Sylphyo Font Folio

User's Guide













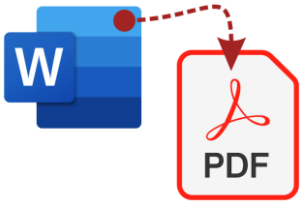






Sylphyo Font Folio – User's Guide

The Sylphyo is an electronic wind instrument designed and produced by ***Aodyo Instruments*** in France. This **Sylphyo Font Folio** is a collection of free fonts with fingering diagrams (such as  and ) for the Sylphyo electronic wind instrument.



These fonts are specifically intended for authors who are writing documents related to the Sylphyo, such as engraving sheet music and authoring educational material. These fonts are particularly useful for people who use *Microsoft Word* to publish PDF documents (such as this User's Guide).

The Sylphyo fonts are available at https://www.Flutopedia.com/sylphyo_fonts.htm. The collection includes three core typefaces:

- Sylphyo **Text**, a modern typeface designed to make body text pleasant and easy to read. I consider Sylphyo Text to be my primary go-to font for typesetting body text.
- Sylphyo **Book** – a classic "old-style" serif typeface based on an Italian Renaissance design,
- Sylphyo **Sans** – a clean, Gothic, sans-serif design focused on readability,

… and six additional typefaces:

- Sylphyo **Arte** – an alternative book typeface with a particular flair,
- Sylphyo **Curv** – a relaxed Humanist design suitable for informal body text or headings,
- Sylphyo **News** – a contemporary newsprint design based on Times New Roman,
- Sylphyo **Roma** – an old-style typeface based on the Clarendon designs of the 17th century,
- Sylphyo **Seri** – a Humanist, "semi-serif" design with tapered strokes and very modest serifs,
- `Sylphyo Type – a "faux-monospace" typeface design that evokes a typewritten feel.`

You can choose the typeface that suits your needs, and then write in a mixture of text and finger diagrams without switching fonts to access those finger diagrams. You can mix any of the typefaces in your document without the pitfalls often associated with using multiple fonts in a document. Each of the fonts has diagrams for all the fingering patterns that are available on the Sylphyo (recorder, flute, trumpet, Native American flute, etc.)



The Sylphyo fonts are and always will be free. The fonts are available to anyone at no charge and licensed under the *SIL Open Font License Version 1.1*. Sylphyo fonts may be used, studied, copied, merged, modified, and redistributed. You may download and embed these fonts in digital documents, use them in commercial projects (including mobile apps), and bundle them (with or without modification) for re-distribution under the terms of the *SIL Open Font License Version 1.1*.

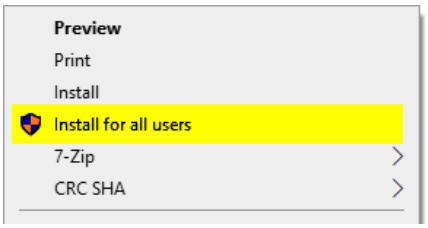
I hope you find these fonts useful!

— Clint Goss [clint@goss.com],
as of February 27, 2021, Font version **1.008**

If you wish to get started quickly, feel free to use this *Quick Start Guide* and start using the fonts. You will need to come back to this document for addition information – in particular, how to access the finger diagram characters.

Quick Start Guide – Sylphyo Font Folio

1. **Download** the release package from https://Flutopedia.com/sylphyo_fonts.htm/
2. **Unpack** the release package `.zip` file into a directory and navigate to that directory.
3. **Navigate** to the `/Fonts` subdirectory.
4. **Install** the fonts in this directory. You can install all the fonts, or as little as one typeface (I recommend Sylphyo Text or Sans).

   On Windows, I recommend:
   [Select fonts] ➟
   [Right-click] ➟
   [Install for all users] (shown above)

   On iOS/Apple systems, Right-click (or Control-click) on the font files and choose to open with *Font Book*.

   The *Sylphyo User's Guide* (`Sylphyo_UserGuide.pdf`) contains more information on installing fonts as well as how to access the finger diagrams.
5. **Restart** your system (to ensure that your editing application will see the new fonts).
6. **Edit** a document in your favorite editing application (*Microsoft Word*, *OpenOffice*, *WordPerfect*, etc.) Check that the Sylphyo fonts are shown in your application's list of available fonts.
7. **Consult** the *Sylphyo Character Map* PDF document for the codes needed to enter finger diagrams in your document.

Copyright ©2020–2021, Clinton F. Goss (clint@goss.com, www.goss.com) with Reserved Font Name Sylphyo.

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SIL OPEN FONT LICENSE Version 1.1 - 26 February 2007
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PREAMBLE
The goals of the Open Font License (OFL) are to stimulate worldwide
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The Release Packages

A Sylphyo release package is a `.ZIP` file that can be downloaded from https://Flutopedia.com/sylphyo_fonts.htm. The `.ZIP` file contains all the files of that release. A `.ZIP` file has a name such as:

`Sylphyo_v1.001_Full.zip`

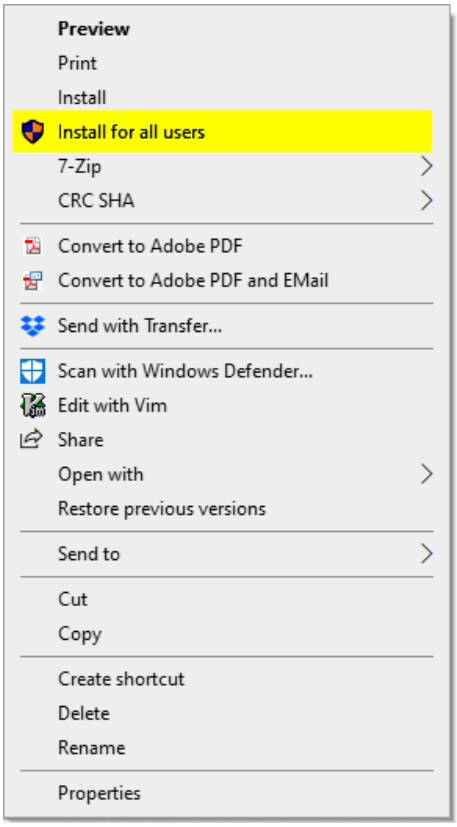
The **blue** characters indicate the version of the release package. This will match the version number embedded in every font in that release package since all fonts are built from scratch for a release. Even if a particular font has not been altered since a prior release, it will carry this new version number.

The **dark red** characters indicate the "flavor" of the package. The "Full" flavor of the Sylphyo fonts is the only flavor that is currently distributed.

Installing Fonts

There are many Web-based resources and streaming videos on how to install TrueType fonts on various systems. This section provides one way to install fonts on two of the most common systems.

Windows 10

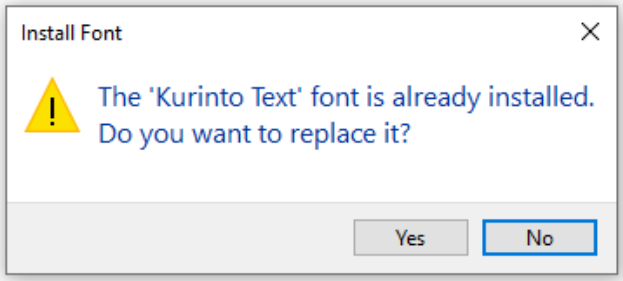


My preference is to install fonts on Windows systems using the Install for all users command. This avoids some rather daunting complexities associated with installing fonts "for the Current User".

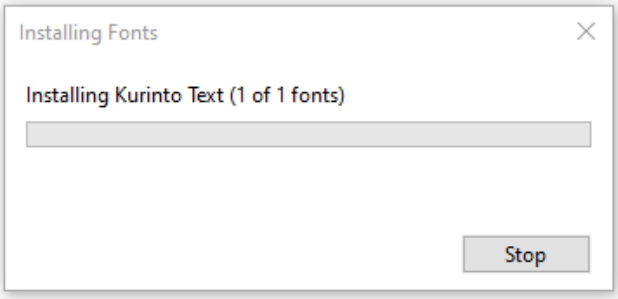
However, you will need to be logged in to an account with Administrator privileges:

1. Download the release package from www.Flutopedia.com/sylphyo_fonts.htm.
2. Unpack the release package from the `.zip` file. This can be done on most Windows systems by right-clicking on the `.zip` file you downloaded and selecting Extract All ... . If this does not work, there are many Web-based resources on how to accomplish this step. If you need an unzip utility, *7-Zip* is a good option.
3. Open Windows Explorer (the Windows "File Manager") and navigate to the directory (folder) where you unpacked the `.zip` file. Then move down to the `/Fonts` sub-directory.
4. Right click (or you may be able to press and hold) on the `XXX.ttf` font files you want to install.

5. Click/tap on Install for all users menu item. (The Install menu item would install for the current user only). See the context menu at the right.
6. If this font is already installed, you may this dialog box.[1] Click/tap on Yes to replace it:



7. The font should now install:



If you encounter issues installing on Windows or have a non-standard Windows setup, the suggestions in the Windows Font Installation section might be helpful.

[1] The exact behavior depends on the version numbers of the installed and new fonts. If you are installing a later version, the install may proceed without a warning dialog box. If you are installing the same version, you will be prompted with the warning dialog. If you are overwriting a **later** version of the font with an earlier (older) version, Windows may refuse to install the older font and you will need to explicitly uninstall the font to complete the installation. See Windows Font Installation for more details.

iOS / Mac Systems

Since I do not work on Apple systems, I am including install instructions from David J. Perry:

> Mac OS X: The easiest way is to right-click (or Control-click) on the font file(s) and choose to open with Font Book, which will typically be the default. You can also drag the font(s) from your folder into Font Book. The file will be validated and then appear in the list of fonts.
>
> There are other ways to install fonts in OS X by copying the font file to various locations. You can use this method if you know what you're doing.

Alternately, here is a page on the Apple web site on installing fonts:
https://support.apple.com/en-us/HT201749

On-Screen Display

Sylphyo fonts are optimized for print rendering.

For best on-screen rendering, it helps to have ClearType set up properly on Windows. When you bring up the ClearType interface, you can immediately see the effect of the changes you make.

To get started, click on the Windows start menu  or  in the lower left and type "ClearText in the search box. You are looking for "Adjust ClearType Text / Control Panel".

Here are some web references on setting up ClearType:

- https://www.boxaid.com/blog/how-to-fix-jagged-poor-quality-fonts-or-text-on-windows/
- https://www.winhelp.us/change-font-smoothing-in-windows.html
- https://superuser.com/questions/807951/fonts-smoothing-on-windows-how-to-disable-cleartype-but-still-get-a-smoothing
- https://superuser.com/questions/803637/how-to-disable-directwrite-in-google-chrome-37
- https://support.google.com/chrome/answer/95290?hl=en

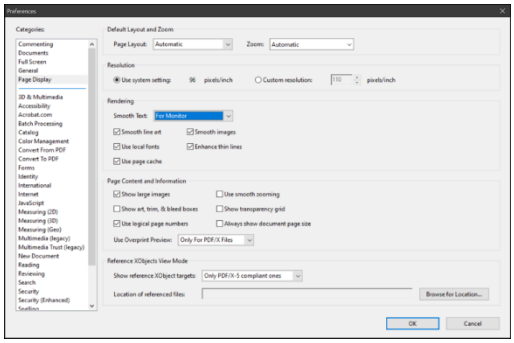
Viewing PDF Files On-Screen

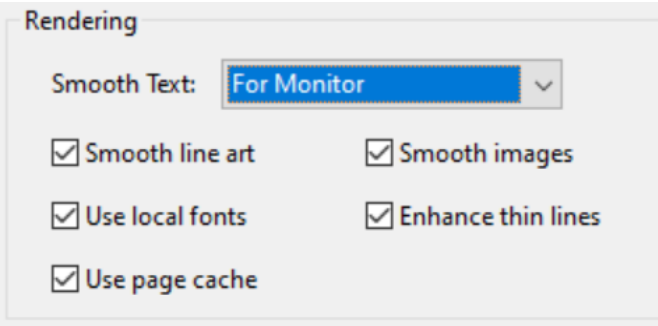
I have been able to dramatically improve the look of PDFs on computer monitors by setting a few configuration parameters. These parameters are in the application you use to view the PDF files (the "PDF viewer").

> One drawback of this situation is that the viewing experience of users of your published PDF files is dependent on **them** to set the parameters on their PDF viewer. You might consider providing them with a version of these instructions, but that is likely to help only a small fraction of your users.

It is beyond the scope of this document to provide specific advice across the huge variety of PDF viewers. However, the general approach is to find the configuration parameters in your PDF viewer, experiment with the settings, and re-open the document to see the effect. Here is one example that has worked for me:

For Adobe Acrobat Pro v9.0, open a PDF file and select Edit ➞ Preferences ➞ Page Display. The Preferences window (shown at the right) has a section for “Rendering”:





It is not always obvious what settings will improve your on-screen renderings … you may need to experiment and re-load your PDF reader to see the results.

Using Unicode

An important part of good typesetting is using the full range of Unicode characters that are available. Getting set up with an easy way to (A) locate and (B) enter Unicode characters into your documents will go a **long** way to achieving that goal.

Locating Unicode Characters

To locate Unicode characters – in particular the finger diagrmas – the main resource should be the *Sylphyo Character Map*, included as a PDF with the release package.

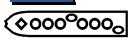
For access to general Unicode characters, you might also consider these resources:

- the *Unicode Code Charts* documents or on-line resources,
- the **`Sylphyo_CodeChart_`*`XXX`*`.pdf`** documents,
- the *BabelMap* application, or
- one of the Sylphyo map files for the specific font I am using (included in the release packages).

Text Input, or "How to Type Unicode Characters"

To get enter Unicode text, you will want to set up your keyboard for your primary writing system. If you use multiple writing systems, it helps to have a smooth way to switch your keyboard between the writing systems that you use most. In addition, you will need a tool to assist in entering Unicode characters into your document.

Microsoft Word

To enter a code point such as `U+ED02`, type E D 0 and 2. This will enter "ED02" into your document. Then hold down the Alt key and type X (this is often written as Alt + X). *Word* will convert the "ED02" into "" – the character in Sylphyo Text Hzt at the code point ED02.

There are some understandable "gotcha's" with this system. When you type Alt + X, *Word* will interpret whatever digits precede the cursor as a Unicode code point. For example, if you type the text "1ED02", the Alt + X approach will get you the code point for `U+1ED02`, which will be "□" – a box indicating a missing character. In this situation, I will typically add a space character before your code point to get the character you want and then remove the extra space after the character is converted.

Web Pages

If you are editing HTML documents for web pages, you can enter any Unicode code point using the syntax, for example, `Ӓ`. However, the number in this syntax is a decimal (base 10) version of the code point number.

So, if you wish to enter 永 – the Han Chinese kanji character for "eternal"[2] at code point U+6C38 – you can translate the hexadecimal 6C38 into decimal 27,704 and enter 永 into your HTML source code. You can do this conversion using an on-line "hex-to-decimal" conversion utility.

As of this writing, some (but not all) browsers will interpret the syntax 永 as a hexadecimal number.

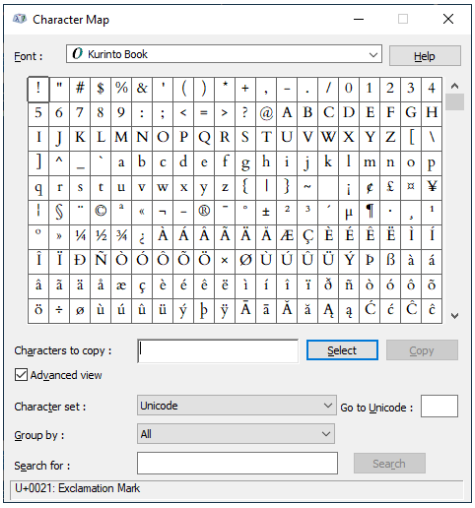
Adobe and Open Office

I do not currently use these applications, but I have been told that *Adobe InDesign* and *OpenOffice* (www.OpenOffice.org) have custom displays of the palette of glyphs in a given font. You can select the characters and enter them by clicking on the code point you want.

Windows

For other applications on *Windows*, you may need to use a separate application to produce the character so that it can be entered into your text.

Character Map is a standard Windows application to display the characters of any font. If you check the Advanced View option, you can select Unicode for the Character Set. Once you locate a character, you can copy it to the clipboard and paste it into your document.



Windows Character Map

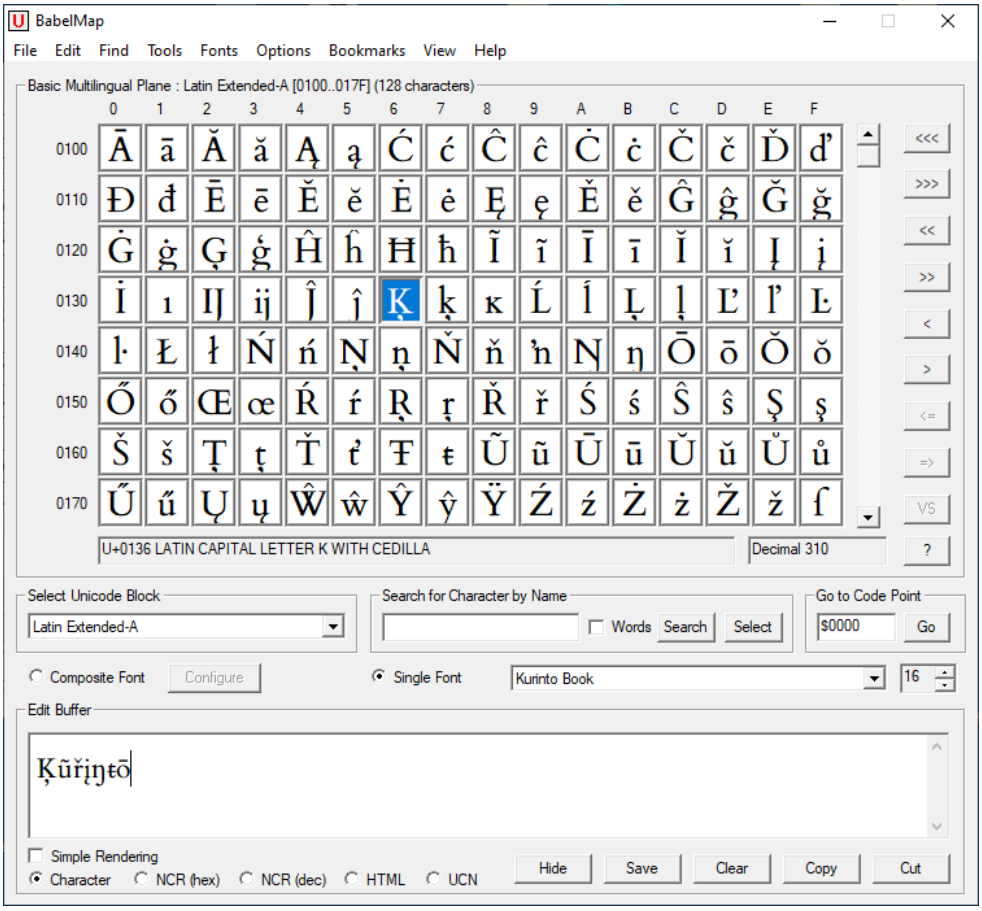
However, as of January 2020 in Windows 10, *Character Map* has numerous flaws that limit its usefulness:

- Characters are displayed in a single, tiny, fixed size.
- The application does not show any characters above U+FFFF.
- For reasons unexplained, it does not display certain characters in that range below U+FFFF.

These limitations severely limit the usefulness of *Character Map* for practical typesetting.

[2] See https://en.wiktionary.org/wiki/%E6%B0%B8.

An excellent alternative is Andrew West's *BabelMap*, freely available at



Andrew West's BabelMap

http://www.Babelstone.co.uk/. It is similar in intent to Windows *Character Map*, but has vastly more functionality, features, and support.

The *Keyman* program (https://Keyman.com/ from SIL International) is another Windows application that I have not explored, but appears to be useful. It supports over 1,000 keyboard layouts.



Linux and MacOS

I do not currently used Linux systems for font development, so I cannot offer advice. However I have heard good reports on these options:

- On Linux systems such as Ubuntu, *KMFL* (http://kmfl.sourceforge.net/) is available.
- *Ukelele* (http://scripts.sil.org/ukelele) is available for Mac OS X versions 10.2 and later.
- *XKB* (http://www.x.org/wiki/XKB) may be useful.
- The utilities *gucharmap* and *kcharselect* let you access the full Unicode range on Ubuntu systems.

About these Fonts

"With twenty-six soldiers of lead
I have conquered the world"
– James Mosley[3]

This project grew out of the intersection of:

- My need for a finger diagram font so I could easily document mappings I was developing for my Sylphyo to control various software synthesizers, samplers, sequencers, and other digital music goodies, and
- My experience developing Kurinto – a very large set of pan-Unicode fonts (see www.Kurinto.com – the image at the right was while researching historical writing systems in Myanmar).



Contemporary Myanmar and Historic Pyu writing systems at the Myanmar National Museum, Yangon, December 2018. Photo: Vera Shanov

The fonts are based on nine of the typefaces in Kurinto: **Kurinto Arte Core**, **Kurinto Book Core**, **Kurinto Curv Core**, etc. The characters (other than the finger diagrams) are derived directly from those Kurinto fonts.

Kurinto itself is composited from a wide range of Open Source fonts, involving hundreds of typeface designers. The file `Contributors.txt` included in the release package documents those source fonts, both directly from Kurinto and indirectly from the fonts that make up Kurinto.

Some Details

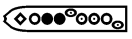
Using the Sylphyo fonts should be straightforward, but there are a few things you should note:

Private Use Area

The finger diagrams all reside in the "Private Use Area" of the fonts – an area of code points set aside for characters that do not warrant inclusion in the Unicode standard because the size of their audience is limited. This Private Use Area uses code points in the range `U+E000` to `U+F8FF`. All the finder diagrams reside in this range.

[3] James Mosley. *The Caslon foundry in 1902: selections from an album*, Matrix 13 (1993), pp. 34–42.

What the Symbols Mean

Each of the finger diagrams – eg.  – have symbols that indicate how each of the finger pads on the Sylphyo is covered:

- The triangle at the top represents the upper five thumb pads.
- The main six finger pads are represented by round circles.
- The two smaller oblong circles represent the two pads for the pinky fingers.

Each pad shows one of these symbols:

- ○ represents an "open pad", i.e. not touching the pad.
- ● represents a "closed pad", i.e. substantially covering the pad.

The next two symbols represent a "don't care". You may play it as ○ or ● and the results will be the same:

- ⊙ This version is used in cases where the pad is most conveniently played open.
- ◉ This version is used in cases where the pad is most conveniently played closed.

Here are some other symbols that are not currently in use, but may be used in the future:

- ⊗ represents a "don't care" – you may play it as ○ or ● and the results will be the same. This symbol was used through release 1.007, and has since been replaced by ⊙ and ◉.
- ◔ represents a "partially covered pad" or a "half-hole" situation. This symbol is not currently in the fonts but may be used in the future.
- ᨒ represents a trill. This symbol is not currently in the fonts but may be used in the future.
- ✚ indicates an "overblow". This symbol is not currently in the fonts but may be used in the future.

> Also note that, based on my experience on the Sylphyo, if you use a fingering pattern that is not specified for the fingering you currently have selected, the Sylphyo will play (or produce the MIDI for) the most recently played note.

Special Symbols

The Sylphyo fonts include several special symbols – here are their code points and meaning:



U+10FF08 This "NotDef" symbol indicates an undefined character. You will typically see if you make a mistake entering a code point.

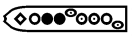
Sylphyo Font Folio Clint Goss

U+10FF00 The "Folio Identification" character.

v1.008 2021-02-27 `U+10FF01` The “Font Identification” character.

1.008 `U+10FF01` The “Font Version Number” character.

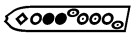
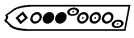
Orientation

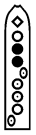
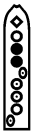
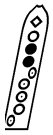
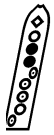
There are two types of fonts in the package: ones with vertical finger diagrams (such as) and ones with horizontal finger diagrams (such as ). The vertical finger diagrams are great for scoring music, but are too small for use in-line in text. If you boost the point size of the vertical finger diagrams, they wreak havoc with your page layout: 

The fonts with “Hzt” at the end of their name have the horizontal finger diagrams, and the others have vertical finger diagrams.

Styles

The **bold**, *italic*, and ***bold-italic*** styles of each typeface affect all the characters of the font, including the finger diagrams. For example:

- Regular: 
- **Bold:** 
- *Italic:* 
- ***Bold-Italic:*** 

… and vertically oriented: Regular:  **Bold:**  *Italic:*  ***Bold-Italic:*** 

Notice that the Bold version is only slightly bolder than the Regular. Making these symbols more bold made them too muddy to read.

Source of Information

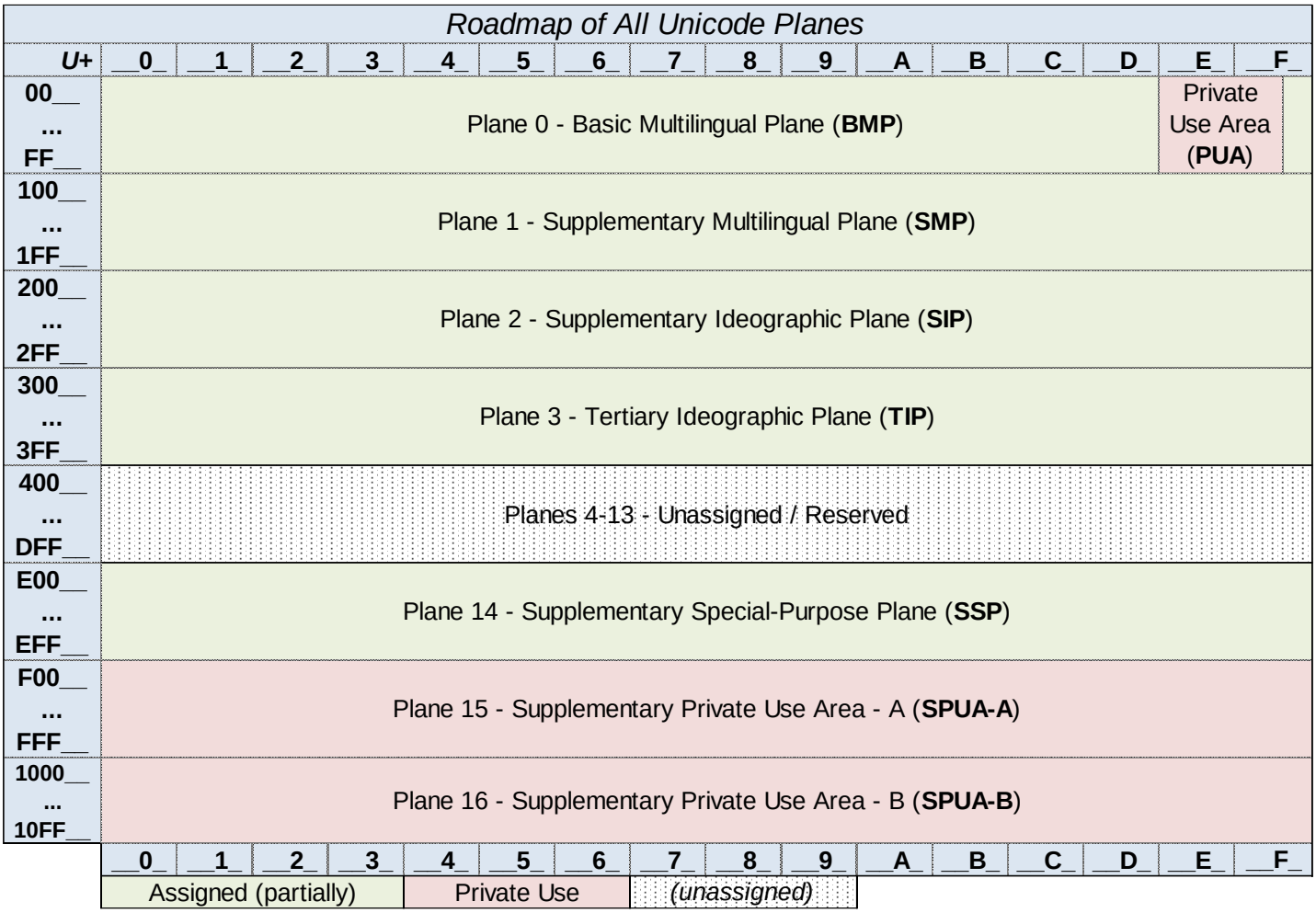
The information used in the finger diagrams comes directly from the definition files used by **Aodyo** in developing the Sylphyo. For this version of the Sylphyo fonts, the information was available for Flute, Saxophone, and Native American flute. It is my hope to be able to implement more of the fingerings in later releases.

Roadmaps

This section provides roadmaps to the blocks of Unicode code points and how they are used in Sylphyo fonts. This information is current as of Unicode version 12.1.

Unicode Planes

This first roadmap shows the overall structure of the 17 Unicode “planes” and how they are currently allocated.



The green areas contain code points assigned by *The Unicode Standard*. Not all code points in these areas are currently assigned to characters. However, those not currently assigned are reserved for future allocation.

The pink zones are set aside for “private use” by organizations and font designers.

Sylphyo Fonts – Full Roadmap

This Roadmap shows the assigned code points in each of the Sylphyo fonts:

*Roadmap of All **Core** Variant Fonts*																
U+	**__0_**	**__1_**	**__2_**	**__3_**	**__4_**	**__5_**	**__6_**	**__7_**	**__8_**	**__9_**	**__A_**	**__B_**	**__C_**	**__D_**	**__E_**	**__F_**
00__	Basic Latin (95 of 95)								Latin-1 Supplement (96 of 96)							
01__	Latin Extended-A (128 of 128)								Latin Extended-B (7 of 208)							
02__												Spacing Modifier Letters (9 of 80)				
03__	Combining Diacritical Marks (1 of 112)							Greek and Coptic (72 of 135 - all Greek)								
04__	Cyrillic (98 of 256)															
05__ **1D__**																
1E__	Latin Extended Additional (8 of 256)															
1F__																
20__	General Punctuation (50 of 111 of which 23 are WGL4)							Superscripts and Subscripts (1 of 42)			Currency Symbols (4 of 32)					
21__	Letterlike Symbols (6 of 80)					Number Forms (4 of 60)				Arrows (7 of 112)						
22__	Mathematical Symbols (17 of 256)															
23__	Miscellaneous Technical (4 of 256)															
24__																
25__	Box Drawing (40 of 128)								Blocks (8 of 32)		Geometric Shapes (15 of 96)					
26__	Miscellaneous Symbols (11 of 256)															
27__ **DF__**																
E0__ **F8__**	Private Use Area (2 of 6400)															
F9__ **FA__**																
FB__	Alphabetic Presentation Forms (2 of 58)															
FC__ **FD__**																
FE__								Arabic Presentation Forms B (1 of 141)								
FF__																Specials (5 of 5)
100__ **10FE__**																
10FF__	Font Ident	Visual Font Metrics														
	__0_	**__1_**	**__2_**	**__3_**	**__4_**	**__5_**	**__6_**	**__7_**	**__8_**	**__9_**	**__A_**	**__B_**	**__C_**	**__D_**	**__E_**	**__F_**
	All characters are WGL4				Mix of WGL4 and non-WGL4					Non-WGL4		Sylphyo			*(unused)*	

The Sylphyo fonts variants contain all the characters in the WGL4 subset plus some additional characters.

Private Use Area Characters

The finger diagrams of Sylphyo fonts are contained in the Private Use Area. This chart provides a roadmap to the fingerings and ranges that are currently allocated and that are planned for future releases:

Roadmap for the Private Use Area in the Sylphyo Fonts																
U+	**__0_**	**__1_**	**__2_**	**__3_**	**__4_**	**__5_**	**__6_**	**__7_**	**__8_**	**__9_**	**__A_**	**__B_**	**__C_**	**__D_**	**__E_**	**__F_**
E0__																256
E1__																256
E2__																256
E3__																256
E4__																256
E5__																256
E6__																256
E7__																256
E8__																256
E9__																256
EA__																256
EB__																256
EC__																256
ED__	*Utility*		Saxophone		Flute			Recorder		Clarinet			Oboe		EWI	
EE__	Nat Am. Flute (Basic)			Native Am. Flute (Extended)						Trumpet (EVI)			Hulusi		Celtic	
EF__	Oriental Clarinet			Whistle												176
F0__	WGL4		*(Reserved for Microsoft Symbol Fonts)*													
F1__																256
F2__																256
F3__																256
F4__																256
F5__																256
F6__																256
F7__																256
F8__																256
	__0_	**__1_**	**__2_**	**__3_**	**__4_**	**__5_**	**__6_**	**__7_**	**__8_**	**__9_**	**__A_**	**__B_**	**__C_**	**__D_**	**__E_**	**__F_**
	Finger Diagrams			Finger Diagrams - Planned for future releases								WGL4	*Reserved*		*(unused)*	

Licensing

Is it free?

Yes. The Sylphyo fonts are free like beer and free like liberty. Enjoy!

I want to use Sylphyo fonts in my publication – can I?

Yes. Sylphyo is released under the *SIL Open Font License Version 1.1 ("the OFL")*, which permits use in any publication, whether electronic or printed. For more answers question about using the fonts, see `FAQ-OFL.txt` or visit https://scripts.sil.org/ofl-faq_web. The text of the *OFL* is distributed in each release package in the `OFL.txt` file.

I would like to bundle Sylphyo fonts with my application – can I?

Yes. The *SIL Open Font License Version 1.1* allows bundling of the licensed fonts with applications, subject to some restrictions. This permission to bundle applies even for commercial, closed-source applications. See the `OFL.txt` and the `FAQ-OFL.txt` files.

Can I use the font on my web site?

Yes. You can create web pages that use Sylphyo fonts to display text. This works both if that font is already available on the user's system or if it is delivered via CSS directives such as `@font-face`.

According to the *SIL Open Font License Version 1.1*, you may also place the Sylphyo fonts on your server for people to download. There is further discussion of web-font issues in the `FAQ-OFL.txt` file.

Is Sylphyo going to stay unrestricted and available at no cost?

There is no intention to ever charge users for using Sylphyo and its variants. The current version is licensed under a free/open license and the intent is that future versions will be similarly unencumbered.

Can I send you money?

No, but thank you for the thought. Please consider supporting the Unicode Consortium at http://unicode.org/consortium/donations.html.

Why does the free, open-source license for Sylphyo have a copyright statement?

A central concept of the Open Source movement is how it uses existing copyright law to guarantee the free and open access to and redistribution of software. This may seem counterintuitive, since copyrights have traditionally been used to restrict the rights of access and redistribution.



Sylphyo fonts are accessible to anyone, in exchange for abiding by the terms of the *OFL*. The *OFL* uses copyright law to guarantee that no party may restrict or curtail anyone else's right to copy, use, modify, and redistribute the font

software. A party that violates the terms of the *OFL* (for example, by restricting the rights of others) loses their rights under the License, placing them in violation of copyright law, and opens the possibility of prosecution.

To further promote open collaboration and development, the guarantees of the *OFL* extend to the source code of the software.

Why isn't this software simply released into the Public Domain?

While it might appear that releasing software into the public domain would be a more noble approach, this path tends not to serve the community as well as the *OFL*.

- The concept of public domain is not universally recognized.
- The mechanism of making a public domain declaration is problematic in many situations, and even illegal in some countries.
- The authors cannot apply a warranty clause and open themselves to litigation by making the code available under a Public Domain declaration.
- Public domain places no restrictions on use. This freedom allows anyone to apply legal restrictions that prevent others (even the original authors) from using the software. Anyone may even claim authorship of the software, making the history of its development unclear. There are many notable cases of these perverse situations involving public domain content.
- Many commercial enterprises avoid using public domain content, because it opens **them** to subsequent litigation by others who have subsequently applied copyright and trademark restrictions.

For these reasons, I am using the well-established tradition of the *OFL* to promote continued, open development of Sylphyo.

Modification

I would like to modify Sylphyo to add a couple of characters I need. Can I?

Yes. Modifications are allowed, as long as you abide by the conditions of the *SIL Open Font License Version 1.1*.

Can I send you work I've done to be incorporated into Sylphyo Fonts?

Yes. See the `Fontlog.txt` file for information on becoming a contributor.

Technical

Can you help me get Sylphyo fonts working on my system?

I cannot afford to offer individual technical support. However, we do want to hear of any problems you encounter, so that I can add them to the list of bugs to fix in later releases. Our contact address is clint@goss.com. Please understand that I cannot guarantee a personal response.

Technical Details

This section has information that is intended primarily for font developers and users with more technical background.

Font Settings

This section describes how various fields are set in Sylphyo fonts. These design choices echo the settings use in the Kurinto fonts, from which Sylphyo inherits. Rationale is provided in some cases.

UnitsPerEm

All Sylphyo fonts use a `Head.UnitsPerEm` setting of 2048 (2^{11}). This was chosen based on:

- the general convention in the font design community,
- on the advice that a power of two may (still) have a performance advantage in some rendering engines, and
- to provide a reasonable level of detail when performing transformations on glyph contours (see the next section on Contour Degradation).

Name Table

Based on the SIL/NRSI recommendations for name table platforms[4], Sylphyo fonts include name table entries for platform 3 (Windows) using the UniBMP encoding. Entries that contain line breaks use the Windows standard of the two charters CR and LF (`U+000D` and `U+000A`).

Head Table

The Flags field of the head table is set so that bits 0 and 1 are on. This indicates that the baseline for all glyphs in the font is at $y = 0$ and the left side bearing point is at $x = 0$.

The modification date of each font is set to the time that the font was generated in the Kurinto pipeline. The creation date is set to Greenwich Mean Time 00:00 on the same date as the modification date.

OS/2 Table

The achVendID field is set to “Goss”, for “Goss Typography”, a registered foundry.

The Sample Text field is taken from Genesis 11:1 (*New International Version Bible*):

> Now the whole world had one language and a common speech.

[4] See https://silnrsi.github.io/FDBP/en-US/Font_Naming.html#about-name-strings-stored-in-opentype-fonts.

DSIG Table

In addition to providing digital signatures in a few fonts, this table served to flag the font as having OpenType tables in Microsoft Word 2013 and before. Fonts without this table would not be recognized by those earlier version of Word as supporting OpenType features such as ligatures, alternate forms of figures (Lining, Old-style, Proportional, Tabular), or stylistic sets, even if the font has a GSUB table.

For this reason, the *fontbakery* testing tool used by Sylphyo still flags FAIL for fonts without a DSIG table.

This shortcoming has been corrected in Microsoft Word 2016 and later. However, since Microsoft Word 2013 is still under extended support through May 2023, all Syphyo fonts provide a vestigial DSIG table to allow users of Word 2013 to access these features.

See https://github.com/googlefonts/fontbakery/issues/1845 for an extended discussion of these issues.

Font Names

Long font names can raise issues in some application, especially *Microsoft Word*. These issues are described in https://github.com/googlefonts/noto-fonts/issues/1566, which reads in part:

> Fonts with a family name that is too long cannot be selected on MS-WORD. The cause is that Name ID 1 is not unique within 31 characters. For example, typefaces that shorten "Condensed" to "Cond" etc. can be used without problems with MS-WORD. My ideal is that all font's Name ID 1 fits within 31 characters. If font name ID 1 is 32 characters or more, even if the font can be used, it is not displayed correctly.

Because of these issues, the Font Family Name (‘name’ table ID 1) are no more than 28 characters long and the Full Font Name (‘name’ table ID 4) of all Sylphyo fonts are unique even if truncated to the first 30 characters.

Range Bits

One holdover from the pre-Unicode era lives inside OpenType files in the form of the 64 Code Page Bits in the fields `OS/2.ulCodePageRange1` and `OS/2.ulCodePageRange2`. Some applications (including Microsoft Word as of February 2020) still use these bits to control font selection.

Each of the Code Page Range bits for Sylphyo fonts is set if the font maps at least 70% of the code points for that range, based on the code page mappings files provided on Unicode.org as of Unicode version 12.1 (https://www.unicode.org/Public/MAPPINGS/).

OpenType files also have a set of `OS/2.ulUnicodeRange…` bits that indicate the presence of characters in various Unicode blocks. The Unicode Range bits are set based on the presence of any mapped code point in the corresponding Unicode block.

Glyph Names

Fonts in the release packages have glyph names based on this priority list:

- The name for the glyph in the Adobe Glyph List (the "AGL"). The AGL contains specific glyph names for 586 code points specified in the `aglfn.txt` file retrieved from https://github.com/adobe-type-tools/agl-aglfn on April 10, 2019.
- For glyphs mapped to a code point, a standard name composed from the lowest mapped code point for the glyph. The standard name has the format "`uniXXXX`" for code points `U+FFFF` and below and "`uXXXXX`" for higher code points. The `XXXX` is the code point in hexidecimal.
- For unmapped glyphs, the name "`_NNNN`" where `NNNN` is the index if the glyph (often called the "glyph ID") in decimal.

Script Codes

The **`Map.txt`** in each release package provides a roster of the writing systems (scripts) that make up each Sylphyo font. It also lists which specific source fonts contributed each of those writing systems.

Each writing system is identified by a script code. These script codes are specific to Sylphyo and, while they are related to the script codes used by Unicode, there are significant differences. Sylphyo adds script codes to handle the division of Unicode scripts along block boundaries, the subset of Core Character Set, divisions across Sylphyo font variants, allocation of non-Unicode blocks for auxiliary writing systems, and for convenience when composing fonts from various sources.

The script codes used in Sylphyo are listed in the **`Scripts.txt`** file in each release package.

Sylphyo script codes are organized into:

Unicode Scripts and Sub-scripts

Unicode Script: A script defined in Unicode. Note that many of these scripts have been segmented so that some (or all) of the characters have been relocated to other scripts.

Sub-script: A script composed of characters extracted from Unicode scripts for the purposed described above.

Common Sub-script: A sub-script made up of characters from the **`Zyyy`** (Common) and **`Zinh`** (Inherited) Unicode scripts.

WGL4 Sub-script: A sub-script containing characters from the *Windows Glyph List 4* character set. These characters are part of the Core Character Set that are present in all Core variant fonts.

NRSI Sub-script: A sub-script containing characters from the core set recommended by NRSI. These characters are part of the Core Character Set that are present in all Core variant fonts.

Google Sub-script: A sub-script containing characters from the core set recommended by Google. These characters are part of the Core Character Set that are present in all Core variant fonts.

Non-Unicode Scripts

Sylphyo PUA Script: Other blocks of code points allocated in the Private Use Area in Sylphyo fonts.

The Pipeline

Versions of these Sylphyo fonts are constructed in a pipeline that is controlled by a set of perl scripts. As of February 2021, a full build of the Sylphyo fonts take about 27 minutes on a 10-core, Intel Core i9-9900X processor at 3.5GHz.

Very generally, the pipeline involves these technologies:



Microsoft Excel workbooks, for tables of information relating to Unicode (characters, glyph names, blocks, scripts), settings to be applied (e.g. the static contents of TrueType information tables), license management, and general control of the rest of the pipeline (e.g. the sequence of subset, merge, and transformations to be performed. This document contains some worksheets that are linked to those `.xlsx` documents.



Perl tools. The majority of work in running the pipeline, transforming fonts, producing releases, rights-management, database management, and various housekeeping functions is done by custom perl scripts I developed, using the Perl interpreter packaged by ActiveState. These tools are based on the open source FontUtils (`Font::TTF`) library developed initially by SIL International (https://scripts.sil.org/FontUtils) and augmented by many contributors.



Python tools. Some use is made of the Python-based FontTools package (https://github.com/fonttools/fonttools), in particular the *merge* utility developed by Behdad Esfahbod and Roozbeh Pournader.



FontCreator. My main tool for font authoring and examination is the commercial FontCreator Pro application by High-Logic, developed by Erwin Denissen (https://www.high-logic.com/).



Microsoft Word.
Used for general documentation, development of the Specimen Book, and testing.

Corel Draw.
Used for authoring document that require extensive formatting, diagrams, and font control that is beyond the scope of *Word*.

FreeType. An open source software library to render outline fonts on raster displays. This is used by Font Validator. http://freetype.org/.

Font Validator. An open-source tool sponsored by Microsoft for verifying glyph consistency within a font. See https://github.com/microsoft/Font-Validator.

Font Bakery. An open-source tool sponsored by Google for reporting various consistency checks on fonts. See https://github.com/googlefonts/fontbakery.

> While the Sylphyo Font Folio is an open-source project in the sense that derivative work can be developed based on the fonts, I have not seen a clear way to release the font-production pipeline itself.
>
> I believe that the complexity of the pipeline structure is too varied for me to reliably document (and support) how other developers might re-create the pipeline environment on their own systems with a likelihood of success.

Windows Font Installation

The font installation instructions for Windows 10 will work in most cases. However, users who repeatedly install and uninstall fonts may encounter frustrating situations:

- Fonts files are loaded into `/Windows/Fonts`, but do not show up in an application's font list.
- Font installation says that a font is already installed when it is not, and clicking `Yes` to replace the font fails to install the font.
- You find many duplicated fonts in `/Windows/Fonts` with extensions such as `_0`, `_1`, …
- *Windows* shows only some of the installed fonts in a typeface.
- And (**particularly** frustrating) your application winds up accessing the **wrong version** of an installed font.

There are many Web-based sources of information on these situations which provide more detailed and timely information than I can cover in this document. However, here are some basic things to note:

- Current versions of *Windows* use a completely different directory structure for fonts that are installed for a single user versus for all users.
- When fonts are installed, *Windows* copies the font file into a system folder and also updates a list of available fonts in the *Windows* registry. Many bizarre issues arise if the list of fonts in the registry gets out of step with the font files in the system folder.
- Windows does not delete superseded fonts – it renames the font files. It can also restore previously "replaced" fonts, making the job of actually deleting a font difficult.
- Fonts listed in the registry with incorrect information (such as referring to a `.ttf` font when the actual file name is `.otf`) can render the font inaccessible.

Here are some pointers to resources that I have come across:

- *"Fonts Seem to Install, but Don't"* - https://forums.adobe.com/thread/951333
- *How to Delete Fonts using the Windows Registry* – https://www.maketecheasier.com/delete-fonts-using-windows-registry/
- *What is the purpose of the Fonts key in the Registry?* – https://superuser.com/questions/813039/what-is-the-purpose-of-the-fonts-key-in-the-registry

In addition, the font installation instructions for Windows 10 will **only** work if the default viewer for fonts is set to *Windows Font Viewer*. If the default view has been changed to another application, the context menu items Install and Install for all users will not be available.

Testing

Testing is done using a set of Microsoft Word document and a set of automated font testing tools.

Testing Documents

The testing documents include this User Guide and related user documentation, the array of Specimen Book documents, and the Publication Sample documents included in the `/Misc` directory of the distribution package.

Testing Tools

All fonts are tested using these tools. Public versions of Sylphyo are not released until all tests are passed.

- **FontValidator.** See https://github.com/HinTak/Font-Validator/
- **Font Bakery**. The Google open source fontbakery toole is executed with -check-universal. See https://github.com/googlefonts/fontbakery
- **kval (kmet -v)** – Kurinto's own testing software, which primarily applies checks against the recommendations in the *Character Design Standards* section of Microsoft Topography's *OpenType Font Development* standards. See https://docs.microsoft.com/en-us/typography/develop/character-design-standards/.

- **kismet** – A tool specific to Kurinto that tests for inconsistencies in metric compatible fonts against the model fonts.

References

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[PRC-Edu 2013] Ministry of Education of the People's Republic of China, 通用规范汉字表 «Table of General Standard Chinese Characters», published June 18, 2013, http://www.gov.cn/gzdt/att/att/site1/20130819/tygfhzb.pdf. See also https://en.wikipedia.org/wiki/Table_of_General_Standard_Chinese_Characters.

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[Unicode 2019] The Unicode Consortium, *The Unicode® Standard, Version 12.0 – Core Specification*, March 2019, 1018 + xxviii pages, ISBN 978-1-936213-22-1, http://www.unicode.org/versions/Unicode12.0.0/.

Appendix 1 – The Core Character Set

Each of the Sylphyo fonts has a set of 810 characters from the Core Character Set. The set of characters is a union of character sets from these sources:

- The WGL4 character set, retrieved from https://en.wikipedia.org/wiki/Windows Glyph List 4 on January 22, 2020. WGL4 was designed by Microsoft to cover ranges of characters for Eastern Europe, Cyrillic, ANSI, Greek, and Turkish.[5]
- *Recommended Characters for Non-Roman Fonts*, by NRSI (the Non-Roman Script Initiative) of SIL International, retrieved from https://scriptsource.org/entry/gg5wm9hhd3 on February 28, 2020. See also subsequent comments and updates on the cited web page that modify the recommendations of the posted document.
- The Core Latin glyph set from *Google Fonts 2016 Glyph Sets*, retrieved from https://github.com/googlefonts/gftools/ on February 19, 2020.
- A few additional characters in the BMP that I consider useful.
- Two ligatures in the Private Use Area (PUA) that have become widely used standards. See Note 4 below.
- A block of additional characters in the Supplementary Private Use Area-B that provide a range of capabilities. See Font Identification and Visual Font Metrics for a description of these characters.

Note that characters from the Unicode IPA Extensions block are not included in the Core character set. This is based on the SIL / NRSI recommendation: Since the IPA Extensions block is designed for linguistic phonetics, individual characters should not be included in a core font – the entire block should be sourced from a single font so that the characters work together.

The core character set supports these languages: **Latin**: Afrikaans, Albanian, Alsatian, Arumanian, Asturian, Basque, Bosnian, Breton, Catalan, Cebuano, Chichewa, Cornish, Corsican, Croatian, Czech, Danish, Dutch, English, Esperanto, Estonian, Faroese, Filipino, Finnish, French, Frisian, Friulian, Gaelic, Gagauz (Latin), Galician, German, Greenlandic, Hungarian, Icelandic, Indonesian, Irish, Italian, Karelian, Ladin, Latin (Lingua Latina), Latvian, Lithuanian, Luba, Maltese, Moldavian (Latin), Norwegian, Occitan, Polish, Portuguese, Rheto-Romance, Romanian, Sámi (Lule), Sámi (Northern), Sámi (Southern), Serbian, Slovak, Slovenian, Sorbian, Spanish, Swahili, Swedish, Turkish, Turkmen (Latin), Vepsian, Welsh, Wolof, Zulu. **Cyrillic**: Agul, Avar, Balkar, Belarusian, Bulgarian, Chechen, Erzya, Gagauz, Ingush, Karachay, Khvarshi, Komi, Komi-Permyak, Lezgian, Macedonian, Moldavian, Nenets Tundra, Ossetian, Russian, Rutul, Serbian, Ukrainian. **Greek**.

The roadmap charts on the next four pages identify each character in the core font. Except where noted, characters can be cut from these charts and pasted into your document.

[5] Windows code pages 1250 (Central European), 1251 (Cyrillic), 1252 (Western European), 1253 (Greek), 1254 (Turkish), as well the MS-DOS glyphs from code page 437. WGL4 is equivalent to the Win95 character set.

*Character Roadmap of All **Core** Variant Fonts*

U+	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Unicode Block
002_	SP	!	"	#	$	%	&	'	(	)	*	+	,	-	.	/	Basic Latin
003_	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?	
004_	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
005_	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_	
006_	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	
007_	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~		95
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
00A_	NB SP	¡	¢	£	¤	¥	¦	§	¨	©	ª	«	¬	SHY	®	¯	Latin-1 Supplement
00B_	°	±	²	³	´	µ	¶	·	¸	¹	º	»	¼	½	¾	¿	
00C_	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï	
00D_	Đ	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß	
00E_	à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	
00F_	ð	ñ	ò	ó	ô	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ	96
010_	Ā	ā	Ă	ă	Ą	ą	Ć	ć	Ĉ	ĉ	Ċ	ċ	Č	č	Ď	ď	Latin Extended-A
011_	Đ	đ	Ē	ē	Ĕ	ĕ	Ė	ė	Ę	ę	Ě	ě	Ĝ	ĝ	Ğ	ğ	
012_	Ġ	ġ	Ģ	ģ	Ĥ	ĥ	Ħ	ħ	Ĩ	ĩ	Ī	ī	Ĭ	ĭ	Į	į	
013_	İ	ı	IJ	ij	Ĵ	ĵ	Ķ	ķ	ĸ	Ĺ	ĺ	Ļ	ļ	Ľ	ľ	Ŀ	
014_	ŀ	Ł	ł	Ń	ń	Ņ	ņ	Ň	ň	ʼn	Ŋ	ŋ	Ō	ō	Ŏ	ŏ	
015_	Ő	ő	Œ	œ	Ŕ	ŕ	Ŗ	ŗ	Ř	ř	Ś	ś	Ŝ	ŝ	Ş	ş	
016_	Š	š	Ţ	ţ	Ť	ť	Ŧ	ŧ	Ũ	ũ	Ū	ū	Ŭ	ŭ	Ů	ů	
017_	Ű	ű	Ų	ų	Ŵ	ŵ	Ŷ	ŷ	Ÿ	Ź	ź	Ż	ż	Ž	ž	ſ	128
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
019_			ƒ														Latin Extended-B
01F_											Ǻ	ǻ	Ǽ	ǽ	Ǿ	ǿ	7
02B_												ʻ	ʼ				Spacing Modifier Letters
02C_							ˆ	ˇ		˗							
02D_	˸								˘	˙	˚	˛	˜	˝			12
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

A — White = core characters. You can usually cut these characters and paste them into your document.

space — Blue indicates a special spacing or separator character.

= character not included

*Character Roadmap of All **Core** Variant Fonts - page 2*

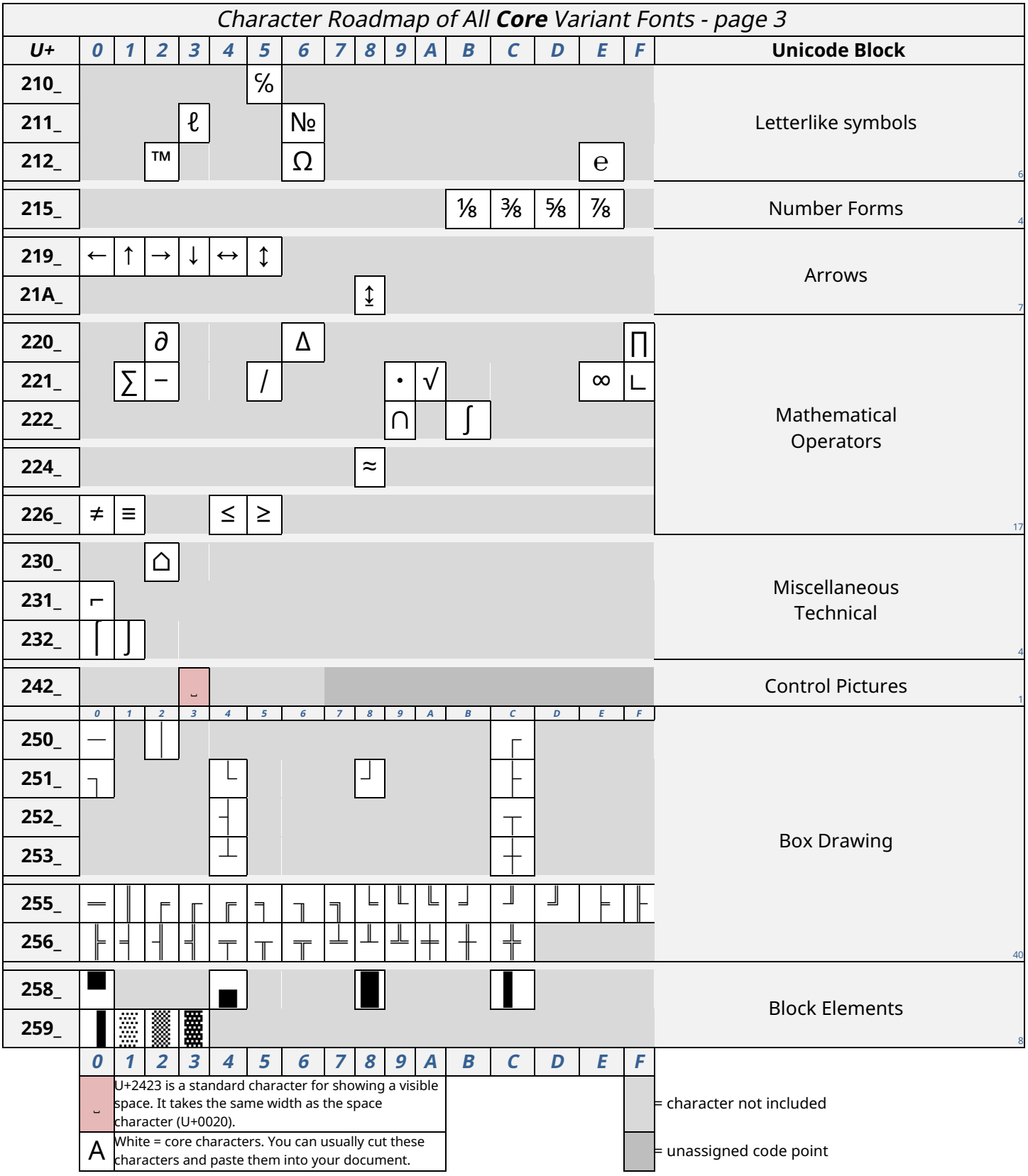
U+	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Unicode Block
034_																CGJ ◌	Comb. Diacritical Marks 1
038_					’	‟	Ά	·	Έ	Ή	Ί		Ό		Ύ	Ώ	Greek and Coptic 72
039_	ΐ	Α	Β	Γ	Δ	Ε	Ζ	Η	Θ	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	
03A_	Π	Ρ		Σ	Τ	Υ	Φ	Χ	Ψ	Ω	Ϊ	Ϋ	ά	έ	ή	ί	
03B_	ΰ	α	β	γ	δ	ε	ζ	η	θ	ι	κ	λ	μ	ν	ξ	ο	
03C_	π	ρ	ς	σ	τ	υ	φ	χ	ψ	ω	ϊ	ϋ	ό	ύ	ώ		
040_	È	Ë	Ђ	Ѓ	Є	S	I	Ї	J	Љ	Њ	Ћ	Ќ	Ѝ	Ў	Џ	Cyrillic 98
041_	А	Б	В	Г	Д	Е	Ж	З	И	Й	К	Л	М	Н	О	П	
042_	Р	С	Т	У	Ф	Х	Ц	Ч	Ш	Щ	Ъ	Ы	Ь	Э	Ю	Я	
043_	а	б	в	г	д	е	ж	з	и	й	к	л	м	н	о	п	
044_	р	с	т	у	ф	х	ц	ч	ш	щ	ъ	ы	ь	э	ю	я	
045_	è	ë	ђ	ѓ	є	s	i	ї	j	љ	њ	ћ	ќ	ѝ	ў	џ	
049_	Ґ	ґ															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1E8_	Ẁ	ẁ	Ẃ	ẃ	Ẅ	ẅ											Latin Extended Additional 8
1EF_			Ỳ	ỳ													
200_	NQ SP	MQ SP	EN SP	EM SP	3/M SP	4/M SP	6/M SP	F SP	P SP	TH SP	H SP	ZW SP	ZW NJ	ZW J	LRM	RLM	General Punctuation (note 1) 67
201_	‐	‑	‒	–	—	―		‗	‘	’	‚	‛	“	”	„		
202_	†	‡	•				…	·	L SEP	P SEP	LRE	RLE	PDF	LRO	RLO	NNB SP	
203_	‰		′	″						‹	›		‼		‾		
204_					⁄												
205_																MM SP	
206_	WJ	ƒ()	×	,	+		LRI	RLI	FSI	PDI	I SS	A SS	I AFS	A AFS	NA DS	NO DS	
207_					4											n	Superscripts & Subscripts 2
20A_				₣	₤			₧					€				Currency Symbols 4
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

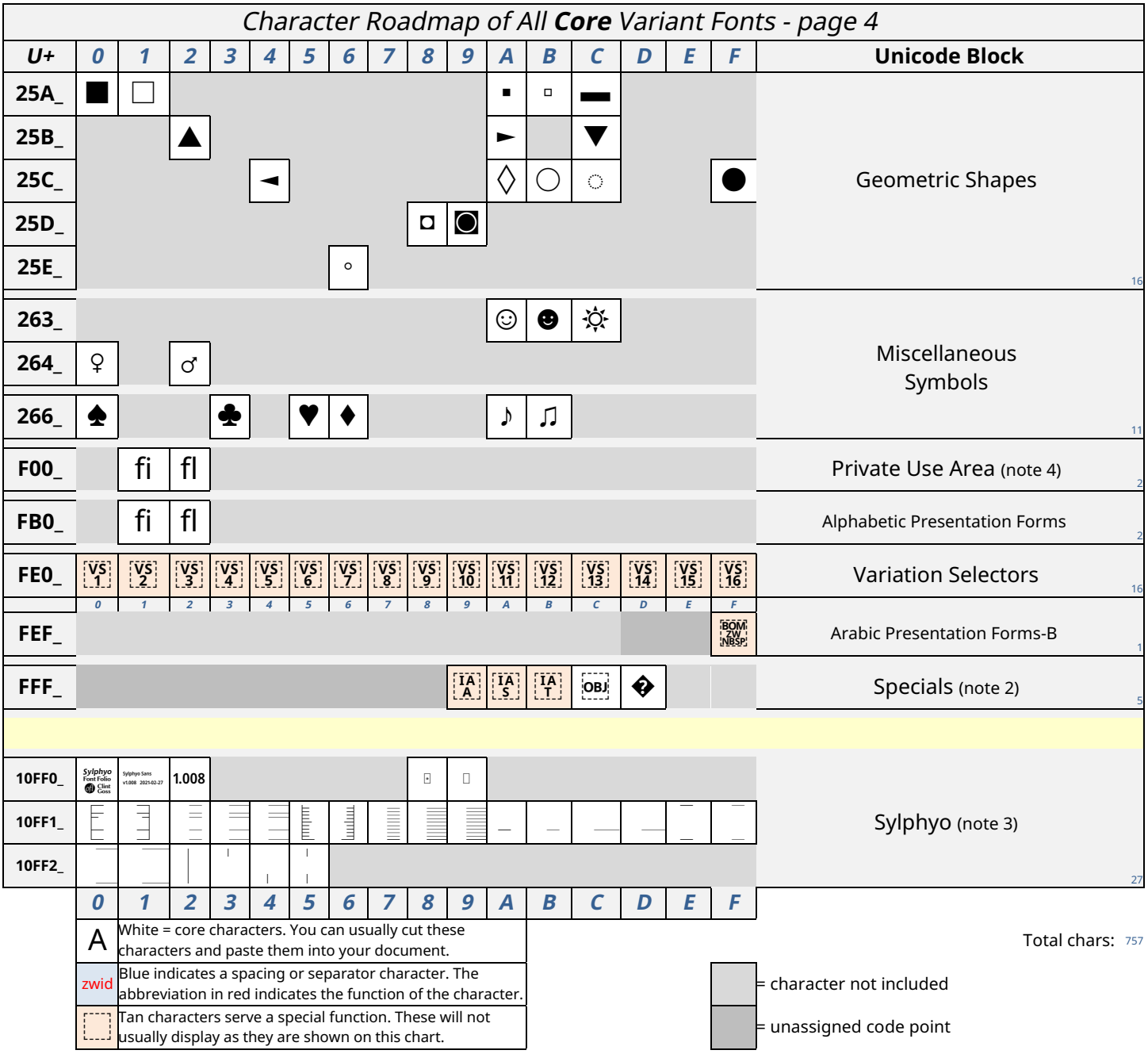
A	White = core characters. You can usually cut these characters and paste them into your document.
space	Blue indicates a spacing or separator char. The abbrev. in red indicates the function of the char. See below.
◌	Tan characters serve a special function. These will not usually display as they are shown on this chart.

= character not included

= unassigned code point

Note 1: The 17 spacing characters are: En Quad, Em Quad, En Space, Em Space, Three-per-Em Space, Four-per-Em Space, Six-per-Em Space, Figure Space, Punctuation Space, Thin Space, Hair Space, Zero Width Space, Line Separator, Paragraph Separator, Narrow No-Break Space, Medium Mathematical Space, and Word Joiner.


Character Roadmap of All Core Variant Fonts - page 3
U+
0 1 2 3 4 5 6 7 8 9 A B C D E F
Unicode Block
210_
211_
212_
Letterlike symbols
215_
Number Forms
219_
21A_
Arrows
220_
221_
222_
Mathematical Operators
224_
226_
230_
231_
232_
Miscellaneous Technical
242_
Control Pictures
250_
251_
252_
253_
Box Drawing
255_
256_
258_
259_
Block Elements
U+2423 is a standard character for showing a visible space. It takes the same width as the space character (U+0020).
White = core characters. You can usually cut these characters and paste them into your document.
= character not included
= unassigned code point



Note 2: The three spacing characters are the InterLinear Anntoation Anchor, Separator, and Terminator characters used internally for Japanese Ruby (furigana).

Note 3: The Sylphyo block provides characters for font identification, visual metrics, and access to characters that would otherwise not be visible since they serve special functions.

Note 4: The Private Use Area (PUA) is generally not used for standard characters. However, the two ligatures at U+F001 and U+F002 – copies of the ligatures at U+FB01 and U+FB02 – have become so widely used in the design community that they have become a de-facto standard. It has been commented that "*Populating the fonts with different glyphs on these positions is support suicide and will make the fonts useless to a professional design community.*"[6] For these reason, I have included them in the Core Character Set.

[6] Comment by Bruno Maag on October 1, 2010. See https://bugs.launchpad.net/ubuntu-font-family/+bug/652154, retrieved April 30, 2020. See also https://scripts.sil.org/PUACharsInMSSotware.