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Dai Banna SIL Fonts

User Guide

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Introduction

Dai Banna SIL is a Unicode font package for rendering New Tai Lue (Xishuangbanna Dai) characters.[1] Apart from a few new characters and Chinese punctuation marks, the design is the same as its predecessor, SIL Dai Banna Fonts. Two font families, differing only in weight, allow for a wide range of uses.

Dai Banna SIL Light

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Dai Banna SIL Book

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The New Tai Lue script is used by approximately 300,000 people who speak the Xishuangbanna Dai language in Yunnan, China. It is a simplification of the Tai Tham (Old Tai Lue) script as used for this language for hundreds of years.

We particularly thank the Dai News Department of Xishuangbanna Daily for valuable advice during the development of this Unicode font package. *Xishuangbanna Daily*, established since 1957, is the largest newspaper company in Yunnan, China that publishes in the New Tai Lue script.

We are also grateful for the assistance of the Research Centre for the Minority Languages of China in developing the original, non-Unicode font package (SIL Dai Banna). The Research Centre for the Minority Languages of China is part of the Institute of Ethnology and Anthropology, Chinese Academy of Social Sciences located in Beijing, China.

[1] The New Tai Lue block was first added to Unicode 4.1 and subsequently amended up through Unicode 5.2. See http://www.unicode.org/charts/PDF/U1980.pdf for the latest code chart.

Supported Characters

These fonts include a complete set of New Tai Lue consonants, vowels, tones and digits, along with punctuation and other useful symbols. A basic set of Latin glyphs, including Arabic numerals, is also provided. Chinese punctuation used in New Tai Lue texts are included as well. The following lists all the glyphs in the package. Unicode scalar values are given in parentheses after the block names.

New Tai Lue (U+1980..19DF)

Consonants	ᦀᦁᦂᦃᦄᦅᦆᦇᦈᦉᦊᦋᦌᦍᦎᦏᦐᦑᦒᦓᦔᦕᦖᦗᦘᦙᦚᦛᦜᦝᦞᦟᦠᦡᦢᦣᦤᦥᦦᦧᦨᦩᦪᦫ᦬᦭᦮᦯ᦰᦱᦲᦳᦴᦵᦶ
Vowel Signs	ᦷᦸᦹᦺᦻᦼᦽᦾᦿᧀᧁᧂᧃᧄᧅᧆᧇᧈᧉ
Final Consonants	᧊᧋᧌᧍᧎᧏᧐᧑᧒
Tone Marks	᧓᧔
Digits	᧐᧑᧒᧓᧔᧕᧖᧗᧘᧙
Various Signs	᧞᧟

Basic Latin (U+0020..007E)

```
 !"#$%&'()*+,-./0123456789:;<=>?@
ABCDEFGHIJKLMNOPQRSTUVWXYZ
[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
```

Latin-1 Supplement (U+00A0, 00A4, 00AC, 00AD, 00B0, 00B6, 00B7)

¤¬°¶·

General Punctuation (U+2009, 200B, 2013, 2014, 2018, 2019, 201C, 201D, 2020..2022, 2026, 2039, 203A, 2060)

-–—‘’“”†‡•…‹›

Geometric Shapes (U+25CC)

◌

This character is included for use with keyboarding the four reordrant vowels. See Features and Requirements for more information.

CJK Symbols and Punctuation (U+3000..3002, 3008..300B)

、。〈〉《》

Halfwidth and Fullwidth Forms (U+FF01, FF08, FF09, FF0C, FF0E, FF1A, FF1B, FF1F)

！（），．：；？

Features and Requirements

The Dai Banna SIL fonts are encoded in **Unicode** and generated in the **TrueType** font format. As a minimum, they require operating systems that support both TrueType and Unicode. These include Microsoft Windows® 9x and greater, Mac OS version 9.0 and later, and some implementations of Unix / Linux. (TrueType font support on Unix and Linux may depend upon the particular applications in use.)

The fonts have built-in smart **Graphite** code to control reordering and line breaking. Graphite is a smart font technology capable of supporting complex script behaviours. For the New Tai Lue script, Graphite enables the visual reordering of four vowels to the left of the base consonant:

U+19B5	ᦵ◌	NEW TAI LUE VOWEL SIGN E
U+19B6	ᦶ◌	NEW TAI LUE VOWEL SIGN AE
U+19B7	ᦷ◌	NEW TAI LUE VOWEL SIGN O
U+19BA	ᦺ◌	NEW TAI LUE VOWEL SIGN AY

Visual reordering is required to display them properly in relation to the base consonant because, according to the Unicode Standard, the New Tai Lue script is encoded after a logical ordering, i.e., consonants are always stored before vowels. Without visual reordering, the above four vowels will be displayed after the base consonant, which is incorrect according to standard usage of the script.

Graphite also allows smart line breaking that limits break opportunities to between syllables only. This is useful because intersyllabic space is optional in New Tai Lue text, and without space marking syllable boundaries, standard applications will just break the line whenever it is full, likely splitting up a syllable, which is undesirable as per standard script usage.

To correctly render a run of text with reordrant vowels and no intersyllabic space, you must be using applications and/or operating systems that provide an adequate level of support for Graphite. Tested applications / operating systems which make use of the Graphite capabilities of the fonts include:

SIL WorldPad 2.4 & 2.8 (Windows)

OpenOffice Writer 3.2.1 (cross-platform)

gedit 2.30.3 (Ubuntu Linux with pango-graphite 0.9.3-0.1)

More information on Graphite and related applications can be found at http://scripts.sil.org/RenderingGraphite.

Besides Graphite, the fonts contain support for another advanced font technology, **OpenType**. To render New Tai Lue text correctly using OpenType, however, a New Tai Lue shaper that carries reordering and line-breaking information is also required. Microsoft Windows 7 Ultimate and Microsoft Office Professional Plus 2010 each comes with an OpenType shaper (*Uniscribe*) capable of reordering New Tai Lue vowels correctly, but neither can do smart line breaking. It is not known whether more capable OpenType shapers are available yet.

Sample Text

The following script sample, also available in plain text format (sample.txt), is taken from a traditional long poem.[2] Notice how vowels are reordered and lines broken:

ᨣᩋᨦᩮᩬᨦᨾᨿᨾᩮᩬᨧᩋᨧᨾᨾᨿᨾᩋᨦᩋᩁᨾᨾᩮᩋᩬ

Licence

SIL International (SIL) is an organisation of linguists dedicated to the study and promotion of the thousands of languages around the world.

As a service to the general academic community, we are happy to make this package available at no charge. You may (and are encouraged to) share this package with your friends and co-workers, but must comply with the terms set forth in the *SIL Open Font License*[3] (OFL.txt), under which Dai Banna SIL is released.

[3] http://scripts.sil.org/OFL

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Installation

The Dai Banna SIL font package includes a set of font files and font documentation (DaiBannaSIL.pdf). These will have already been installed through the .exe or .deb installers. If you are reading this file from a .zip download instead, please read on.

Note: No keyboarding component is included. If you want to use the font to type New Tai Lue characters, then you will need a separate keyboard manager.

Microsoft Windows

Either copy the extracted font files (DBSIL*.ttf) into the system Fonts folder (usually `C:\Windows\Fonts\`) or install via the Fonts Control Panel:

1. Go to Start Menu | Control Panel | Fonts | File | Install New Font...
2. Select the drive and folder where the extracted font files are. You should now see eight "Dai Banna SIL" fonts listed in the "List of fonts" scroll box.
3. Highlight all of them in the scroll box, or click "Select All" if there are no other fonts in that folder.
4. Check the "Copy fonts to Fonts folder" box.
5. Click OK.

See http://support.microsoft.com/kb/314960 for more information.

Macintosh

Copy the extracted font files (DBSIL*.ttf) into one of the several predefined Fonts folder (e.g., `/Library/Fonts/`). See http://support.apple.com/kb/HT2435 for more information.

Linux

Copy the extracted font files (DBSIL*.ttf) into `~/.fonts` for personal installation or into `/usr/share/fonts/` for system-wide installation. Then type `fc-cache -fv` to update the system font cache.

Note: Certain applications may not see the new fonts immediately. You may have to quit and restart the application for the fonts to become available.

More information on general font installation is available on our website at http://scripts.sil.org/DecompressUtil.

Known Issues

Encoding: Garbage / question marks / initial square displayed

When a plain text file encoded in UTF-8 is opened with Microsoft Works Spreadsheet 9.0 on Windows 7 Ultimate, all New Tai Lue characters turn into question marks. This is **not** a defect of our fonts but the application's lack of Unicode support despite the smart operating system.

When the UTF-8 file is opened with Microsoft Works Word Processor 9.0, New Tai Lue characters turn into garbage characters. Copying and pasting the text into the application instead will display New Tai Lue glyphs. This is a defect of the application and **not** our font package.

When the file is opened with one of the following applications and displayed in a Dai Banna SIL font, a square/rectangle is displayed as the first character followed by the text proper:

LibreOffice Calc 3.3.1 (cross platform)

OpenOffice Calc 3.2.1 & 3.3 (cross platform)

gedit 2.30.3 on Ubuntu Linux 10.10

This is **not** a defect of our fonts but a failure of the respective applications to recognise the supposedly non-graphic BOM (Byte Order Mark) at the start of a UTF-8 file. Saving the original text file in "Unicode" (in Notepad) or "UTF-8 without BOM" (in Notepad++) format can avoid this problem.

Reordering: Reordering missing / messed up on delete/undo - Windows

Microsoft Works Word Processor 9.0 fails to perform any reordering at all when rendering New Tai Lue text. Furthermore, a dotted circle is displayed after each reordrant vowel, overlapping with the next two characters.

In Microsoft Word 2010, when the base consonant of a reordrant vowel is deleted (via <Delete> or <Backspace>), a dotted circle appears after the vowel as expected, but then up to four subsequent characters overlap one another and/or with the circle such that they become illegible. Undoing does not restore the situation at all: the consonant gets *restored* to **before** rather than after the vowel, the dotted circle stays there, and overlapping still remains. A similar situation is when the vowel is deleted via <Delete> and then undone, though in this case overlapping appears only after undoing and is limited to the dotted circle overlapping with the next two characters.

In Microsoft Excel 2010, when a reordrant vowel is deleted (via <Delete> or <Backspace>) as the **first** edit action after entering a cell (via double-clicking or pressing <F2>), everything works fine. As a subsequent edit, however, the **consonant** gets visually deleted instead and only after exiting the cell (via clicking away or pressing <Enter>) will it reappear in place of the logically deleted vowel.

These are defects of the applications in properly rendering text around reordrant vowels and are **not** related to our font package.

Cursor tracking: Confusing cursor positions around reordrant vowels

Except SIL Worldpad 2.4 & 2.8, all applications/operating systems we tested cause visual confusion in cursor positions around a reordrant vowel and its base consonant: a cursor visually before the vowel actually lies logically before the **consonant**, and a cursor visually after the consonant, logically after the **vowel** (or **between** the consonant and the vowel as described below). At these positions, therefore, pressing <Delete> or <Backspace> may not remove what the user intuitively expects.

In Microsoft Wordpad 6.1 on Windows 7 Ultimate, the visual position after the base consonant can also represent the logical position **between** the consonant and the vowel if the cursor was advanced from before the vowel via <right-arrow>. Pressing <right-arrow> once more, however, does not further advance the cursor, though the **logical** position is now after the vowel as if the cursor had advanced past an invisible character. Since one visual position corresponds to two logical positions, confusion may arise in editing.

In Microsoft Word & Excel 2010, the cursor advances from before the vowel to the middle of the consonant if the former is narrow and the latter is wide (e.g., U+1982, U+1984, U+1989). If the reverse is true, then it advances to the middle of the vowel (U+19B6). These suggest Word & Excel just move the cursor by the advance width of the consonant, which logically comes first, without visually tracking where it is.

All these visual confusions are limitations of the applications and/or operating system and **not** a defect of our font package. Until better handling is available in a newer version, the only work-around is to get used to this anomaly through practice and carefulness.

Text segmentation: Restricted cursor placement + forced block deletion

The following applications/operating systems forbid cursor placement between a reordrant vowel and its base consonant:

Microsoft Notepad 6.1 on Windows 7 Ultimate

gedit 2.30.3 on Ubuntu Linux 10.10 with pango-graphite 0.9.3-0.1

The following cross-platform applications further forbid cursor placement before a normal vowel or tone letter:

LibreOffice Writer & Calc 3.3.1

OpenOffice Writer & Calc 3.2.1 & 3.3

All the above also force block deletion to various extents. In Notepad 6.1, pressing <Delete> before the reordrant vowel deletes **both** the vowel and the base consonant. In the rest of the applications/OS, pressing <Delete> deletes the character **logically** after the cursor plus all following contiguous vowels and tone letters. Furthermore,

1. In gedit, pressing <Backspace> logically after a reordrant vowel deletes both the vowel and the base consonant if followed by a vowel or tone letter.
2. In LibreOffice and OpenOffice, when a reordrant vowel is logically at the end of a paragraph, **sometimes** pressing <Backspace> once from the paragraph end deletes nothing but pressing it twice deletes both the vowel and the base consonant.

All these phenomena are **not** defects of our fonts but rather failures of the respective applications/OS to segment text properly. Until a fix is available, the user will have to <Delete> or <Backspace> from the nearest allowed cursor position to delete a character and retype any wanted characters lost in forced block deletion or sequential backspacing. Alternatively, one can use SIL WorldPad 2.4 or 2.8 to edit and view/print the document or first use Microsoft WordPad 6.1 to edit (no smart line breaks) and then use OpenOffice Writer 3.2.1 to view/print with smart line breaking.

Line breaking: Line breaks intrasyllabically in New Tai Lue text

Despite smart line breaking code in our font package, the following smart applications and/or operating systems still allow breaks in the middle of a syllable:

LibreOffice Writer & Calc 3.3.1 (cross platform)

OpenOffice Writer & Calc 3.3 (cross platform)

OpenOffice Calc 3.2.1 (cross platform)

Microsoft Word & Excel 2010 on Windows 7 Ultimate

Microsoft Works Word Processor 9.0 on Windows 7 Ultimate

Word and Excel 2010 may also break the line between a reordrant vowel and its base consonant. In such case the consonant is left on the first line while the vowel gets wrapped to the next with a trailing dotted circle and, if in Word 2010, character overlapping like that in base-consonant deletion. (See issue < Reordering > above.)

These are defects of the respective applications/OS and **not** our font package. A fix has reportedly been included in the development build of LibreOffice. Hopefully it will be included in the next minor release (3.4).

Line breaking: No break after CJK punctuation and/or space

When rendering a run of New Tai Lue text, smart applications and operationg systems should observe line-break opportunities after CJK punctuation just like their non-smart counterparts (save Microsoft Word 2003 and Wordpad 5.1, which fail to break after some CJK punctuation). However, no such breaks are observed at all in the following applications on Windows 7 Ultimate, a smart OS:

Microsoft Excel 2010

Microsoft Works Word Processor 9.0

In addition, the following smart applications/OS even fail to break after **space** (whether U+0020 or U+3000) as well:

LibreOffice Writer & Calc 3.3.1 (cross platform)

OpenOffice Writer & Calc 3.3 (cross platform)

OpenOffice Calc 3.2.1 (cross platform)

Microsoft Notepad 6.1 on Windows 7 Ultimate

These are failures of the respective applications/OS and are **not** related to our fonts.

Line breaking: Line wraps despite room for syllable - pango-graphite

In gedit 2.30.3 on Ubuntu Linux 10.10 with pango-graphite 0.9.3-0.1, the syllable before a reordrant vowel gets wrapped to the next line despite room on the current. This is an application-/OS-specific behaviour and is **not** a defect of our fonts.

Justification: New Tai Lue text cannot be full-justified - Windows

When full justification is attempted on a run of New Tai Lue text with no intersyllabic space, the following smart applications produce left justification instead:

WorldPad 2.8 on Windows XP Professional SP3

OpenOffice Calc 3.2.1 on Windows 7 Ultimate

OpenOffice Calc 3.3 on Windows XP Professional SP3

This is a limitation of the applications and **not** our font package.

Font linking: CJK punctuation rendered in other fonts - Windows 7

Although the Dai Banna SIL fonts contain glyphs for some characters in the CJK Symbols and Punctuation block and the Halfwidth and Fullwidth Forms block, certain applications/operating systems will automatically choose a default Asian text font to display these characters instead. This can usually be overridden by highlighting the whole run of New Tai Lue text and changing the font to one in the Dai Banna SIL family, but the following applications on Windows 7 Ultimate insist in font linking:

Microsoft Word 2010

Microsoft Works Word Processor 9.0

This is **not** a defect of our fonts but rather a failure of the applications/OS to recognise Dai Banna SIL as containing Asian (CJK) glyphs.

Misc.: Autofit row height gives initial blank line - Excel 2010

In a cell containing New Tai Lue text wrapped into multiple lines, the autofit function in Microsoft Excel 2010 may fail to compute the correct row height when the column width falls in a certain range. The result is that a blank line is left before the first line of text. This faulty behaviour is **not** a defect of our fonts but a bug of the application. Manual height adjustment can remove the blank line.

Technical Support

As these fonts and utilities are distributed at no cost, we are unable to provide a commercial level of personal technical support. We will, however, try to resolve problems that are reported to us.

We do hope that you will report problems so they can be addressed in future releases. Even if you are not having any specific problems, but have an idea on how this system could be improved, we want to hear your ideas and suggestions.

Please note that these fonts are intended for use by experienced computer users. Installing and using these fonts is not a trivial matter. The most effective technical support is usually provided by an experienced computer user who can personally sit down with you at your computer to troubleshoot the problem.

General information about the encoding and use of the fonts can be found in the README file. Additional information is also available on our general Font FAQ page at http://scripts.sil.org/FontFAQ. If that fails to answer your question, you can contact us at:

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