Lava
A contrast Syllabics typeface family with a secondary style for more expression. In addition to providing localised Syllabics community support resulting from the comprehensive research findings in the Typotheque North American project, Lava Syllabics offers the benefits of a secondary style that is informed by research, expanding the typographic palette of the Syllabics to offer additional devices for expression and organization in typographic layouts. Lava Syllabics is built on a contrast model that suits the inherent structures of the script, while still working in harmony with Lava Latin, giving users the ability to set refined layouts in mixed and isolated multi-script settings.
The historical Blackfoot Syllabics are visually very distinct compared to the other Syllabics traditions, and can be considered a graphic isolate.

**ALGONQUIAN SYLLABICS**
The Algonquin Syllabics were developed for the Algonquin languages Ojibway and Cree, the original languages that this system was created for. They spread westward from Manitoba to the prairie communities, as well as eastward into Ontario and Québec.

**INUKTUT SYLLABICS**
The Inuktitut Syllabics share a strong graphic relationship to the Algonquian. The first texts printed in the Inuktitut language used the same type material that was developed for Cree and Ojibway, which formed the basis for the style of the Inuktitut Syllabics.

**DENE SYLLABICS**
The Dene Syllabics differ in both appearance and orthographic behaviour to the Algonquin or Inuktitut systems. This is due to the use of the square form style over the round form, and in the requirement for finals characters to vary in their vertical position—ing in relation to the base syllabic characters.

**BLACKFOOT: GRAPHIC ISOLATE**
The historical Blackfoot Syllabics are visually very distinct compared to the other Syllabics traditions, and can be considered a graphic isolate.

**LANGUAGE SUPPORT**

The Lava Syllabics type family supports all of the Indigenous languages in North America that use the Canadian Syllabics writing system, including full support for each language’s standard roman orthographies.
The Lava Syllabics glyph set supports the full Unicode range for the Unified Canadian Aboriginal Syllabics, including *Unified Canadian Aboriginal Syllabics Extended-A*, added with the release of Unicode version 14.0, which this project contributed to the Unicode Standard, through proposing additions for Nattilingmiutut and historical Cree and Ojibway characters.
FAMILY OVERVIEW

THIN
THIN ITALIC

LIGHT
LIGHT ITALIC

REGULAR
REGULAR ITALIC

MEDIUM
MEDIUM ITALIC

BOLD
BOLD ITALIC

HEAVY
HEAVY ITALIC
Nattilingmiutut
Dulk’wah ke
Anishininiiimowin
Saíyísí dëne
Iyw Iyimuun
Néhiyawêwin
Qikiqtaaluk nigianí
Ililîmowin
Sahtúot’íne Yat’í
Anishinaabemowin
Nîhithawîwin
Nunavimmiuttitut
Dane-zaa Zááge?
Înû Ayimûn
SYLLABICS SECONDARY STYLE

In conjunction with providing comprehensive support for all Syllabics-using Indigenous communities in North America, the new Typotheque Lava Syllabics typeface expands the Syllabics typographic palette by offering a secondary cursive style.

Due to the lack of formal manuscript sources, the key factor in developing an appropriate secondary style in the Syllabics system therefore is to reflect on the attributes and tendencies of letter construction found in the handwriting of local Syllabics writers. These properties can then be compared to the formal typographic Syllabics model; a model for an appropriate secondary that reflects the local user base can be achieved.

The analyses of Syllabics handwriting to develop the Lava Syllabics secondary style were taken from documents written by local Indigenous Syllabics users. Careful attention was paid to patterns that were consistent across all of the writing samples, and where patterns are consistent or diverge between samples within and across Syllabics-using Indigenous language communities.

The result of these analyses was a secondary style sourced from the handwriting of local users, which allows for the design to evoke a new means of graphically expressing the language and expanding the typographic palette of the Syllabics.
SYLLABICS CONTRAST

In conjunction with providing comprehensive support for all Syllabics-using Indigenous communities in North America, the new Typotheque Lava Syllabics typeface expands the Syllabics typographic palette by offering a secondary cursive style.

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The result of these analyses was a secondary style sourced from the handwriting of local users, which allows for the design to evoke a new means of graphically expressing the language and expanding the typographic palette of the Syllabics.
I think about this, the younger people need first to learn about inuusiq – will you have a good inuusiq will you live your life such? And if you are not vigilant what kind of inuusiq will result? These are the first things to really understand in an education.
The Unified Canadian Aboriginal Syllabics supports several Indigenous languages in Canada across the continent. Although the term ‘unified’ is applied to the character set, there are many languages that do not see their typographic or orthographic preferences represented correctly. One of these preferences not represented in the UCAS repertoire is the preference of the square form syllabics style, which is preferred by the Dene communities for representing their syllabics orthographies.

The Lava Syllabics fonts provide a full set for all square form alternates in its glyph set, which can be accessed via OpenType stylistic set 13 (“ss13”) in supporting typesetting environments.
SYLLABICS PROPORTIONS

As in any type system, there are inherent vertical metrics that should be observed which contribute to the best appearance of a given writing system. An aspect of the Syllabics typographic grid that must be observed is the relationship of the Syllabics to the Latin scripts vertical metrics, as these two systems are very frequently used together. This has much to do with the internal counterspaces of the Syllabics, which are wide and largely open, and contribute to a horizontal movement on the line. By contrast, the internal counter rhythm of Latin type is very narrow and vertical, which gives it a more vertical stance in lines of type. For this reason, the topline of the full-height Syllabics characters should be roughly 10–15% shorter than that of the Latin cap height, even if we consider the Syllabics being set on its own in paragraphs of text.

The grid example, right, shows the vertical proportion relationship for Lava Syllabics to Lava Latin, with the Syllabics top line sitting 94 units below the Latin capital height, and the medial height characters sitting 40 units below the Latin x-height in order to achieve optimal harmony between the two scripts in shared text settings. The paragraph settings, right, further demonstrate how these grid proportions achieve harmony between these two scripts that are frequently used together.

The name ṣaptcha qaniujaapait derives from the root qaniq, meaning ‘mouth’. The alternative, Latin-based writing system is named ṣaptcha qaliujaapait, and it derives from ṣaptcha qaliit, a word describing the markings or the grain in rocks. ṣaptcha ṣaptcha Titirausiq nutaaq meaning ‘new writing system’ is to be seen in contrast to ṣaptcha ṣaptcha titirausiit nutaunngittut, the ‘old syllabics’ used before the reforms of 1976.²

SYLLABICS EMBEDDED IN LATIN TEXT

The name ṣaptcha qaniujaapait derives from the root qaniq, meaning ‘mouth’. The alternative, Latin-based writing system is named ṣaptcha qaliujaapait, and it derives from ṣaptcha qaliit, a word describing the markings or the grain in rocks. ṣaptcha ṣaptcha Titirausiq nutaaq meaning ‘new writing system’ is to be seen in contrast to ṣaptcha ṣaptcha titirausiit nutaunngittut, the ‘old syllabics’ used before the reforms of 1976.²
The Dakelh (Carrier) people once enjoyed extensive literacy with the script. It is recorded that it was often used to write messages on trees, and Morice published a newspaper in syllabics which was in print from 1891 to 1894. Some transcriptions of Latin and English have been recorded as well. The switch was rather abrupt, to the point that parents would write in syllabics and their children would write in the alphabet, and neither could understand the other's writing.

Dakelh Syllabics

Carrier Syllabics text from Morice, Carrier reading-book/Carrier Syllabics text from Morice, Carrier reading-book

LanguageGeek, 1894.
Syllabics typefaces require a wider word space glyph width than the word space glyph for the Latin, in order for syllabics words to be readable in paragraph settings.

Bill Jancewicz – Algonquian Syllabics expert – notes that ‘... Much more difficulty has been experienced however with the whitespace, in particular the word-space character, which is encoded in BJCree UNI at somewhat wider than an em. The Euphemia word space is much too narrow for legible reading of syllabics.’

The default space character for Lava Syllabics is set to 660 units (Regular), over double the width of the Latin space character to ensure easy readability of Syllabics text. Please note that the syllabics space character is the default space character width in the Lava Syllabics fonts.

The localised script word space variants are available in the Lava Syllabics fonts as forced OpenType substitutions, which can also be accessed via stylistic sets 11 (Latin variants “ss11”) and 12 (Syllabics variants “ss12”) in supporting typesetting environments.

Note: when typesetting Syllabics texts in Adobe InDesign, be sure to activate the “World-Ready Paragraph Composer” in order to access the automatic Latin and Syllabics word space variants.

Ikwa oma piyakwāw i-kisikāk i-ki-nātādapiyān, ikwāni ikwa nikāpān, i-ōshakwāw kinosiwik, ikwa kā-nitawi-akotakwāw ikwa akwāwānisihk, i-wi-aya-wiskwasawkwāw, nimistikwak i-wi-os-ihakwāw. Ikwāni ikwa nipimahkamikisin kinosiwik i-ōshakwāw, ikwa nāsīpitimihk mākā wiđa.

**WORD SPACE TOO NARROW**

Ikwa oma piyakwāw i-kisikāk i-ki-nātādapiyān, ikwāni ikwa nikāpān, i-ōshakwāw kinosiwik, ikwa kā-nitawi-akotakwāw ikwa akwāwānisihk, i-wi-aya-wiskwasawkwāw, nimistikwak i-wi-os-ihakwāw. Ikwāni ikwa nipimahkamikisin kinosiwik

**IDEAL WORD SPACE**

---

1 BILL JANCEWICZ, In email correspondence with the author, Jancewicz described several issues surrounding digital Syllabics typography, including the word space glyph. He describes in the above quote excerpt his solution for the space character in his BJCree UNI typeface, a freely-available Syllabics typeface. ‘Proposal for additions to UCAS’, 24 August 2020, 9:40pm EST.
Donald be darwhun ast’un ts’ayah

Abul tbe darun zakh whughon kut

Yanus what’ut yan k’ut ts’ayah

Sdu bar et ts’akh I tlho hokh

10 taoozun.00 hokhwa onkut (10,000.00)

Bulakh ba naoolha choot ka dookhni

Abul de ch’akh ba koolho 15 taooszun (15,000)
NUMERALS AND PUNCTUATION

SYLLABICS NUMERALS
Similarly to providing solutions for punctuation marks tailored to suit to the Syllabics, the default numerals in the Lava Syllabics have been designed to match the proportions and height of the Syllabics. As a result, the numerals are set to the height of the Syllabics glyphs, and are drawn wider to better harmonise with the wider width and stance of the Syllabics. The Lava Syllabics numerals are available in both proportional and lining figures for tabular settings.

SYLLABICS PUNCTUATION
While there are script-specific syllabics punctuation marks that are used by the Algonquian syllabics-using languages (syllabics full stop • and hyphen –), all orthographies within the Syllabics writing system utilize Latin punctuation marks in text settings. The Lava Syllabics fonts have tailored these respective Latin punctuation marks to be positioned – and in some cases proportioned – to match the height and inherent proportions for the Syllabics glyphs, so they may harmonise better in Syllabics text settings.

These localised script variants are available in the Lava Syllabics fonts as forced OpenType substitutions, which can also be accessed via stylistic sets 11 (Latin variants “ss11”) and 12 (Syllabics variants “ss12”) in supporting typesetting environments.

Note: when typesetting Syllabics texts in Adobe InDesign, be sure to activate the “World-Ready Paragraph Composer” in order to access the automatic Latin and Syllabics variants.

SYLLABICS NUMERALS AND PUNCTUATION IN TEXT

SYLLABICS PUNCTUATION; LATIN PUNCTUATION

“_when?”
As part of the Typotheque North American Syllabics project’s mission to support Indigenous language revitalisation and preservation in North America, technical issues within the Unicode range for UCAS have been addressed to add missing characters to the Unicode Standard.

**Nattilik Shr and H Series**
The Nattilingmiutut dialect of the Inuktut language – spoken in the Nattilik community in the Western region of Nunavut – has been missing 12 characters in Unicode from its syllabics orthography that has prevented the community from teaching and using its language in digital text transmission environments. Working with Nattilik community language experts Janet Tamalik McGrath and Elisabeth Janesn-Hadlari, Typotheque submitted a successful proposal in October 2020 to encode the missing characters (Nattilik Kutaiřřutit) into Unicode, with their scheduled release in September 2021 with Unicode 14.0. The Lava Syllabics fonts provide full support for these new Nattilik characters across all weights and styles.

**Historical Sp Series**
In the October 2020 Unicode proposal to add new additions to UCAS, Typotheque was also able to successfully add a historical sp-series for the Algonquian syllabics that was previously missing from Unicode. The Lava Syllabics include these Algonquian characters across all weights and styles in its glyph set.
In conjunction with adding new characters to UCAS for the Syllabics, further support for Indigenous languages that use the Syllabics was provided through a proposal to change the representative glyphs in the UCAS code charts. These changes corrected errors in the accurate representative forms of the glyphs for the Carrier, Sayisi (Dene), and Ojibway Syllabics, and provide a model for all future Syllabics fonts to follow. The Lava Syllabics fonts support these revisions in its glyph set.

**CORRECTIONS FOR CARRIER**
The Carrier (Dakelh) syllabics have been included in the Unicode script encoding for UCAS since its inception in 1999, however, they have suffered from an attempt to ‘unify’ them with the syllabics style of other orthographies in the character encoding. Typotheque has worked closely with Carrier syllabics experts Francois Prince and Dennis Cumberland to successfully propose changes to the representative characters for the Carrier Syllabics in the UCAS code charts.

**CORRECTIONS FOR SAYISI**
The proposed changes to the Sayisi and general Dene Syllabics glyphs have also been implemented, providing the correct square form representative shape.

**CORRECTIONS FOR OJIBWAY**
The Lava Syllabics also implements the correct orientation and composition of the i finals characters required by the Ojibway Syllabics, as specified in these representative glyph changes.
chisichiiyeshiishtamaatin e tipapayich anit-h kaa naat-amekw wiichihtuwin **Expression** Happy Wedding

Anniversary! Joyeux anniversaire de marriage! **Glosses** (4)

- anniversary (N:3 S:5)
- marriage (N:4 S:5)
- wedding (N:6 S:5)

- anniversaire (N:2 S:3)

**Topics** (1) ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖ (N:31 S:20) ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ ᐱᔨᐦᑖᔭᐦᑖᐦᑖᔨᐦᑖᐦᑖ
VERTICAL POSITIONING OF FINALS FOR DENE SYLLABICS

While many syllabics orthographies such as Inuktut, Cree, and Ojibway position their final characters at the top line of a word, some syllabics-using languages prefer their finals to be placed at either the midline, baseline, or combination of vertical alignment zones. Carrier syllabics prefer to have finals positioned at the mid point of a word, between the baseline and top line. The Dene syllabics-using languages (Sayisi, Chipewyan, North and South Slavey) not only have preferences towards the vertical positioning of finals, but rather, orthographically require their finals to be positioned at either the top, mid, or baseline in order to correctly represent pronunciation in the language.

**MIDLINE FINALS**
In order to accommodate the midline finals positioning preferred in languages, such as Carrier, the Lava Syllabics fonts provide access to the Carrier preferred midline finals via OpenType stylistic set 15 (“ss15”) in supporting typesetting environments.

**BASELINE FINALS**
Some Dene languages have multiple vertical positioning requirements, with finals requiring to sit at the top, mid and baseline. In order to accommodate the requirement of baseline finals in orthographies such as Beaver, Sayisi Dene, and South Slavey the following stylistic set can be activated to access the relevant finals glyph.

* Please note that at this time, we have not yet found a suitable way for encoding the vertically-positioned baseline and midline
**NUNAVIK PREFERRED NG FINAL**

**NUNAVIK PREFERRED NG**
The Nunavik language region of Northern Québec prefers an alternative form of the ng final character that is commonly used in Nunavut dialect communities (ᓂ). In the Nunavut region, the form for the ng final takes the shape of a combine sequence of ᐆ + ᐅ which results in the shape ᐆ. By contrast, the Nunavik region’s communities prefer their ng to be a sequence of ᐆ + ᐅ, resulting in the shape ᐆ.

The Lava Syllabics fonts provide this alternative for the Nunavik community under OpenType stylistic set 14 (“ss14”), accessible in supporting typesetting environments.
I think about this, the younger Dane-zaa Žáágéʔ, is an Athabaskan Dulk’wah ke, meaning on trees, writing
In the Northern Ojibway dialect, there is variation in the preferred orientation of final characters throughout communities in the region, with some preferring their finals to take the a vowel position, and some preferring their finals take the i vowel orientation position.

Additionally, some Northern Ontario communities prefer an n final character (ⁿ) that is vertically positioned at the midline.

All of these finals variations are available in the glyph set for the Lava Syllabics, and available through standard encoding methods.
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Artistic Director : Louis-Philippe Verrier / ᐊᑐᕋᕉᒃ ᐃᐅᓕᖅᓯᕉᒃ
directeur · Concepteur graphique :

Proofreaders : Philippe Boivin / ᐊᑐᕋᕉᒃ ᐃᐅᓕᖅᓯᕉᒃ
directeur · Concepteur graphique :

English-French translation : Vivocomm / ᐊᑐᕋᕉᒃ ᐃᐅᓕᖅᓯᕉᒃ
directeur · Concepteur graphique :

French-English translation : Kathleen Bernard, Duggan Cayer.

Printed in Canada by Solisco
Some Plains Cree communities that prefer to use the dot y final (⁺) have a special combination sequence that is formed when final y is followed by a w dot (.), In this sequence, the dot y final (⁺) and w dot (.) transforms to a stacking of two syllabics dots, appearing as a colon-like symbol (᛬).

This symbol is not encoded in UCAS, and an alternative glyph has been provided in the Lava Syllabics fonts in order to accommodate this transformation preference for these Plains Cree communities.

We have not yet found a suitable way to encode this sequence via OpenType Layout rules, however, a custom build can be ordered for Plains Cree communities that prefer this sequence in their standard typesetting.
While the Lava Syllabics fonts focus on delivering high quality typographic solutions for the Syllabics writing system, comprehensive support has also been provided for the roman orthography needs in each language that uses the Syllabics. Through research investigations towards the standardised roman orthographies for each of the Syllabics-using Indigenous languages, the supporting Latin glyph set has been defined to cover all languages in UCAS. Additionally, the necessary glyph composition/decomposition rules have been instituted into the Syllabics fonts to accommodate the shaping requirements for all languages’ roman orthographies.
CUSTOM FONT BUILDS

As the Syllabics are a very diverse writing system, with many language communities having unique needs that the UCAS encoding does not always accommodate.

In situations where the general Lava Syllabics fonts do comfortably accommodate the needs of your community’s Syllabics orthography, it is possible to discuss a custom font build. A custom font is tailor made to work for your community’s preferences and requirements, and can be adjusted to function in a comfortable way for the desired use of the fonts.

To request a custom font build of the Typotheque Syllabics Lava typefaces, please contact: info@typotheque.com
The following texts were used throughout the examples in this document:

[AIR INUIT (ᐃᓄᐃᑦ), ᐊᑭᔾᔨᑎᑦ ᐊᓄᒃᑐᑦ / Le Nord à vol d’oiseau / The Spirit of the North. Air Inuit (ᐃᓄᐃᑦ), Fall 2019

[CREE SCHOOL BOARD], ᐃᔾᔨᒌᓖ / The Spirit of the North. Air Inuit (ᐃᓄᐃᑦ), Fall 2019


CHRISS HARVEY, various texts that were encoded by Chris Harvey in LanguageGeek were used for the showings of the fonts in this document. LanguageGeek, 2011

JANET TAMALIK MCGRAH (ᑕᒥᐅᔭ), 'text quoting elder Mariano Aupilarjuk, 2010'. In The Qaggiq Model: Toward a Theory of Inuktut Knowledge Renewal, Nunavut Arctic College, 2018

FRANCOIS PRINCE (ᓄᑦᑐᑦ), 'Carrier inscription translation'. From Neyu Professional Services, 2018
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