LaoScript10 Add-In for Microsoft Word
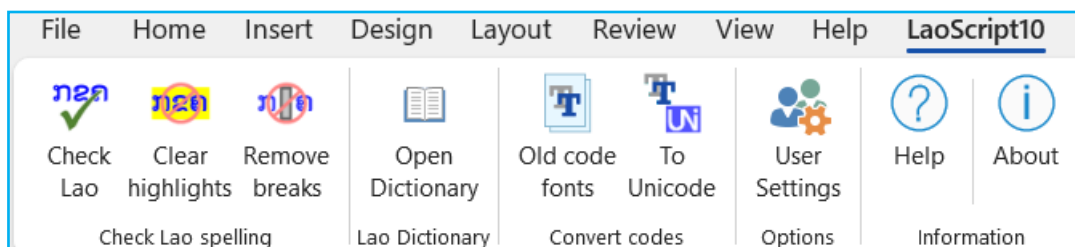
Version 10.15

Overview

Microsoft Windows remains limited in its support for Lao language. The **LaoScript10 Add-In for Microsoft Word** provides methods to check for unidentified words and insert or remove visible or hidden breaks between words, using a dictionary of Lao words that contains words with simplified (standard), classical, or both spelling conventions. It also supports conversion of Lao text using old (obsolete) 8-bit coding into Unicode-coded Lao text, using a Unicode font with similar appearance to the 8-bit coded Lao font where possible.

Using the Add-In

Download the Add-In zip package from the laoscript.net download page and install it according to the instructions at the end of this document. After the Add-In has been installed, whenever a Word document is opened, a new **LaoScript10** ribbon tab will be visible:

Checking Lao Spelling

To check the spelling of Lao text in a document, select the text range to be checked and click **Check Lao**. Unidentified Lao words will be highlighted. For example, when the following text from a recent news article[1] is checked, it appears as:

ຫົວຂໍ້ຂ່າວສຳຄັນສຳລັບແລງມື້ນີ້ ມີດັ່ງນີ້: ອະດີດສະມາຊິກສະພາແຫ່ງຊາດຂອງກຳປູເຈຍ ຖືກຍິງເສຍຊີວິດຢູ່ບາງກອກ, ສະມາຊິກລັດ<mark>ຖະ</mark>ສະພາສະຫະລັດ ຍ້ອງຍໍປະຫານາທິບໍດີ ຈີ<mark>ມ</mark>ມີ ຄາ<mark>ຣ໌</mark>ເຕີ ໃນຫໍ Rotunda ຂອງຫໍລັດ<mark>ຖະ</mark>ສະພາສະຫະລັດ, ແລະ ເກົາຫຼີເໜືອໄດ້ທົດລອງລູກສອນໄຟຂີປະນາວຸດໄລຍະກາງທີ່ມີຄວາມໄວເກີນສຽງແນ່ໃສ່ເປົ້າໝາຍໃນເຂດປາຊີ<mark>ຟິກ</mark>.

The highlighted characters indicate either misspelled words or, more often, loan words (from English or another language) or a word or part of a word that is not found in the Lao dictionary being used.

Until fairly recently it was usually helpful to insert hidden breaks[2] between Lao words for the text to wrap correctly. As most operating system platforms now wrap Lao text at word boundaries more or less correctly, that is no longer important. However, for some texts (especially if including old Lao spellings or Lao-Pali words) it may still be useful, and either hidden or visible word breaks may be inserted during checking (see User Settings).

If the visible breaks option is selected, the above paragraph when checked appears as:

ຫົວຂໍ້·ຂ່າວ·ສຳຄັນ·ສຳລັບ·ແລງ·ມື້ນີ້ ມີ·ດັ່ງນີ້: ອະດີດ·ສະມາຊິກ·ສະພາ·ແຫ່ງ·ຊາດ·ຂອງ·ກຳປູເຈຍ ຖືກ·ຍິງ·ເສຍ·ຊີວິດ·ຢູ່·ບາງກອກ, ສະມາຊິກ·ລັດ<mark>ຖະ</mark>ສະພາ·ສະຫະລັດ ຍ້ອງຍໍ·ປະຫານາທິບໍດີ ຈີ<mark>ມ</mark>ມີ ຄາ<mark>ຣ໌</mark>ເຕີ ໃນ·ຫໍ Rotunda ຂອງ·ຫໍ·ລັດ<mark>ຖະ</mark>ສະພາ·ສະຫະລັດ, ແລະ ເກົາຫຼີ·ເໜືອ·ໄດ້·ທົດ·ລອງ·ລູກ·ສອນ·ໄຟ·ຂີ·ປະ·ນາ·ວຸດ·ໄລຍະ·ກາງ·ທີ່·ມີ·ຄວາມ·ໄວ·ເກີນ·ສຽງ·ແນ່·ໃສ່·ເປົ້າ·ໝາຍ·ໃນ·ເຂດ·ປາ·ຊີ<mark>ຟິກ</mark>.

If hidden breaks are inserted, they will only be shown if the ¶ "Show marks" button (on the ribbon menu Home tab) is clicked[3].

Words or names that have not been identified may be added to the dictionary (see below) and the text checked again, or simply ignored by clicking **Clear highlights** to remove all error marking from the selected text.

Inserted hidden or visible breaks may also be removed from selected text by clicking **Remove breaks**.

Different user settings allow different categories of Lao words to be used when identifying words in a text. More accurate word identification is possible if the properties of the Lao text are taken into account.

Lao words included in the dictionary always use the ligature forms ຫນ, ຫມ and ຫຼ of high-class (sonorant) consonants but both ligature and digraph forms (ຫນ, ຫມ, ຫວ) are normally recognized when identifying words.

The spelling convention for most Lao words entered in the dictionary follows current usage in Lao PDR ('simplified' spellings). However, many texts still use the older ('classical') spellings and it can be helpful to select from a list of only simplified, or only classical spellings when checking a text.

Some examples of words with different classical and simplified spellings are:

Simplified	Classical
ຕະຫຼາດ (ຕະຫລາດ)	ຕລາດ
ຄຳພີ	ຄັມພີ
ຄັບແພະ	ຄັພ
ວັດຖຸບານ	ຣັຖບານ

When checking scientific, technical, legal or other texts that include very specific terminology, it is helpful to include additional word lists that are not in the regular dictionary. Such lists can be imported into the dictionary and assigned a category name, alllowing them to be included or excluded as appropriate when checking Lao texts. A category of "Names" for proper names and loan words is provided by default and can be used in the same way.

Be aware that a word of several syllables will, if not included in the dictionary, often be identified as separate words, sometimes leading to incorrect wrapping. This is a limitation that can really only be avoided by either writing the Lao with visible word breaks or by using AI-based contextual word identification which is not yet feasible.

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[3] Or the shortcut combination Ctrl-Shift-8 is entered.

The Lao Dictionary

Lao spelling conventions

Word identification by the Add-In depends on a dictionary of Lao words. How words are entered depends on the spelling convention for the word, as follows.

Simplified same as classical

> If the Lao word is spelled the same according to either convention, the *Current spelling* text box will contain an asterisk.

Simplified spelling only

> If the word (such as ຕະຫຼາດ) uses a simplified spelling that differs from the classical spelling for the same word, the *Current spelling* text box must be left blank.

Classical spelling only

> If the word (such as ຕລາດ) uses a classical spelling that differs from the simplified spelling for that word, the simplified spelling for the word should be entered in the *Current spelling* text box in order that the classically spelled word wil be ordered correctly in the dictionary list.

Each entry also allows an English gloss to be added, and word category, if relevant[4]. Alphabetic and orthographic sorting keys are added automatically when a word is added.

Adding, Modifying or Deleting Dictionary Entries

To view, add, modify or delete dictionary entries click the **Open Dictionary** button. When the form opens, enter a single letter or a string into the *Filter entries by Lao…* textbox then press **Enter** or **Tab** to display all Lao entries that start with the entered string, shown in standard alphabetical order, for example:

If a single consonant is typed, the form will display all words that start either with that consonant or a vowel prefix followed by the consonant. The total number of entries matching the filter is

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[4] Many proper names that have been adapted from other languages do not follow Lao spelling conventions. In this version of the Add-In, they can be identified by assigning them to the word Category 'Names'.

displayed at the top right of the form. Entries may also be selected by English glosses (if defined in the dictionary), or by word category.

The three filters can be used separately or together. The list will be updated on leaving the filter control (or changing the *Filter by Category…* value).   Click **Clear** to clear the list and the filter controls.

When entering any control that displays Lao text, the Lao keyboard will be automatically selected.

The form must be closed before any changes that are made will be applied when checking Lao text.

To modify an existing entry, click on an entry and then edit the appropriate textbox below the list, then click **Modify**:

Lao Dictionary				✕
Filter entries by Lao...	**Filter by English...**	**Filter by Category...**		**Clear**
ເຊ			▼	106 entries
Lao word	*Current (simplified) spelling*	*English gloss*	*Category*	
ເສະ	*	-	▲	**Add**
ເສ	*	-		
ເສຕະ	*	-		**Modify**
ເສຕະສັ̃ດ	*	-		
ເສຕາ	*	-		**Delete**
ເສໂຫ	*	perspiration		
ເສໂຫດ	*	-		
ເສນາ	*	-	▼	**Import...**
				Export...
Lao word	**Current spelling**	**English meaning (if known)**	**Category**	
ເຊໂຫ	*	perspiration	▼	

To add a new entry, right-click the currently selected entry (if an entry is selected and displayed in the *Lao word* text box)[5] to clear the list and entry fields, enter the new *Lao word*, *Current spelling* and (optionally) an English gloss and word category, then click **Add** [6]. Do not add words with the digraph (non-ligature) spellings ຫນ, ຫມ, ຫວ[7]. (If you enter a word with a digraph spelling it will automatically be changed to the ligature form unless it is ambiguous.)

If a word has a classical spelling and a different simplified spelling, enter the classical spelling entered as the *Lao word* and the simplified spelling as *Current spelling.* If a word is recognized as both simplified and classical spelling (as most words are), enter the word in *Lao word* and type an asterisk "*" in the *Current spelling* text box. If a word with simplified spelling (for example ຕະຫຼາງດ) should not be recognized as a classical spelling, delete the "*" from the *Current spelling* text box and click **Modify**.

To delete an existing entry, click the entry to select it and then click the **Delete** button (or press the **Delete** key).

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[5] Or click **Clear.**

[6] The dictionary form will warn the user and prevent the insertion of duplicated entries.

[7] Words with non-ligature spellings are added automatically when checking spelling rather than being stored in the database.

Word categories can be added as needed when adding or modifying entries. The Add-In will automatically keep track of categories and remove any unused categories (except the default category and Names) when the Dictionary form is closed.

Importing and Exporting Dictionary Entries

The entire dictionary may be exported to a UTF-8 (tab-separated) text file which can be opened and edited in Excel or any Unicode-compliant text editor and re-imported using the **Import…** button. However, be aware that words must be unique when imported and as noted above, should not include words that use non-ligature spellings. Any tab-separated UTF-8 list of Lao words with one to four columns can be imported provided that it complies with the following:

Column 1	Column 2	Column 3	Column4
Lao word	Gloss	Simplified spelling	Category (or blank)

If a single column, the words will be regarded as both classical and simplified spellings. The fourth column should either be left empty or contain the category name if the word has been assigned a category. Any rows (such as a heading row) which start with a non-Lao character will be ignored.

If **Ctrl** is pressed when **Import…** is clicked, a message box will be displayed asking the user whether or not to delete all existing entries before importing the new list.

Converting text in documents with old (8-bit) Lao fonts

Most older Word documents with Lao text encoded for non-standard 8-bit-coded fonts (such as *Saysettha Lao, alice_5, etc.)* may be processed to convert the text to use a Unicode font. If a similar-looking Unicode font exists, that font may be used for the converted text.

To convert text in a Lao document, open the document, select the text to be converted, then click **To Unicode**. If no text is selected, all Lao text in the document will be converted, optionally including text in headers, footers and any text boxes.

A list of known Lao 8-bit fonts is included in the LaoScript10.accdb database that is installed with the app, and may be extended or modified by clicking **Font list**. The following form will be shown:

For each listed font, the coding convention used for the font, a Unicode replacement font, and a scale factor will be specified.

Coding conventions

The following coding conventions are currently recognized:

Coding convention	Example font
LSWin	Saysettha Lao
Lao 95	Saysettha 95
Lao 2000	Saysettha 2000
Alice	alice_5
SengChanh	SengChanh
Sengchanh US	SengChanh US
Sayawath	Xayawath
IBM-STENO	Saysettha LS

If you have a document with a font that uses one of the above coding conventions, but is not listed in the table, click **Clear**, then enter the font in the text box below the list of font names. Change the code convention, replacement font and scale factor if necessary then click **Add** to include the font in the list of fonts for which text must be converted.

If you have a document with Lao text that used an 8-bit coded font that is not following one of the conventions currently listed, please contact me via https://laoscript.net/support/contact.php. It may be possible to add the coding convention to allow text using fonts with that convention to be converted.

While Lao text using an uninstalled 8-bit Lao font will not be displayed correctly, the text can be converted to Unicode without needing to install the old font (which may not even be available).

Replacement fonts

A standard list of known Lao Unicode fonts is included with the app, but the list of Lao Unicode fonts available for substitution will also include any other installed fonts that support Lao Unicode.

Scale factor

> The scale factor property specifies the percentage by which the text-size for text in an original 8-bit font should be rescaled when converted to Unicode. For most fonts, no rescaling should be needed, so the scale factor should be left at 100 (%), but some older fonts used character sizes that were a much smaller proportion of the font's cell-size than is currently used, so need to be rescaled when converting.

The selected code convention, replacement font and scale factor may be modified for any listed font by selecting that font, correcting the properties as wanted, then clicking **Modify**. A font may also be removed from the list by selecting it then clicking **Delete**. The list may be restored to the default list by clicking **Reset**.

User Settings

Various options are provided for customizing the way Lao word identification is applied, and all changes made to user settings are applied immediately. The **User Settings** form does not need to be closed when trying different options for processing Lao text.

The **User Settings** form appears as follows:

Each setting is described below.

Processing options

Text processing (checking Lao spelling, clearing highlighting or breaks, or converting from old codes) is applied to the current selection, but if no text is selected, it will be applied to the Main story of the document. If there are headings or other story ranges (such as footnotes) that also need to be checked, the **Include headers and footers…** option should be checked when processing the entire document.

For word lists and similar texts, it may be preferable to test if each entry is a listed dictionary word, instead of splitting it into two or more words if no dictionary entry is found. To do this, check the **Process contiguous Lao as a single string** option before processing the selection or document.

If you have documents with old-coded Lao text, check the **Check for old code text before processing** option to avoid accidentally corrupting the old-coded Lao. If all your documents use standard, Unicode-coded Lao, leave that option unchecked. (Checking for old-coded Lao may take several seconds for a large document.)

Word identification and dictionary options

The spelling convention to be used when identifying words and/or inserting breaks may be selected to be *Simplified*, *Classical* or *Both* (see Lao Spelling Conventions above). By default, *Simplified* spellings are assumed.

After checking and identifying Lao words, the words may be left unseparated, or be separated by visible or hidden break codes. By default, they will not be separated.
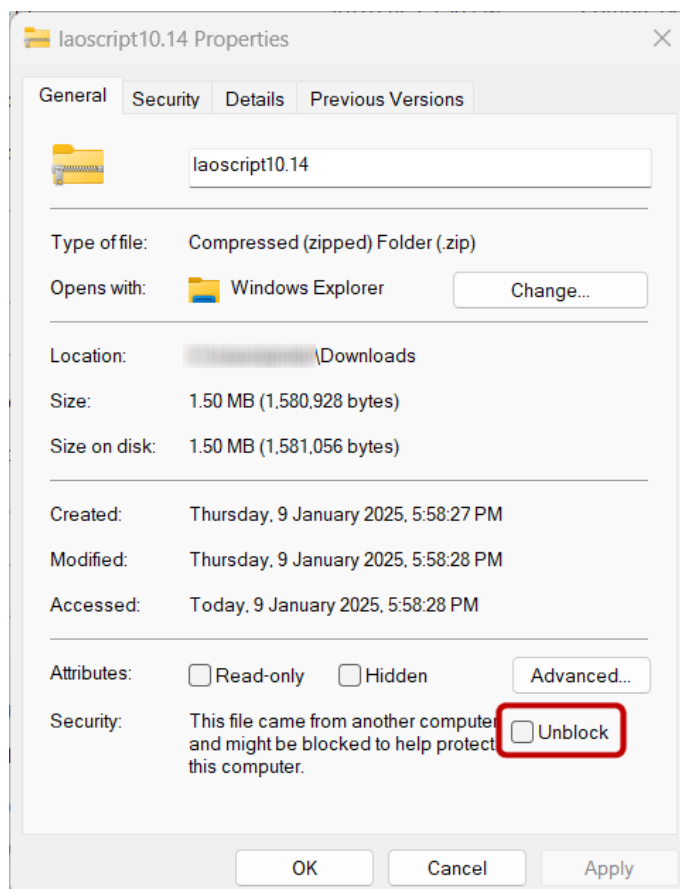
Words may be checked against the default word list or a subset of selected word categories.

For most texts, it will be best to allow digraph forms of the high class sonorant consonants, but if it is important to observe the current (strict) Lao spelling conventions and minimize ambiguities, *uncheck* the **Allow non-ligature spellings of Lao words** option before checking Lao spelling.
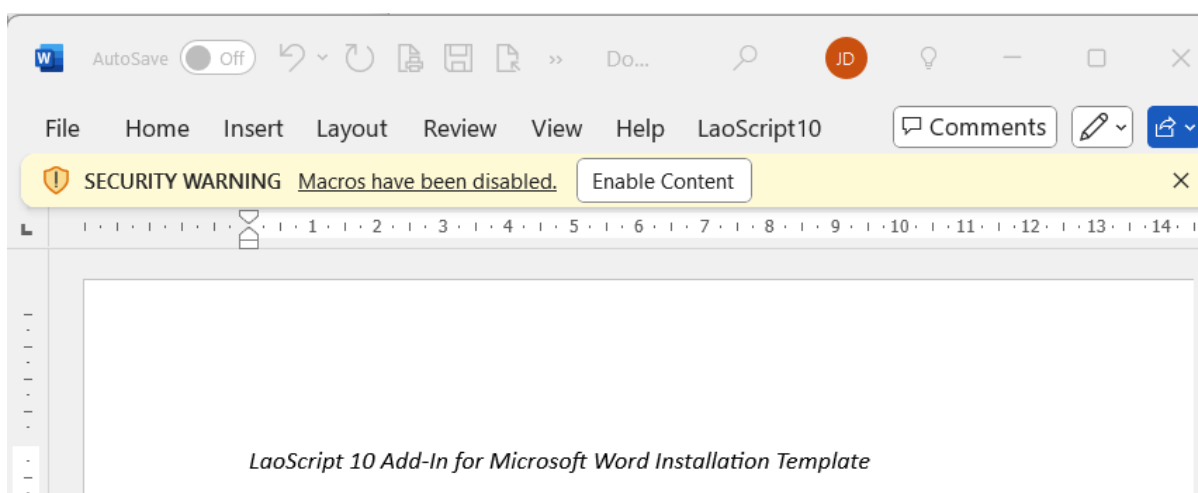
To ignore spelling errors when inserting (hidden or visible) word breaks, uncheck the **Highlight incorrectly spelled or unknown Lao words** option. (This may sometimes be preferable if a document already uses highlighting for other purposes.)

Installing the Add-In

1. Download the Add-In from https://laoscript.net/download/laoscript10.14.zip
2. Unblock the downloaded file. Open **File – Properties** (in the right-click menu for the entry in your downloads folder) and check **Unblock**:
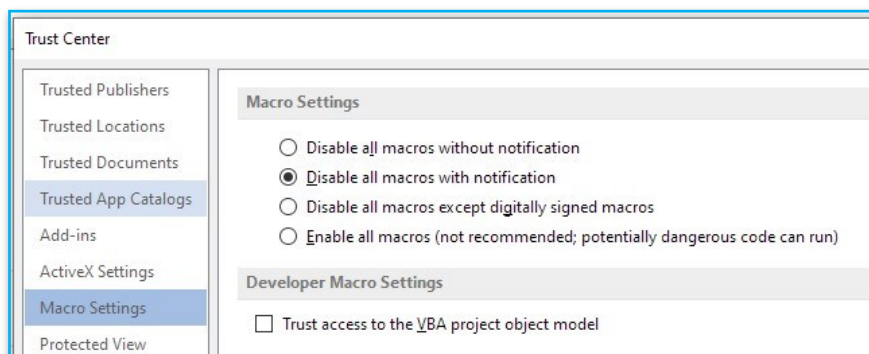

3. Use **Extract all…** (in the right-click menu) to unpack the contents of the archive into the suggested folder (or any other folder that is not read-only).
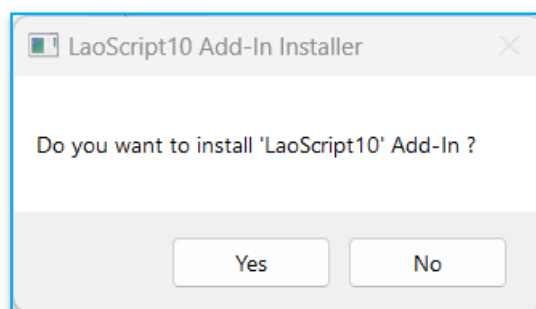4. Double-click **LaoScript10.install.dotm** and click **Enable Content**[8]:

5. If you do not see this Security Notice or the prompt to install the Add-In that will normally be shown next, you may have not unblocked the file or you may need to change your macro security

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[8] Whether this warning or a different security warning is shown, it will always be necessary to enable the macros in the installation template to run in order to install the Add-In.

settings in **Trust Center** to allow the installation to continue. The recommended setting is **Disable all macros with notification:**

6. You will then be prompted to confirm installation:

Updating the Add-In

To update to a newer version, download and unpack the new version according to the instructions above, and double-click the new installation template **LaoScript10.install.dotm**. You will be prompted whether to replace or remove the installed Add-In but if updating, the existing user dictionary and settings will be retained.

Uninstalling the Add-In

To uninstall the Add-In, double-click installation template **LaoScript10.install.dotm** again. You will be prompted whether or not to continue with uninstalling, and asked whether or not to retain the user dictionary and settings. If the dictionary has been modified, you may want to keep a copy of it for reference or future use.