYLLABICS CARRIER JI
- 1622 ☉ CANADIAN SYLLABICS CARRIER LU
- 1623 ☉ CANADIAN SYLLABICS CARRIER LO
- 1624 ☉ CANADIAN SYLLABICS CARRIER LE
- 1625 ☉ CANADIAN SYLLABICS CARRIER LEE
- 1626 ☉ CANADIAN SYLLABICS CARRIER LI
- 1627 ☉ CANADIAN SYLLABICS CARRIER LA
- 1628 ☉ CANADIAN SYLLABICS CARRIER DLI
- 1629 ☉ CANADIAN SYLLABICS CARRIER DLO
- 162A ☉ CANADIAN SYLLABICS CARRIER DLE
- 162B ☉ CANADIAN SYLLABICS CARRIER DLEE
- 162C ☉ CANADIAN SYLLABICS CARRIER DLII
- 162D ☉ CANADIAN SYLLABICS CARRIER DLLA
- 162E ☉ CANADIAN SYLLABICS CARRIER LHIU
- 162F ☉ CANADIAN SYLLABICS CARRIER LHI
- 1630 ☉ CANADIAN SYLLABICS CARRIER LHEE
- 1631 ☉ CANADIAN SYLLABICS CARRIER LI
- 1632 ☉ CANADIAN SYLLABICS CARRIER LHII
- 1633 ☉ CANADIAN SYLLABICS CARRIER TLUH
- 1634 ☉ CANADIAN SYLLABICS CARRIER TLUH
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- 1636 ☉ CANADIAN SYLLABICS CARRIER TLUH
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- 1638 ☉ CANADIAN SYLLABICS CARRIER TLUH
- 1639 ☉ CANADIAN SYLLABICS CARRIER TLUH
- 163A ☉ CANADIAN SYLLABICS CARRIER TLUH
- 163B ☉ CANADIAN SYLLABICS CARRIER TLUH
- 163C ☉ CANADIAN SYLLABICS CARRIER TLUH
- 163D ☉ CANADIAN SYLLABICS CARRIER TLUH
- 163E ☉ CANADIAN SYLLABICS CARRIER TLUH
- 163F ☉ CANADIAN SYLLABICS CARRIER TLUH
- 1640 ☉ CANADIAN SYLLABICS CARRIER ZU
- 1641 ☉ CANADIAN SYLLABICS CARRIER ZO
- 1642 ☉ CANADIAN SYLLABICS CARRIER ZE
- 1643 ☉ CANADIAN SYLLABICS CARRIER ZEE
- 1644 ☉ CANADIAN SYLLABICS CARRIER ZI
- 1645 ☉ CANADIAN SYLLABICS CARRIER ZA
- 1646 ☉ CANADIAN SYLLABICS CARRIER Z
  - vertically centered at midline
- 1647 ☉ CANADIAN SYLLABICS CARRIER INITIAL Z
  - vertically centered at midline
- 1648 ☉ CANADIAN SYLLABICS CARRIER DZU
- 1649 ☉ CANADIAN SYLLABICS CARRIER DZ0
- 164A ☉ CANADIAN SYLLABICS CARRIER DZE
- 164B ☉ CANADIAN SYLLABICS CARRIER DZEE
- 164C ☉ CANADIAN SYLLABICS CARRIER DZI
- 164D ☉ CANADIAN SYLLABICS CARRIER DZA
- 164E ☉ CANADIAN SYLLABICS CARRIER SU
- 164F ☉ CANADIAN SYLLABICS CARRIER SO
- 1650 ☉ CANADIAN SYLLABICS CARRIER SE
- 1651 ☉ CANADIAN SYLLABICS CARRIER SEE
- 1652 ☉ CANADIAN SYLLABICS CARRIER SI
- 1653 ☉ CANADIAN SYLLABICS CARRIER SA
- 1654 ☉ CANADIAN SYLLABICS CARRIER SHU
- 1655 ☉ CANADIAN SYLLABICS CARRIER SHO
- 1656 ☉ CANADIAN SYLLABICS CARRIER SHE
- 1657 ☉ CANADIAN SYLLABICS CARRIER SHEE
- 1658 ☉ CANADIAN SYLLABICS CARRIER SHI
- 1659 ☉ CANADIAN SYLLABICS CARRIER SHA
- 165A ☉ CANADIAN SYLLABICS CARRIER SH
  - vertically centered at midline
- 165B ☉ CANADIAN SYLLABICS CARRIER TSU
- 165C ☉ CANADIAN SYLLABICS CARRIER TSO
- 165D ☉ CANADIAN SYLLABICS CARRIER TSE
- 165E ☉ CANADIAN SYLLABICS CARRIER TSEE
- 165F ☉ CANADIAN SYLLABICS CARRIER TSI
- 1660 ☉ CANADIAN SYLLABICS CARRIER TSA
- 1661 ☉ CANADIAN SYLLABICS CARRIER CHU
- 1662 ☉ CANADIAN SYLLABICS CARRIER CHO
- 1663 ☉ CANADIAN SYLLABICS CARRIER CHE
- 1664 ☉ CANADIAN SYLLABICS CARRIER CHEE
- 1665 ☉ CANADIAN SYLLABICS CARRIER CHI
- 1666 ☉ CANADIAN SYLLABICS CARRIER CHA
- 1667 ☉ CANADIAN SYLLABICS CARRIER TNTU
- 1668 ☉ CANADIAN SYLLABICS CARRIER TTSO
- 1669 ☉ CANADIAN SYLLABICS CARRIER TTSE
- 166A ☉ CANADIAN SYLLABICS CARRIER TTTSEE
- 166B ☉ CANADIAN SYLLABICS CARRIER TTSI
- 166C ☉ CANADIAN SYLLABICS CARRIER TTSA

**Addition**
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  CANADIAN SYLLABICS WESTERN W
...

Syllables for Beaver Dene, Hare-Dene, and Chipewyan Dene
Syllables for Dene and Carrier
...

18EC  CANADIAN SYLLABICS SAYISI HOO
  • Chipewyan Dene (GU)

18ED  CANADIAN SYLLABICS CARRIER GWO
  • Beaver Dene (CHYE)

18EE  CANADIAN SYLLABICS CARRIER GEE
  • Chipewyan Dene (CHU)

18EF  CANADIAN SYLLABICS CARRIER GAA
  • Beaver Dene (CHAI)

18F0  CANADIAN SYLLABICS CARRIER GWA
  • Hare Dene (SHYA)

18F1  CANADIAN SYLLABICS SAYISI JUU
  • Chipewyan Dene (TSU)

18F2  CANADIAN SYLLABICS CARRIER JWA
  • Beaver Dene (TSYE)

Finals for Dene and Carrier
...

18F5  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):

1. **CORRECT FINALS POSITION**

   ![Correct Finals Position](image1)

2. **INCORRECT FINALS POSITION**

   ![Incorrect Finals Position](image2)
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.

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.
Guide to figures for proposed representative glyph changes for Carrier

Proposed representative character revisions of the Unified Canadian Aboriginal Syllabics

Typotheque
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.

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**Legend**
- Vertical position revision (finals)
## 3.1 Proposed Changes for Carrier

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### Legend
- **Character shape / proportion revision**
- **Vertical position revision (finals)**
- **Character orientation revision**
3.1 Proposed Changes for Carrier

Legend:
- Character shape/proportion revision
- Vertical position revision (finals)
- Character orientation revision
### Proposed Changes for Carrier

<table>
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<th>Character Shape/Proportion Revision</th>
<th>Vertical Position Revision (Finals)</th>
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</thead>
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</tbody>
</table>

**Legend**
- 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, Uheidi (Prince George), Saik'uz (Stoney Creek), Nadleh, Stellat'en(Fraser Lake), Burns Lake Band (Ts'il Kaz Koh), Lake Babine Nation( Nadot'en), Chest'ada, Takla First Nations (Tat'liah), Nak'azdli ( Fort Saint James), Tl'aat'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 Dakelh to the forefront of our language revitalisation. 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 Dakelne (Carrier Nation) that I teach in expect the Dakelh Syllabics to appear only in the form of the system developed by Adrien-Gabriel Morice. (correct characters) and (incorrect characters). The current representation in system fonts has seriously altered this, and is not adequate to write Dakelh.

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 whenaondleh (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 Ꞩ, Carrier dlee, U+1606 Ɦ Carrier ni, U+1642 Ɦ Carrier ze, U+1604 Ɦ Carrier ne, and U+161F Ɦ Carrier jee and the correct vertical positioning of final U+144B Ɪ Carrier k. 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: ᘸ vs. ᘷ) 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.

Musit,

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 ᘸ 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

![Image showing Carrier glyphs]

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.

2.3 Disunified Carrier Glyphs in UCAS

Figure 4: Two showings above of ranges of the UCAS main 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 “Carrier ng,” as well as provided the necessary distinct Carrier finals characters as shown in the above listings. As U+14D1 “Carrier ng” is disunified from U+1421 “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.

2.4 Correct orientation of Carrier *dlu* and *tlo* glyphs

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 Carrier *dlu* and U+163B 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 preferred 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 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 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

Preferred contemporary shaping of Carrier z and Athapascan s

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. ᘥ vs ᘡ for U+1625 ᘥ 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. ᕵ ᕴ,List ᕵ ᕴ, ᘧ ᘡ vs. ᕵ ᕴ,List ᕴ ᕴ, ᘧ ᘡ).

Additionally, the above showings depict the correct graphical distinction between U+14DA ᕵ Carrier or and U+1607 ᕵ 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 ᕵ Carrier h, U+1607 ᕵ Carrier na, U+15F1 ᕵ Carrier ge, U+1606 ᕵ Carrier ni, U+1665 ᕵ Carrier chi, U+15ED ᕵ Carrier pa, U+1613 ᕵ Carrier ya, and U+162B ᕵ 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 "Œuvres poétiques" Carrier prayer book of 1901, showing the technical mapping of the Carrier syllabary that he originally devised in collaboration with Jimmy Alexander in 1885. This syllabary chart provides attestation for the correct representative forms preferred by the contemporary Carrier Nation, showing:

U+144B Carrier b, ji, U+161B Carrier
U+14D1 Carrier ng, ja, U+161C Carrier
U+1506 Athapascan s, jis, U+161D Carrier
U+15C4 Carrier pha, jio, U+161E Carrier
U+15C5 Carrier gha, jjo, U+161F Carrier
U+15C6 Carrier ghe, joe, U+1620 Carrier
U+15C7 Carrier ghe, jis, U+1621 Carrier
U+15C8 Carrier ghi, jjo, U+1622 Carrier
U+15C9 Carrier gha, jio, U+1623 Carrier
U+15CA Carrier ru, lo, U+1624 Carrier
U+15CB Carrier ro, le, U+1625 Carrier
U+15CC Carrier re, le, U+1626 Carrier
U+15CD Carrier r, li, U+1627 Carrier
U+15CE Carrier ri, U+1628 Carrier diu,
U+15CF Carrier ra, U+1629 Carrier diu,
U+15D0 Carrier ree, U+162A Carrier diu,
U+15D1 Carrier wo, U+162B Carrier dlee,
U+15D2 Carrier we, U+162C Carrier dliu,
U+15D3 Carrier wee, U+162D Carrier diu,
U+15D4 Carrier wi, U+1630 Carrier the,
U+15D5 Carrier wa, U+1631 Carrier hee,
U+15DC Carrier thu, U+1632 Carrier hi,
U+15DD Carrier tho, U+1633 Carrier ha,
U+15DE Carrier the, U+1634 Carrier thu,
U+15DF Carrier thie, U+1635 Carrier thdo,
U+15E0 Carrier thi, U+1636 Carrier the,
U+15E1 Carrier tha, U+1637 Carrier thie,
U+15E2 Carrier thu, U+1638 Carrier thlo,
U+15E3 Carrier thlo, U+1639 Carrier thdo,
U+15E4 Carrier tlo, U+163A Carrier thdu,
U+15E5 Carrier tlo, U+163B Carrier thdu,
U+15E6 Carrier t, U+163C Carrier tle,
U+15E7 Carrier tta, U+163D Carrier tlee,
U+15E8 Carrier pu, U+163E Carrier tli,
U+15E9 Carrier po, U+163F Carrier tdu,
U+15EA Carrier pe, U+1640 Carrier zu,
U+15EB Carrier pee, U+1641 Carrier zo,
U+15EC Carrier pi, U+1642 Carrier ze,
U+15ED Carrier pa, U+1643 Carrier zee,
U+15EE Carrier ge, U+1644 Carrier zi,
U+15EF Carrier ga, U+1645 Carrier zdu,
U+15F0 Carrier go, U+1646 Carrier z,
U+15F1 Carrier ge, U+1647 Carrier in,
U+15F2 Carrier gee, U+1648 Carrier de,
U+15F3 Carrier gi, U+1649 Carrier do,
U+15F4 Carrier go, U+164A Carrier dz,
U+15F5 Carrier ghe, U+164B Carrier dee,
U+15F6 Carrier kho, U+164C Carrier dze,
U+15F7 Carrier khe, U+164D Carrier dzo,
U+15F8 Carrier khe, U+164E Carrier do,
U+15F9 Carrier khi, U+164F Carrier so,
U+15FA Carrier kha, U+1650 Carrier se,
U+15FD Carrier khe, U+1651 Carrier see,
U+15FB Carrier kuu, U+1652 Carrier si,
U+15FC Carrier khe, U+1653 Carrier sa,
U+15FE Carrier khe, U+1654 Carrier shu,
U+15FF Carrier khi, U+1655 Carrier sho,
U+1600 Carrier kha, U+1656 Carrier she,
U+1601 Carrier kh, U+1657 Carrier sh,
U+1602 Carrier nu, U+1658 Carrier shi,
U+1603 Carrier no, U+1659 Carrier shu,
U+1604 Carrier nee, U+165A Carrier shch,
U+1605 Carrier nee, U+165B Carrier shch,
U+1606 Carrier ni, U+165C Carrier shch,
U+1607 Carrier na, U+165D Carrier shch,
U+1608 Carrier mu, U+165E Carrier shch,
U+1609 Carrier mo, U+165F Carrier shch,
U+160A Carrier ma, U+1660 Carrier shch,
U+160B Carrier mee, U+1661 Carrier shch,
U+160C Carrier mi, U+1662 Carrier shch,
U+160D Carrier me, U+1663 Carrier shch,
U+160E Carrier mu, U+1664 Carrier shch,
U+160F Carrier yo, U+1665 Carrier shch,
U+1610 Carrier ye, U+1666 Carrier shch,
U+1611 Carrier yee, U+1667 Carrier shch,
U+1612 Carrier yi, U+1668 Carrier shch,
U+1613 Carrier ya, U+1669 Carrier shch,
U+1614 Carrier jo, U+166A Carrier shch,
U+1616 Carrier jo, U+166B Carrier shch,
U+1617 Carrier je, U+166C Carrier shch,
U+1618 Carrier jee, U+166D Carrier shch,
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 Carrier h, jii, U+161B Carrier
U+14D1 Carrier ng, ja, U+161C Carrier
U+1506 Athapaskan s, jin, U+161D Carrier
U+15C4 Carrier ghu, jjo, U+161E T0 Carrier
U+15C5 Carrier gho, jjo, U+161F T0 Carrier
U+15C6 Carrier ghe, jji, U+1620 T0 Carrier
U+15C7 Carrier gee, jji, U+1621 T0 Carrier
U+15C8 Carrier ghi, jjo, U+1622 T0 Carrier
U+15C9 Carrier gha, jju, U+1623 T0 Carrier
U+15CA Carrier ru, lo, U+1624 Carrier
U+15CB Carrier ro, le, U+1625 Carrier
U+15CC Carrier re, lo, U+1626 Carrier
U+15CD Carrier ree, li, U+1627 Carrier
U+15CE Carrier ri, U+1628 Carrier di, U+1629 Carrier
U+15DF Carrier ru, U+162A Carrier die,
U+15D1 Carrier wo, U+162B Carrier dile, U+162C Carrier dil
U+15D2 Carrier we, U+162D Carrier dila
U+15D3 Carrier wu, U+1630 Carrier lhe
U+15D4 Carrier wi, U+1631 Carrier lhe,
U+15D5 Carrier wa, U+1632 Carrier lif
U+15DC Carrier thu, U+1633 Carrier lha,
U+15DD Carrier tho, U+1634 Carrier lthu,
U+15DE Carrier the, U+1635 Carrier ltho,
U+15DF Carrier thee, U+1636 Carrier lthi,
U+15E0 Carrier thi, U+1637 Carrier lthhe
U+15E1 Carrier tha, U+1638 Carrier lthlu,
U+15E2 Carrier thu, U+1639 Carrier lthlha,
U+15E3 Carrier tio, U+163A Carrier lthlu,
U+15E4 Carrier te, U+163B Carrier lthlho,
U+15E5 Carrier tee, U+163C Carrier lthle,
U+15E6 Carrier tti, U+163D Carrier lthlha,
U+15E7 Carrier tta, U+163E Carrier lthlhi,
U+15E8 Carrier pu, U+163F Carrier lthlho,
U+15EA Carrier po, U+1640 Carrier sla,
U+15EB Carrier pe, U+1641 Carrier so,
U+15EC Carrier pi, U+1642 Carrier ze,
U+15ED Carrier pe, U+1643 Carrier see,
U+15EE Carrier p, U+1644 Carrier si,
U+15EF Carrier gu, U+1645 Carrier za,
U+15F0 Carrier go, U+1646 Carrier s,
U+15F1 Carrier ge, U+1647 Carrier initial t,
U+15F2 Carrier gee, U+1648 Carrier dzu,
U+15F3 Carrier gi, U+1649 Carrier dzo,
U+15F4 Carrier ga, U+164A Carrier dzu,
U+15F5 Carrier khu, U+164B Carrier dzee,
U+15F6 Carrier kho, U+164C Carrier dzei,
U+15F7 Carrier hke, U+164D Carrier dza,
U+15F8 Carrier hkeo, U+164E Carrier du,
U+15F9 Carrier khe, U+164F Carrier do,
U+15FA Carrier ko, U+1650 Carrier se,
U+15FD Carrier khe, U+1651 Carrier see,
U+15FB Carrier khu, U+1652 Carrier si,
U+15FC Carrier ka, U+1653 Carrier sa,
U+15FE Carrier kho, U+1654 Carrier shu,
U+15FF Carrier khi, U+1655 Carrier sho,
U+1600 Carrier kha, U+1656 Carrier she,
U+1601 Carrier kh, U+1657 Carrier shee,
U+1602 Carrier nu, U+1658 Carrier shi,
U+1603 Carrier no, U+1659 Carrier sha,
U+1604 Carrier me, U+165A Carrier sh,
U+1605 Carrier nee, U+165B Carrier tsu,
U+1606 Carrier mi, U+165C Carrier tso,
U+1607 Carrier ma, U+165D Carrier tse,
U+1608 Carrier mu, U+165E Carrier teo,
U+1609 Carrier mo, U+165F Carrier tsi,
U+160A Carrier me, U+1660 Carrier tsa,
U+160B Carrier mee, U+1661 Carrier chu,
U+160C Carrier mi, U+1662 Carrier cho,
U+160D Carrier ma, U+1663 Carrier ch,
U+160E Carrier yu, U+1664 Carrier chee,
U+160F Carrier yo, U+1665 Carrier chi,
U+1610 Carrier ye, U+1666 Carrier cha,
U+1611 Carrier yee, U+1667 Carrier tsse,
U+1612 Carrier yi, U+1668 Carrier tsoo,
U+1613 Carrier ya, U+1669 Carrier tto,
U+1614 Carrier ju, U+166A Carrier tse,
U+1616 Carrier jo, U+166B Carrier tsi,
U+1617 Carrier je, U+166C Carrier tss,
U+1618 Carrier jee, U+1685 Carrier dental s
U+1619 Carrier
2.6 Attestations for 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 ᓶ Athapaskan, U+15ED Carrier pa, U+160B Carrier me, U+165D Carrier tse, U+1660 Carrier tsa, U+162C Carrier dli, U+1606 Carrier ni, U+1607 Carrier na, U+15EA Carrier pe, U+1627 Carrier la, U+1604 Carrier ne, U+163F Carrier tla, U+161B Carrier ja, U+166C Carrier tta, U+1613 Carrier ya, U+15FA Carrier kha, U+164E Carrier su, U+15DE Carrier thi, U+15E1 Carrier tha, U+15E7 Carrier tsa, and U+15DC Carrier thu
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Being \( \Delta C \Delta E \Delta E \Delta C \Delta C \). So, the pupil who becomes familiar with these nine symbols may also be said to have mastered the whole alphabet.

Also, the modifications of each character take place internally and in conformity to logical and easily learned rules. To illustrate we will use the \( \Delta E \). The student who is familiar with the nine signs will recognize 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 \( S \). Let\'s now insert the perpendicular line, when used as an internal accentuation to a sign, corresponds to the \( h \) of the roman alphabet (as in \( \Delta E \) gha, \( \Delta E \) wha, \( \Delta E \) k(a)tha, \( \Delta E \) k(a) (kha),) and we obtain \( \Delta E \). Should we cross the end of the horizontal line, we will thereby add a \( \gamma \) to that sign which will then become \( \Delta E \). In like manner, \( \Delta E \) Sa may be changed to \( \Delta E \) Ts which, in its turn is liable to be transformed into \( \Delta E \) ts\'a (t\'sa), \( \Delta E \) ta, \( \Delta E \) ga etc. may also become \( \Delta E \) t\'a, \( \Delta E \) 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 (\( \gamma g, \gamma k, \gamma \kappa \gamma \)); the nasals by (\( \gamma n, \gamma n g, \gamma n \)). Also note the transformation of \( \gamma h \) to \( \gamma sh \) through the insertion \( \lambda \) or modified \( h \) 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.

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Figure 12. Page 3 from François Prince\'s book. Duchun K'ut 'uk'une'ugz / Dakelh syllabic writing system, providing a lesson in the structure of the Carrier syllabics. Showing attestation for U+144B \( \text{Carrier h} \), U+14D1 \( \text{Carrier ng} \), U+1506 \( \text{Carrier n} \), U+15D1 \( \text{Carrier pa} \), U+15F4 \( \text{Carrier ga} \), U+15ED \( \text{Carrier pa} \), U+15F4 \( \text{Carrier ga} \), U+1607 \( \text{Carrier na} \), U+166C \( \text{Carrier nga} \), U+1613 \( \text{Carrier na} \), U+15FA \( \text{Carrier pa} \), U+1627 \( \text{Carrier la} \), U+1653 \( \text{Carrier ra} \), U+1666 \( \text{Carrier cha} \), U+1659 \( \text{Carrier sha} \), U+1660 \( \text{Carrier tsa} \), U+15E7 \( \text{Carrier itsa} \), U+1600 \( \text{Carrier kha} \), U+165A \( \text{Carrier sh} \), U+15CF \( \text{Carrier na} \), and U+15DB \( \text{Carrier hwa} \).
From Prince, Neyu Professional Services, 2018
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 ᓆ Athapascan s, U+1669 ᖇ Carrier tsee, U+166C ᖈ Carrier tta, U+1603 ᖉ Carrier na, U+144B ᖐ Carrier h, U+15E5 ᖖ Carrier ttee, U+1669 ᖇ Carrier tta, U+1605 ᖈ Carrier nee, U+1606 ᖉ Carrier ni, U+1607 ᖊ Carrier na, U+15E7 ᖘ Carrier pa, U+1627 ᖙ Carrier la, U+1624 ᖚ Carrier le, U+1628 ᖛ Carrier dlee, U+15F4 ᖜ Carrier ga, U+15F1 ᖝ Carrier ge, U+1601 ᖣ Carrier k̕, U+15FD ᖥ Carrier k̕he, U+15F8 ᖦ Carrier k̕he, U+1610 ᖧ Carrier ye, U+1613 ᖨ Carrier ya, U+1611 ᖩ Carrier yee, U+1612 ᖩ Carrier yi, U+160E ᖩ Carrier yu, U+1660 ᖯ Carrier tsa, U+1657 ᖱ Carrier s̕ee, U+1626 ᖲ Carrier l̕i, U+160A ᖳ Carrier me, U+160D ᖴ Carrier ma, U+163F ᖵ Carrier tla, U+1618 ᖶ Carrier jee, U+1652 ᖷ Carrier si, U+1623 ᖸ Carrier la, U+1646 ᖹ Carrier 2, U+15EE ᖺ Carrier p̕, U+1663 ᖻ Carrier che, U+1665 ᖼ Carrier chi, and U+1651 ᖽ Carrier see.
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Be dustl’us uts’odul’eh /Carrier Reading Book

Ndí dustl’us khinoohl’en ene ba.

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

Tat hodndut on’un ook’wunets’uzguz inle’, et hoonts’i aooe’t ts’inla sulli’; et huwa doocha i dustl’us za buba nats’inla.

Andit tube nzoots’ulhhti: lhendun hoonlyay 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’odoonukh junnih: dustl’us buts’odul’eh hokwats’uninun te, khuni soo udechoo ook’w’oneusguz i ts’iyaooh soocho t’uznoozeh; ilho ootus ts’odooyih junnih.

Figure 14: Page 1 from Francois Prince’s book ᐅ ᐅ ᐅ /Carrier Reading Book /Duchun ƙ’at ‘uk’one’uzguz /Dakelh syllabic writing system, showing attestation for U+1506 ᐅ Athapaskan ᐅ U+144B ᐅ Carrier ᐅ U+1605 ᐅ Carrier nee, U+1602 ᐅ Carrier nu, U+15ED ᐅ Carrier pa, and U+15EB ᐅ Carrier pee
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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 "Abapascan s", U+1604 "Carrier ne", U+1610 "Carrier ye", U+1627 "Carrier la", U+1624 "Carrier le", U+1625 "Carrier lee", U+1626 "Carrier li", U+15F7 "Carrier khe", U+1605 "Carrier nee", U+1606 "Carrier ni", U+15FD "Carrier khe", U+1612 "Carrier ye", U+1585 "Carrier bhe", U+1586 "Carrier tsi", U+1585 "Carrier sa", and U+1646 "Carrier z".
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for Carrier

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 ᓇ Athapaskan s, U+1626 ᓇ Carrier li, U+1606 ᓇ Carrier ni, U+15EC ᓇ Carrier pi, U+15EB ᓇ Carrier pee, and U+15ED ᓇ 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 ᐌ Athapascan s, U+1626 ᐈ Carrier li, U+1606 ᐋ Carrier ni, U+15EC ᐍ Carrier pi, U+15EB ᐌ Carrier pee, U+15ED ᐎ Carrier pa, U+144B ᐷ Carrier h, U+1652 ᐹ Carrier si, U+1663 ᐩ Carrier che, U+166B ᐯ Carrier tsi, U+1669 ᐪ Carrier tse, U+1660 ᗸ Carrier tso, U+162D ᗸ Carrier dla, U+161E ᗪ Carrier jje, U+1613 ᖓ Carrier ya, U+1610 ᖑ Carrier ye, U+1612 ᖒ Carrier yi, U+15FD ᖓ Carrier hke, U+1650 ᖑ Carrier se, U+1653 ᖒ Carrier sa, U+1601 ᖓ Carrier mk, U+15E7 ᖔ Carrier tta, U+15FE ᖔ Carrier hkee, U+15F1 ᖔ Carrier ge, U+1623 ᖔ Carrier lo, and U+1618 ᖔ Carrier ja.
Coach (chief)
Dayi, ᐅ

Captain (big boss)
Mooditi, ᐩᑯᑯ

Assistant Captain (little boss)
Moodiyaz, ᐩᑯᓐᓯᔨ

Captain, ᐩᑯᑯ
Assistant captain, ᐩᔨᔨᑯᑯ
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If Gai2)G^JioK) ... q-i'D^O^^GU^G:^GG/|-lO
S-^D> 3 QVKD"3,> [L'Gt'G,<32D A^2DV
B

Figure 19 From Garrioch’s Manual of devotion of 1886, showing showing attestation for U+18F2 Carrier jwa, and U+18ED w 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.”

2.6 Attestations for Carrier

Figure 20 From Kirkby's Manual of devotion and instruction in the Chipewyan language, 1879, showing attestation for U+18EE  çıkt 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.
figure 21 From Garrioch’s *The Gospel according to St. Mark*, 1886, showing attestation for U+18EF ᣯ 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.”

Figure 22 From Petitiot, Dictionnaire de la langue déné-dindjié dialectes montagnais ou chippewyan, 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.
2.7 Carrier Syllabics orthography (ᑐᐦᑊᕼᐨᐠ멕TextStyle)

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.
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 Euphemias 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 \( \text{ᘚ} \) CANADIAN SYLLABICS SAYISI JI follow the same shape pattern as U+161B \( \text{ᘛ} \) CANADIAN SYLLABICS CARRIER JA. Additionally – due to a common visual appearance – U+1615 \( \text{ᘕ} \) CANADIAN SYLLABICS SAYISI JU and U+161A \( \text{ᘚ} \) 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 provides 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.
### Proposed Changes for Sayisi

<table>
<thead>
<tr>
<th>18E</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ꞌ</td>
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</tr>
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<td>ꞧ</td>
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</tr>
<tr>
<td>Ꞩ</td>
<td>Ꞩ</td>
</tr>
</tbody>
</table>

**Legend**
- Glyph shape / proportion change
3.2 Comparing the Round and Square form syllabics styles

**ROUND FORM**

atoonun

**SQUARE FORM**

atoonun

**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.
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 ꤐ Sayisi he, U+15C1 ꤑ Sayisi hi, U+15C2 ꤒ Sayisi ha, U+15C3 ꤓ Sayisi hu, U+1615 ꤔ Sayisi ju, and U+161A ꤕ Sayisi ji
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 แมน Sayisi he, U+15C1 แมน Sayisi hi, U+15C2 แมน Sayisi ho, U+15C3 แมน Sayisi ha, U+1615 แซยีม Sayisi ju, U+161A แซยีม Sayisi ji, U+18EC แซยีม Sayisi hoo, and U+18F1 แซยีม Sayisi joo.
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 Ь Sayisi he, U+15C3 Ь Sayisi ha, U+1615 Ь Sayisi ju, U+161A Ь Sayisi ji.
3.4 Sayisi Syllabics orthography

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 ᘕ Sayisi ju and U+161A ᘚ Sayisi ji, the correct shapes for these representative glyphs are graphically related to the similar proposed revisions to the Carrier representative characters U+1614 ᘔ Carrier ju and U+161B ᘛ 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.
Proposed representative character revisions of the Unified Canadian Aboriginal Syllabics

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.

<table>
<thead>
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<th>1</th>
<th>2</th>
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<th>4</th>
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<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
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<td>18C</td>
<td>18D</td>
<td>18E</td>
<td>18F</td>
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<td></td>
</tr>
</tbody>
</table>

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 ᖆ CANADIAN SYLLABICS OJIBWAY SH, follows the a-vowel orientation (3), while U+18DB ᖈ 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 ᕒ CANADIAN SYLLABICS EASTERN W and U+18DD ᕓ 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 (ᐃ or ᐆ) or syllable characters (ᐐ or ᐑ), 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 ᖈ 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:

<table>
<thead>
<tr>
<th>I-POSITION</th>
<th>A-POSITION</th>
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</thead>
<tbody>
<tr>
<td>sh</td>
<td>ᖈ</td>
</tr>
<tr>
<td>n</td>
<td>ᖉ</td>
</tr>
<tr>
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<td>d</td>
<td>ᖉ</td>
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<tr>
<td>m</td>
<td>ᖉ</td>
</tr>
<tr>
<td>s</td>
<td>ᖉ</td>
</tr>
</tbody>
</table>
4.3 Attestations for Ojibway

8. Additional finals for Ojibway (U+A9EE..U+A9F7). Certain dialects (e.g. Northern Ojibway) use superscript i-finals instead of the a-finals used in eastern Cree and Inuktitut. Only one of these is currently encoded in the UCS, /y/. For orthographies which place mid-dots before base letters, the w-final is U+A9F6 CANADIAN SYLLABICS EASTERN W; for orthographies which position mid-dots after base letters, the w-final is U+A9F7 CANADIAN SYLLABICS WESTERN W. See Figures 2, 14, 15, and 16.

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 ᣛ Ojibway sh, U+18DC ᣜ Eastern w, and U+18DD ᣜ 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 ᣜ Eastern w, and U+18DD ᣜ 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 ᣛ 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.
4.3 Attestations for Ojibway

Figure 34 A detail from page 35 of ᐃᐃᐁᐧ ᒥᓇᐧᒋᒧᐃᐧᓂ ᐲᐃᓇ ᑐᑕᣖ ᐊᐊ ᒪᣖ / The Gospel of Mark in Northern Ojibway (Saulteaux) and English (TEV), 1974, showing attestation for the correct orientation of U+18DB ᣛ Ojibway s.

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.

Figure 35 A detail from page 23 of L2/08-132, Proposal to encode 39 Unified Canadian Aboriginal Syllabics in the UCS, 2008, showing the attestation that Everson and Harvey provided for U+18DD ᖃ Western w, taken from ᐃᐃᐁᐧ ᒥᓇᐧᒋᒧᐃᐧᓂ ᐲᐃᓇ ᑐᑕᣖ ᐊᐊ ᒪᣖ / The Gospel of Mark in Northern Ojibway (Saulteaux) and English (TEV), 1974.

This sample shows attestation for the correct representative character that Everson and Harvey proposed for U+18DD ᖃ 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 ᖃ Eastern w.
### Consonant | Vowels | 1/1 | o/oo | a/aa | Finals | West | East a-series | East 1-series
---|---|---|---|---|---|---|---|---
none/h/ŋ | ♣ | △ | △ | △ | " | " | /ŋ/ /ŋ/
W (West) | ♣ | △ | ♣ | △ | ♣ | △ | ♣ | ♣ or ♣
(East) | ♣ | △ | ♣ | △ | ♣ | △ | ♣ | ♣ or ♣
P | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
T | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
K | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
C | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
M | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
N | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
S | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
Z | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
Y (West) | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
(East) | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
L (West) | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
(East) | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
SK | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣
HK | ♣ | △ | △ | △ | ♣ | △ | ♣ | ♣ or ♣

**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 ᣛ Ojibway sh, as well as the correct composition for the representative character for U+18DC ᣜ 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 Northern 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
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 ᣛ Ojibway sh is shown marked blue, following the shape of the full-size syllabic character sh. Additionally, the chart shows the correct representative characters for U+18DC ᣜ Eastern w, and U+18DD ᣜ 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 ᣜ Eastern w, and U+18DD ᣜ Western w. Although Everson and Harvey provided the correct representative character in their proposal, the current 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.
BIBLIOGRAPHY


[CANADIAN BIBLE SOCIETY], ΔΔν-Γ.ά.ΓΔ-Ω. ΚΩ-Λ. The Gospel of Mark in Northern Ojibway (Saulteaux) and English (TEV). Canadian Bible Society, 1974

[CANADIAN STANDARDS ASSOCIATION], Proposed pDAM for Unified Canadian Aboriginal Syllabics. ISO/IEC JTC1/SC2/WG2 N1441, 10 June 1996


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.' Email correspondence with the author received 21 April 2021, 4:13 am EST and 23 April 2021, 11:43 am EST

MICHAEL EVERSON AND CHRIS HARVEY, Proposal to encode 39 Unified Canadian Aboriginal Syllabics in the UCS. From the International Organization for Standardization JTC1/SC2/WG2 N3427, L2/08-132, 2008


PÈRE LEGOFF, ᐱᓇᑖᓇ ᐱᓇᑖᓇ ᐱᓇᑖᓇ / Livre de prières en langue Montagnaise. C. O. Beauchemin & Fils, Libraires-Imprimeurs, 1890

ADRIEN-GABRIEL MORICE, ᐱᒡᔨᔅᐧᐃᐧᐦᔅ ᐱᒡᔨᔅᐧᐃᐧᐦᔅ / Carrier prayer book, containing together with the usual formularies a complete collection of hymns, catechisms, directions relative to various points of Catholic life. Stuart’s Lake Mission, 1901


ADRIEN-GABRIEL MORICE, ᐱᒡᔨᔅᐧᐃᐧᐦᔅ / Mission Papers. First edition (Dᐧ 1 ᐱᒡᔨᔅᐧᐃᐧᐦᔅ), Volume 10 (Dᐧ 10 ᐱᒡᔨᔅᐧᐃᐧᐦᔅ) Stuart’s Lake Mission, 1894
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 dënê-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
ACKNOWLEDGEMENTS

The author owes much gratitude to Debbie Anderson (Universal Scripts Project/Script Encoding Initiative), Liang Hai, Roozbeh Pournader and Ben Yang for their technical support, feedback, and guidance throughout the entire process of preparing this proposal. To the Script Ad Hoc Group, for their helpful feedback and guidance towards preparing a successful proposal to revise representative glyphs in the UCAS code charts. To Francois Prince and Dennis Cumberland, for providing their vast knowledge of the Carrier syllabics and its history, taking the time to answer phone calls and emails, and tirelessly working to provide examples of the correct Carrier syllabics forms. To Peter Bil’ak, for investing in and supporting the Typotheque North American Syllabics project, which made the investigation and proposal to revise these glyphs in the UCAS code charts possible.
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.