

# THAI TO LAO TRANSLATION

An Add-In for Microsoft Word

## User Guide

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Lao Script for Windows

<https://laoscript.net>

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## Introduction

Translation of Word documents from Thai language into Lao has been included for many years as part of the LaoScript Add-In for Microsoft Word. The Thai to Lao translation method has now been greatly improved and is available as an Add-In for Microsoft Word independently of the LaoScript Application.

The Add-In provides completely automatic translation by dictionary substitution from Thai into Lao, by clicking the Translate Thai button (for a single document) or the Translate All button (to translate all documents in a folder). The translated documents will usually be quite understandable Lao but Thai words that are unusual, specialized language or misspelled, will not be found in the dictionary, and the inserted Lao will be phonetically transliterated from Thai and highlighted (or flagged) to be checked manually. Thai words with several different known Lao translations are similarly highlighted for later resolution. A method is provided to quickly move to and resolve highlighted unknown or ambiguous words in each translated document.

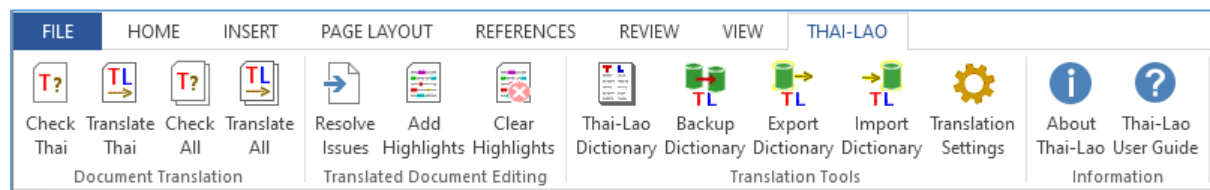
For a document or collection of documents that includes many names or specialized language, the Add-In provides a method to scan the document or documents before translation and extend the dictionary as required. Doing this can greatly reduce the amount of editing that the translated documents would otherwise need.

The word list supplied with the Add-In includes more than 22,000 Thai entries and nearly 9,000 Thai-Lao word pairs. It can be extended or modified as required, either by importing additional word lists, or by adding or linking individual Thai or Lao words or phrases.

AutoSave must be disabled when translating or checking a document that would otherwise be automatically saved to a remote folder (e.g. OneDrive).

## Using the Thai to Lao Translation Add-In

After installing the Thai-Lao Add-In, a THAI-LAO tab will be added to the Ribbon Menu as shown here. The function of each button is briefly described below:



<i>Button Caption</i>	<i>Description</i>
<u>Check Thai</u>	Interactively check the currently open Thai document for unrecognized (or misspelled) Thai words and words with no or ambiguous Lao equivalents.
<u>Translate Thai</u>	Translate the currently open Thai document automatically into Lao.
<u>Check All, Translate All</u>	Automatically check or translate all Thai documents in the selected folder and display (and log) as summary of unrecognized, uncertain, or ambiguous Thai words found.
<u>Resolve Issues</u>	Interactively resolve ambiguities and correct errors in a translated document.
<u>Add Highlights, Remove Highlights</u>	Restore or clear error highlighting in a translated document.
<u>Thai-Lao Dictionary</u>	Open and edit the Thai-Lao dictionary.
<u>Backup Dictionary</u>	Make a backup copy of the current Thai-Lao dictionary.
<u>Import word list</u>	Import (or merge) a Thai, Lao, or Thai-Lao (UTF-8 text file) word list.
<u>Export word list</u>	Export the current dictionary as a simple (UTF-8) text file.
<u>Translation Settings</u>	Open and view or change the ThaiLao dictionary file, the target document font, and other user options affecting the translation process.
<u>About Thai-Lao</u>	Product identification and version.
<u>Thai-Lao User Guide</u>	Open this User Guide.

The function of each (underlined) button is described in detail below.

## Translate Thai

To translate a Thai document automatically into Lao, open the document and click the "Translate Thai" button in the "Document Translation" button group. The translation result will be a file with the same name<sup>1</sup> in a **TranslatedLao** sub-folder of the original document path. Errors and alternates may be highlighted (according to user settings – see [Translation Settings](#)) and the translated text may then be further edited as necessary.

## Translation Example

During translation, the Add-In will handle unknown Thai words, spelling errors, and Thai words with more than one possible corresponding Lao word according to user settings as shown in the following [Translation Settings](#) dialog:

To clarify the use of different settings, the following sample text (adapted from a paragraph from the *Thai Tipitaka*) will be automatically translated using different combinations of user settings. (An intentional spelling error in the first word group has been made to show how to manage spelling errors.)

ก. มื่ออยู่จริง ๆ พราหมณ์ เหตุที่เขากล่าวหาเราว่า พระสมณะโคตมมีปกติไม่ไยดี ดังนี้ ชื่อว่ากล่าวถูก เพราะความไยดีในรูป เสียง กลิ่น รส โผฏฐัพพะ เหล่านี้ ตถาคต ละได้แล้ว ตัดรากขาดแล้ว ทำให้เป็นเหมือนตาลยอดด้วน ทำให้ไม่มีในภายหลัง มีไม่เกิดอีก ต่อไปเป็นธรรมดา นี้แล เหตุที่เขากล่าวหาเราว่า พระสมณะโคตมมีปกติไม่ไยดี ดังนี้ชื่อว่า กล่าวถูก แต่ไม่ใช่เหตุที่ท่านมุ่งกล่าว.

<sup>1</sup> The file name can optionally be translated from Thai to Lao. See [Translation Settings](#) for details.

**Example 1: Default settings**

- For Thai words with multiple corresponding Lao, use default or first Lao word.
- Highlight unknown Thai and Thai words without corresponding Lao.

ພ. ມີຢູ່ຈິງໆ ພາມ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຢດີ ດັ່ງນີ້ ຊື່ວ່າ ກ່າວຖືກ ເພາະຄວາມໂຢດີໃນຮູບ ສຽງ ກິ່ນ ລົດຊາດ ໂຜດຖັບພະ ເຫລົ່ານັ້ນ ຕະຖາຄົດ ລະໂດ້ແລ້ວ ຕັດຮາກຂາດແລ້ວ ເຮັດໃຫ້ເປັນເໝືອນຕານຍອດດ້ວນ ເຮັດບໍ່ໃຫ້ມີໃນພາຍຫລັງ ມີບໍ່ເກີດອີກ ຕໍ່ໄປ ເປັນທຳມະດາ ນີ້ແລ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຢດີ ດັ່ງນີ້ຊື່ວ່າ ກ່າວຖືກ ແຕ່ບໍ່ແມ່ນເຫດທີ່ທ່ານມຸ່ງກ່າວ.

Wherever the Thai cannot be matched to a corresponding Lao word, the Lao is transliterated phonetically from the Thai. The Lao text will be highlighted as follows:

- **Red** - the Thai was not the dictionary, or was a spelling error.
- **Pink** - The Thai word was in the word list but marked as uncertain.
- **Aqua** - no Lao word was found corresponding to the Thai word.
- **Green** - the Lao word is marked as an uncertain translation for this Thai word.
- **Yellow** - more than one Lao word is possible and no default has assigned.
- **Gray** - more than one Lao word is possible and the default has been selected.

**Example 2: Not highlighted**

- For Thai words with multiple corresponding Lao, use default or first Lao word.
- Do not highlight unknown Thai and Thai words without corresponding Lao.

ພ. ມີຢູ່ຈິງໆ ພຣາຫົມ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຢດີ ດັ່ງນີ້ ຊື່ວ່າກ່າວຖືກ ເພາະຄວາມໂຢດີໃນຮູບ ສຽງ ກິ່ນ ລົດຊາດ ໂຜດຖັບພະ ເຫລົ່ານັ້ນ ຕະຖາຄົດ ລະໂດ້ແລ້ວ ຕັດຮາກຂາດແລ້ວ ເຮັດໃຫ້ເປັນເໝືອນຕານຍອດດ້ວນ ເຮັດບໍ່ໃຫ້ມີໃນພາຍຫລັງ ມີ ບໍ່ເກີດອີກ ຕໍ່ໄປເປັນທຳມະດາ ນີ້ແລ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິ ບໍ່ໂຢດີ ດັ່ງນີ້ຊື່ວ່າ ກ່າວຖືກ ແຕ່ບໍ່ແມ່ນເຫດທີ່ທ່ານມຸ່ງກ່າວ.

The result of translation using these settings will be exactly the same as for the preceding example apart from highlighting. However, errors will be more difficult to identify.

**Example 3: Select Lao word if no default.**

- For Thai words with multiple corresponding Lao, select if no default Lao.
- Highlight unknown Thai and Thai words without corresponding Lao.

ພ. ມີຢູ່ຈິງໆ ພຣາຫົມ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຢດີ ດັ່ງນີ້ ຊື່ວ່າກ່າວຖືກ ເພາະຄວາມໂຢດີໃນຮູບ ສຽງ ກິ່ນ ລົດຊາດ|ລົດ ໂຜດຖັບພະ ເຫລົ່ານັ້ນ ຕະຖາຄົດ ລະໂດ້ແລ້ວ ຕັດຮາກຂາດແລ້ວ ເຮັດໃຫ້ເປັນເໝືອນຕານຍອດດ້ວນ ເຮັດບໍ່ໃຫ້ມີໃນພາຍຫລັງ ມີ ບໍ່ເກີດອີກ ຕໍ່ໄປເປັນທຳມະດາ ນີ້ແລ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິ ບໍ່ໂຢດີ ດັ່ງນີ້ຊື່ວ່າ ກ່າວຖືກ ແຕ່ບໍ່ແມ່ນເຫດທີ່ທ່ານມຸ່ງກ່າວ.

Alternative Lao words are shown separated by a vertical bar| and highlighted in yellow. Select the preferred Lao word according to the context.

### Automatic Translation: Summary

Automatic translation is a very easy way to translate Thai text into Lao, but the translation quality can often be significantly improved by adding new Thai – Lao entries to the dictionary and selecting or adding new Lao words for Thai entries that do not have corresponding Lao entries and also by selecting the best Lao equivalent word, according to the context, where more than one Lao entry corresponds to the Thai. The **Check Thai** function described below, was designed for this purpose.

### Check Thai

When checking the Thai text in a document, each paragraph is displayed on a form that allows each phrase of Thai text characters to be translated and checked before continuing. The process supports:

- Correction of spelling mistakes in (or otherwise editing) the Thai source documents.
- Quickly adding new entries to or modifying existing entries in the Thai word list.
- Marking a given Lao word as the default for a given Thai word in the phrase.
- Optionally marking either a Thai word or a corresponding Lao word in a dictionary entry as uncertain.

### Check Thai Example

The same sample text used previously will be used to explain this process. When Check Thai is clicked, after reading the word list, and identifying all Thai text in the document, the first paragraph will be displayed, and the first contiguous Thai string in that paragraph. Click **Find next** to find the first word that needs attention:

Check and correct Thai word matching and Lao word correspondence

Thai text: มี อยู่ จริง งง

Lao text: ມີ ຢູ່ ຈິງ ງງ

Thai paragraph: 
 

ก. มีอยู่จริง ๆ พราหมณ์ เหตุที่เขากล่าวหาเราว่า พระสมณะโคดมมีปกติไม่ไยดี ดังนี้ ชื่อว่ากล่าวถูก เพราะความไยดีในรูป เสียง กลิ่น รส โสภณรูปพะ เหล่านั้น ตถาคด ละได้แล้ว ตัดรากขาดแล้ว ทำให้เป็นเหมือนตาลยอดด้วน ทำให้ไม่มีในภายหลัง มีไม่เกิดอีก ต่อไปเป็นธรรมดา นี่แล เหตุที่เขากล่าวหาเราว่า พระสมณะโคดมมีปกติไม่ไยดี ดังนี้ชื่อว่า กล่าวถูก แต่ไม่ใช่เหตุที่ท่านมุ่งกล่าว.

The error (the repeated character) is immediately apparent and can be corrected by clicking the Edit button (above the display of the entire paragraph), editing the paragraph, and then clicking the Save button. When the document is saved, the phrase will be checked and checking resumed at the start of the paragraph. Clicking **Find next** again then shows the next issue:

Check and correct Thai word matching and Lao word correspondence

Thai text: พราหมณ์

Lao text: ພຣາທິມ

Thai paragraph: 
   
ก. มียุ่จรงๆ พราหมณ์ เหตุที่เขากล่าวหาเราว่า พระสมณะโคตมมีปกติไม่ไยดี ดังนี้ ชื่อว่า
   
กล่าวถูก เพราะความไยดีในรูป เสียง กลิ่น รส โสภณรูปพะ เหล่านั้น ตถาคค ละได้แล้ว ตัด
   
รากขาดแล้ว ทำให้เป็นเหมือนตาลยอดด้วน ทำให้ไม่มีในภายหลัง มีไม่เกิดอีก ต่อไปเป็น
   
ธรรมดา นั้แล เหตุที่เขากล่าวหาเราว่า พระสมณะโคตมมีปกติไม่ไยดี ดังนี้ชื่อว่า กล่าวถูก
   
แต่ไม่ใช่เหตุที่ท่านมุ่งกล่าว.

Paragraph # 1 / 1

Dictionary

In this case, the appropriate Lao word needs to be entered or selected in the word list. Clicking **Dictionary** opens the Dictionary form, showing that the Thai word is recognized, but no appropriate Lao translation has been linked to it, and the phonetically transliterated Lao is incorrect.

Thai Lao Dictionary

Thai word: พราหมณ์

Lao word (and meaning):

Lao entries for this Thai word:

Close

If the correct Lao word (ພາມ) is entered, and the Lao entries for this Thai word **+** (Add) button clicked, the dictionary then shows:

Thai Lao Dictionary

Thai word: พราหมณ์

Lao word (and meaning): ພາມ, Brahman

Lao entries for this Thai word: ພາມ, Brahman

Close



As soon as **Close** is clicked, the corrected Lao will be used when translating.

Apart from finding issues automatically, the next (or previous) phrase can be selected to check the Lao translation by using the navigation buttons at the top of the form; if Shift is held down, the same navigation buttons move to the next or previous paragraphs (or to the start of the document).

If a Thai (or Lao) word is automatically or manually highlighted during the checking process, opening the Dictionary form will allow that word to be quickly added to the wordlist and the Thai-Lao word pair linked.

For more details, and how to modify or delete entries or links between entries, see the [Thai-Lao Dictionary](#) section below.

### Translation Glossary

After translating a document (or a group of documents in a folder see following section), a glossary of Thai-Lao pairs for all words translated is produced and can be saved as a text file suitable for opening in Excel or any Unicode-capable text editor. A User Setting determines whether or not a glossary will be compiled and which words will be included, depending on the error status of each word as described in the preceding section. It is also possible to produce a glossary of all words in the documents translated.

## Checking and Translating Multiple Documents

For many translation projects there will be many related documents for which the same Thai-Lao dictionary should be used, with the same default choices for alternate Lao.

The Ribbon Menu buttons Check All and Translate All used to process a number of documents together. However, when either checking or translating multiple documents, rather than interactively reviewing and editing each Thai document, a summary of issues is displayed instead. The same summary is saved as a log (either ThaiDocumentStatus.csv when checking, or TranslationStatus.csv in the source document folder when translating).

Identified issues correspond to the (optionally) highlighted words in the translated documents, for example:

Checking Thai documents for unidentified Thai-Lao word pairs						
File name	Uncertain Thai		Uncertain Lao		Ambiguous Lao	
abbr test.docx	-	-	2	-	-	(2)
short test.docx	-	-	-	-	-	(0)
thaitest 1.docx	1	-	15	-	-	(42)
thaitest 2.docx	25	3	104	1	1	(556)
thaitest 3.docx	20	1	164	-	-	(190)

Checking Thai text...	100%	Done
Files checked	5/5	

After each file name, the values in the next four columns indicate the number of words that have been marked as Unlisted (or flagged as uncertain) Thai and Lao. The next column shows the number of Lao words that should be disambiguated and the value in the last column (shown in parentheses) indicates the number of words for which more than one Lao meaning exists but for which a default Lao word has been assigned.

## Hints for Translating Multiple Documents

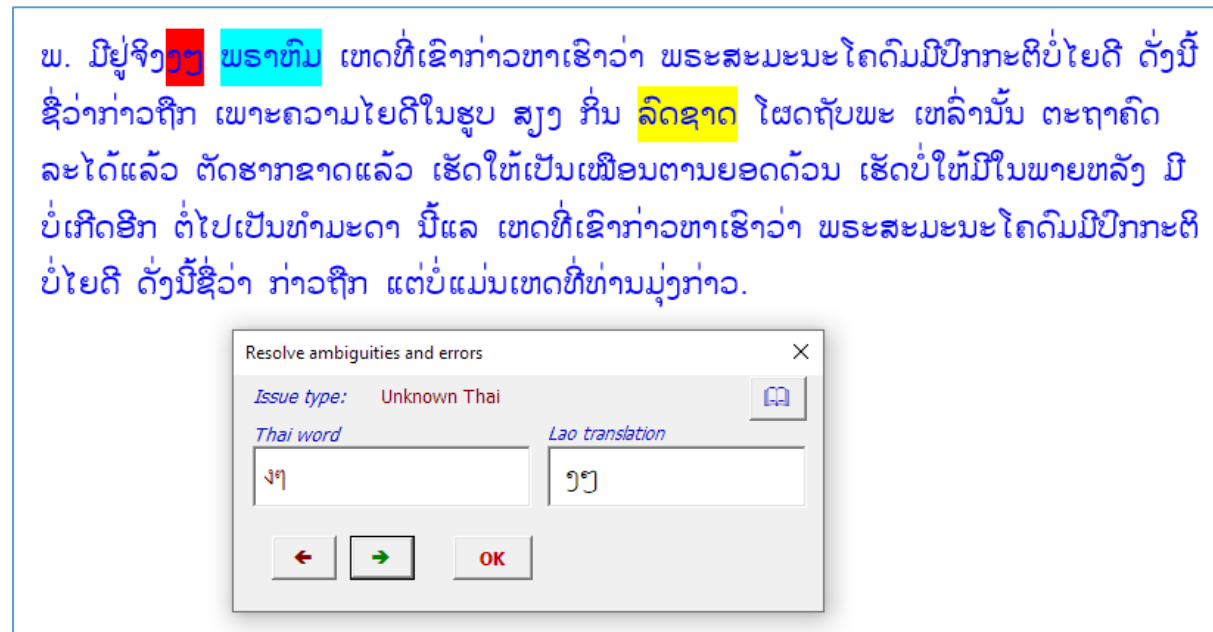
When translating many documents, it will often be helpful to either **Check All** or **Translate All** initially to get an idea of how many issues are likely to need correcting. If there are few issues, then the **Resolve Issues** process (see below) can be used to quickly correct the identified errors, but if many words are not recognized, then it will be better to use the **Check Thai** function with documents with many missing words and extend the dictionary before translating all the documents.

It can be useful when doing this to have a browser window open to a Thai dictionary (such as [พจนานุกรม Longdo Dictionary แปลภาษา คำศัพท์](#)) to check the spelling and meaning of words not found in the word list being used. Each time a word is identified as needing attention during the **Check Thai** process, the Thai word is copied to the clipboard, making it easy to search for that word in the online dictionary being used as a reference.

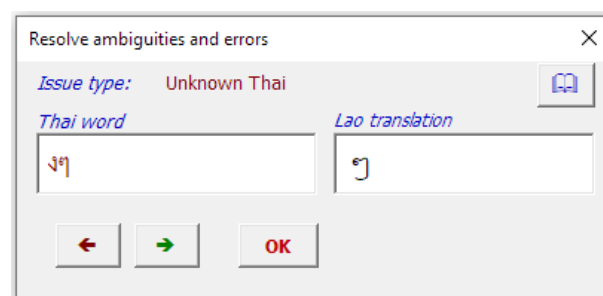
## Correcting the Translated Document

When the translation process has not been able to identify all Thai words in the source document, or some words have more than one possible Lao translations, the translated document will (optionally) highlight and mark the words that need attention. The **Resolve Issues** button simplifies the process of finding and correcting marked words.

When **Resolve Issues** is clicked, a small modeless<sup>2</sup> form is opened, and can be moved to any convenient part of the screen. The first marked error will then be selected and displayed in the form. With the previous (uncorrected) example, this appears as:



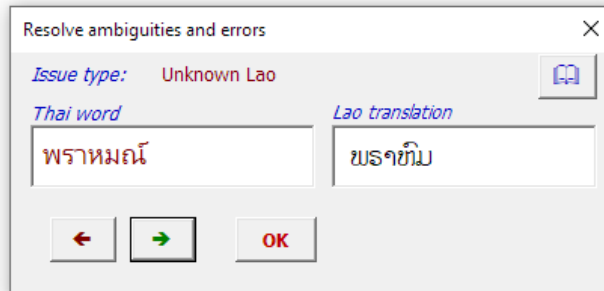
The error in this case is obvious and can be corrected in the translated document. However, it will usually be best to correct the error on the form:



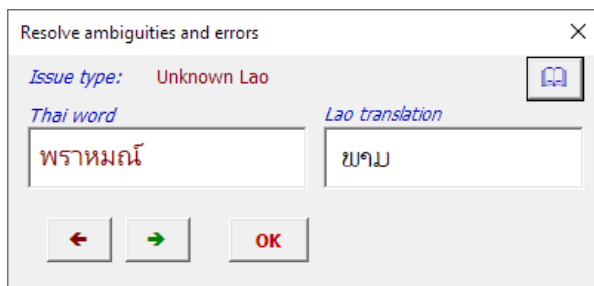
then pressing OK, as that will then remove all the hidden error markup as well as correcting the error. When this is done, the form will find the next marked word:

<sup>2</sup> A **modeless** form is a form opened to allow interaction with the form as well as continued editing of the document, rather than requiring the form to be closed before allowing document editing to continue.

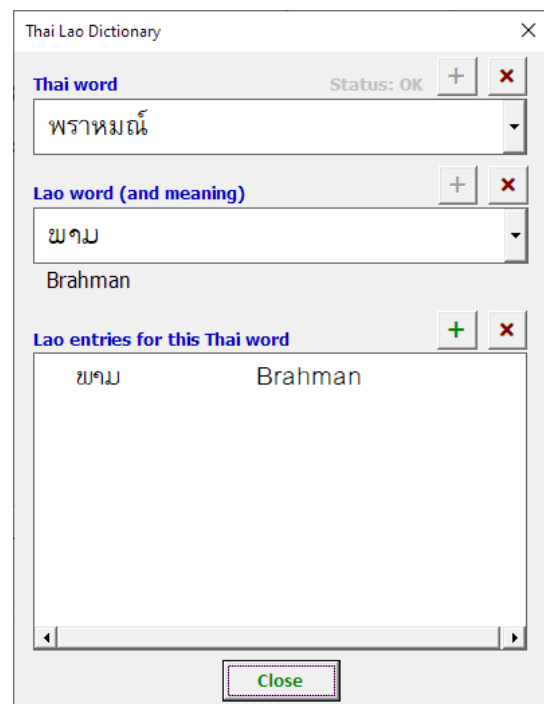
ພ. ມີຢູ່ຈິງໆ ພຣາທົມ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຍດີ ດັ່ງນີ້ ຊື່ວ່າກ່າວຖືກ ເພາະຄວາມໂຍດີໃນຮູບ ສູງ ກິນ ລົດຊາດ ໂຜດຖັບພະ ເຫລົ່ານັ້ນ ຕະຖາຄົດ ລະໄດ້ແລ້ວ ຕັດຮາກຂາດແລ້ວ ເຮັດໃຫ້ເປັນເໝືອນຕາມຍອດດ້ວນ ເຮັດບໍ່ໃຫ້ມີໃນພາຍຫລັງ ມີ ບໍ່ເກີດອີກ ຕໍ່ໄປເປັນທຳມະດາ ນີ້ແລ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິ ບໍ່ໂຍດີ ດັ່ງນີ້ຊື່ວ່າ ກ່າວຖືກ ແຕ່ບໍ່ແມ່ນເຫດທີ່ທ່ານມຸ່ງກ່າວ.



The issue in this case is a missing Lao translation for the recognized Thai word. The correction should again be made in the form, or alternatively by clicking the Dictionary button and finding the correct Lao word and linking it to the Thai. If this is done, then the selected Lao word will replace the highlighted (incorrect) word in the document (and be used in future translation):



and appear as:



ພ. ມີຢູ່ຈິງໆ ພາມ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຍດີ ດັ່ງນີ້ ຊື່ວ່າ ກ່າວຖືກ ເພາະຄວາມໂຍດີໃນຮູບ ສູງ ກິນ ລົດຊາດ ໂຜດຖັບພະ ເຫລົ່ານັ້ນ ຕະຖາຄົດ ລະໄດ້ ແລ້ວ ຕັດຮາກຂາດແລ້ວ ເຮັດໃຫ້ເປັນເໝືອນຕາມຍອດດ້ວນ ເຮັດບໍ່ໃຫ້ມີໃນພາຍຫລັງ ມີບໍ່ເກີດ ອີກ ຕໍ່ໄປເປັນທຳມະດາ ນີ້ແລ ເຫດທີ່ເຂົາກ່າວຫາເຮົາວ່າ ພຣະສະມະນະໂຄດົມມີປົກກະຕິບໍ່ໂຍດີ ດັ່ງນີ້ຊື່ວ່າ ກ່າວຖືກ ແຕ່ບໍ່ແມ່ນເຫດທີ່ທ່ານມຸ່ງກ່າວ.

The remaining highlighted error is an ambiguity which could not be automatically resolved. When the **Resolve Issues** form identifies an ambiguous Lao translation, it displays the dictionary choices for the original Thai word:

Issue type:	Ambiguous Lao without default	
Thai word	Lao translation	
รส	ລົດຊາດ	
	ລົດຊາດ	
	ລົດ	

Select the appropriate Lao word for the context – or type in a different translation if preferred - and click **OK** to replace the highlighted Lao word by the preferred alternative.

At any point in this process you can use the forward or backward arrow buttons to skip to the next or previous issue, leaving the highlighted word to be corrected in the document instead.

When all errors and ambiguities have been resolved (or skipped), the **OK** button will be replaced by a **Close** button to close the form and resume normal document editing. (The form can also be closed at any time using the normal **x** close button in the form title bar.)

Using this form can greatly speed up the management of ambiguities which cannot always be correctly handled before translation by setting a default Lao word for a given Thai word.

Note that all types of identified issues will always be marked using hidden text, even if not highlighted. However, the highlighting level determines which types of issue will be recognized when using the **Resolve Issues** form.

### Applying and Clearing Highlighting

Unless disabled (by User Settings), highlighting and marking of words that need attention will always be applied to a document after translation. The highlighting can be cleared by clicking the **Clear Highlights** button, or re-applied by using the **Add Highlights** button.

However, once an error has been corrected using the **Resolve Issues** form, hidden markup is removed and highlighting will no longer be applied.

Sometimes it may be useful to change the highlighting level (in User Settings) and re-apply highlighting in order to identify and correct issues that were not initially highlighted, such as to select alternative Lao translations for words for which a default has been assigned.

To remove all hidden markup as well as highlighting, hold **Shift** when clicking the **Clear Highlights** button.

## Thai-Lao Dictionary

The **Thai-Lao Dictionary** form manages entries in the bilingual dictionary used for translating Thai text into Lao. The dictionary form can be opened directly from the ribbon menu, or from the interactive document checking form. When opened from the ribbon menu, if Thai text is selected, that text will be entered into the Thai word combo-box on the dictionary form, and if Lao text is selected it will be entered in the Lao word combo-box on the dictionary form. In either case, the form will attempt to match the entered word with a listed entry from the corresponding list.

If opened without any text being selected, the user can enter either Thai text into Thai combo-box, or Lao text into the Lao combo-box. Again, the combo-boxes will attempt to match the entered strings to a listed dictionary entry.

When entering text into the Thai combo-box or the Lao combo-box, the keyboard will automatically be switched for typing Thai or Lao respectively.

### Looking up a Thai word

To look up a Thai word, just type the word into the Thai word combo-box. The corresponding (linked) Lao entries will be shown for each listed Thai entry:

The default Lao entry for the entered Thai word, if any, is identified by a bullet. Double-click any entry to set it as the default, or (if already set as the default) to clear the default.

To link another Lao word as a possible translation for this Thai word, type the Lao word in the Lao word combo-box or select it from the drop-down list, and click the Lao entries Add button.

To delete a link between Thai and Lao words, click the red **X** above the list of Lao entries. Deleting either a Lao or a Thai entry will not remove the corresponding Thai or Lao entry but just remove the link that relates the two.

Thai Lao Dictionary

Thai word Status: OK + X

Lao word (and meaning) + X

Lao entries for this Thai word + X

ເຂົາ	he
ເຂົາສັດ	animal horns
ທ່ານ	sir
ພວກເຂົາ	they
ເພິ່ນ	they
ລາວ	Laos, himself

Close

### Looking up a Lao word

Any listed Lao entry can be selected by typing the Lao in the Lao word combo box or selecting it from the drop-down list. Once a Lao word has been defined, an English meaning (gloss) can also be added to the field immediately beneath the Lao.

### Adding a new Thai or Lao word

To add a new Thai or Lao word type (or paste) the word into the appropriate combo-box and click the **+** button at the right hand side of the combo-box.

Whenever both a Thai word and a Lao word have been selected, the **+** button above the Lao entries for this Thai word list will be enabled, allowing the two entries to be linked.

### Deleting Thai or Lao dictionary entries

To delete a Thai or Lao dictionary entry, select the entry in the appropriate combo-box, then click the red X button above the right hand side of the combo box. You will be prompted to confirm the deletion, after which the entry will be deleted. When a Thai entry is deleted, any Thai-Lao links are also deleted, but the linked Lao entries themselves are not deleted. Similarly, if a Lao entry is deleted, any Thai-Lao links to that entry will also be deleted, but not the linked Thai entries.

### Exporting dictionary entries

The current word list may be backed up by exporting as a UTF-8 coded, tab-separated text file, with each line comprising either a Thai word with its associated Lao words, or a separate Lao word with gloss. The # and \* flag characters described in the preceding section will be included. The filename used will follow the name of the current word list but include a date stamp and use the .txt suffix.

### Importing dictionary entries

Previously exported dictionary text files may be imported into another dictionary database by clicking the **Import** button and browsing to the file. It is also possible to import lists of Thai, Lao or related Thai and Lao entries in UTF-8 text files if the following rules are observed.

Once a list has been selected for importing, you will be asked whether to replace the existing word list or merge the new entries into it.

#### *Importing Thai word lists*

Each word must be at the start of a separate line, optionally followed by one or more tab-separated corresponding Lao entries.

#### *Importing Lao word lists*

Each word must be at the start of a separate line. An optional gloss may follow after a tab.


If a Thai or Lao word in the Thai entry is followed immediately by the # character, those entries will be identified as uncertain in the imported list. Similarly, if any Lao word in the Thai entry is preceded by \*, that word will be identified as the default Lao word for the Thai head word when translating. (Separate Lao entries should not be marked by either flag character.)

Thai and Lao entries can be imported together or separately. If a Thai entry is imported that includes a Lao word that is not yet listed, the corresponding Lao entry will also be added. Entries do not need to be sorted as they are sorted automatically when the list is saved.

## Translation Settings

Then the "Translation Settings" button is clicked, the following dialog will be shown:

### Thai-Lao word list

The default Thai-Lao dictionary will be a UTF-\* text file named ThaiLao.dat. This file should not normally be edited manually as it includes automatically generated strings required for sorting the Thai and Lao fields correctly. To use (or create) a new word list, click the  button beside the word list text box and select the word list using the file browser that will be shown. Additional Thai and Lao entries may then be imported as described above.

### Font for Lao text

For normal Thai to Lao translation, any (Unicode) Lao font can be specified for the target document, but **Saysettha OT** is the default and recommended since the Lao fonts included with Windows do not always display tone marks clearly in Word documents.

### Thai dictionary entries with multiple Lao entries

For each Thai word found with more than one possible corresponding Lao entry, the user can choose whether to simply accept the default Lao entry (if set) or the first Lao entry (if no default is set), to require selection from the list of alternates if no default has been set, or to always require selection from all possible Lao entries words listed in the Thai-Lao dictionary for that Thai entry.

### Words to highlight in Lao document

Thai words with no corresponding Lao word are always transliterated into Lao, but can also optionally be highlighted in the translated document. Different highlighting options are available, from no highlighting, through highlighting only unknown Thai or Lao words, to highlighting every Lao word for which an alternative exists; each highlighting level also highlights all words that would be highlighted at a "lower" level".

### Transliteration conventions

For most Thai to Lao translation, each Thai word that is associated with a Lao word will be replaced by the corresponding Lao word and transliteration of unknown Thai will be made phonetically.



Thai to Lao transliteration identifies syllables wherever possible and follows the standard Lao spelling conventions for implicit vowels and final and silent consonants. So, for example, the Thai words รหัส and พระหมอน, if unassociated with corresponding Lao words, will be transliterated as ຣົດ and ພຣາໝ໌ respectively. Where the syllables within a Thai word cannot be identified, each letter is transliterated independently.

### Line breaking

The user can select whether to insert hidden (ZWSP) breaks between Lao words and whether or not to hyphenate Lao words.

### Translate Thai file name

If a Thai document has Thai characters in its file name, the name of the translated file can be also be translated, either optionally (as prompted) or automatically. (When translated multiple files, file names will always be translated unless the Never option is selected.)

### Glossary compilation

A glossary containing all Thai – Lao entries for words in the translated documents can optionally be provided as an Excel-compatible text file. The list may include all words found, or just those highlighted according to the current highlighting settings. (A word count is included for each entry.)

When a single file is translated, the glossary will have the same name as the document (apart from the suffix), but if multiple documents are translated together in a folder, a single glossary will be compiled and named **Glossary.csv**.

### Reset

Clicking **Reset** will restore all settings to the default values. However, if the word list has been modified without being renamed, **Reset** will not restore the word list to its original contents. To do that, you will need to unpack ThaiLao.dat from the zip archive installation file downloaded originally.

### Debug

If the **Debug** option is selected and saved, a log of various stages in translation and/or checking a document will be generated and saved with the name *debug.log* in the same folder as the original (Thai) document. If unexpected errors occur, try selecting this option and re-translating the document to generate the log, which should be sent together with the installation log (saved to *setup.log* in the original installation folder during Add-in installation) to <mailto://support@laoscript.net> for diagnosis and assistance.

## Appendix 1: Installing the Add-In

Download [ThaiLao310.zip](#) from the [LaoScript](#) website **and unblock the downloaded file**<sup>3</sup>. Then unpack the zip archive into a new folder<sup>4</sup>.

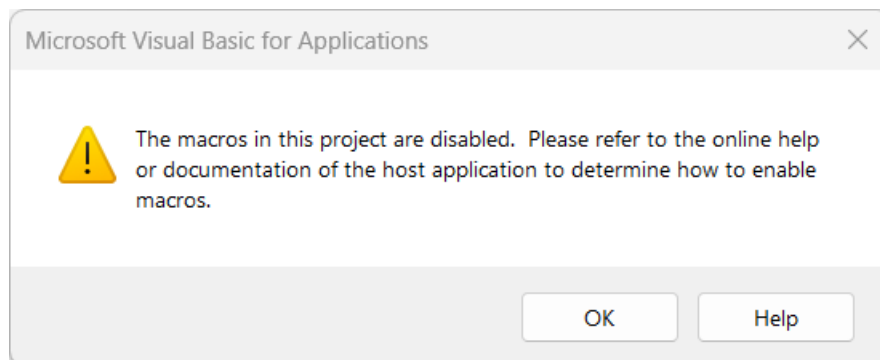
The package contains the following files:

ThaiLao.dotm	The Word template Add-In with the translation app.
ThaiLao.dat	Thai-Lao wordlist.
ThaiLao Add-In User Guide.pdf	This User Guide.
ThaiLaoSample.docx	Sample document.

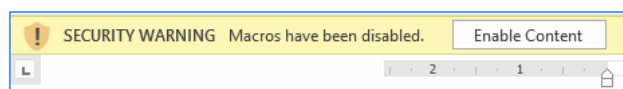
One or more Lao fonts may also be included and may be installed if needed. An initial user settings file is also included, but is not essential for installation. (After unpacking the files, if any are still blocked, use Windows Explorer to unblock.)

Using Windows Explorer, double-click the file entry for the template **ThaiLao.dotm** or select **New**, from the right-click menu. (Do not select **Open**, which will open the template for editing instead of installing the Add-In.)

The following dialog may be displayed:



After clicking **OK**, a further security warning will then be displayed:



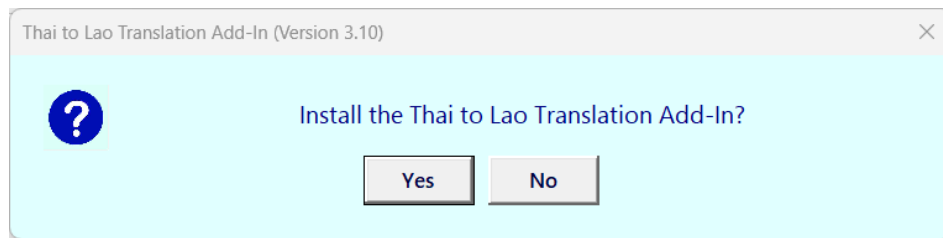
Click **Enable Content** to continue the installation.

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<sup>3</sup> Using Windows Explorer, right-click the file entry and select **Properties**. Check "Unblock" and click **Apply** or **OK**.

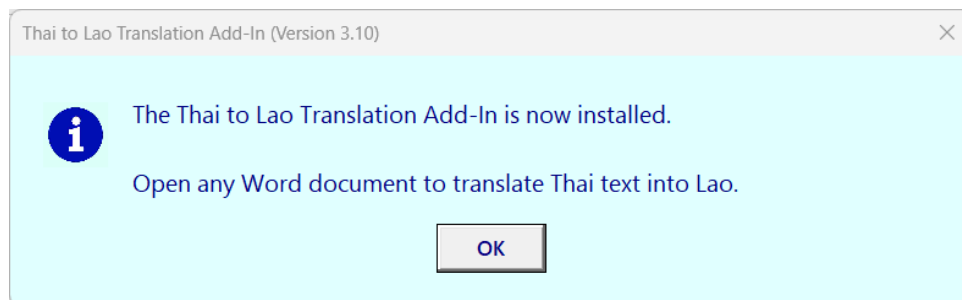
<sup>4</sup> The archive can most easily be expanded to a folder under *Downloads* but can be anywhere in your file system where files can be created and written to. Folder contents are only used during Add-In installation and uninstallation.

The following message will then appear:



Click **Yes** to install the template as a Word Add-In. Word will then close automatically. When it is re-opened, a new **Thai-Lao** tab will be visible in the Ribbon Menu.

When successfully installed, the following message will be displayed:



and the dictionary and other files needed for translation will be copied to a folder within your application data (typically *C:\<user>\AppData\Roaming\ThaiLao\*). This folder must not be deleted while the Thai-Lao Add-In is still needed, but will normally be deleted if the Add-In is installed.

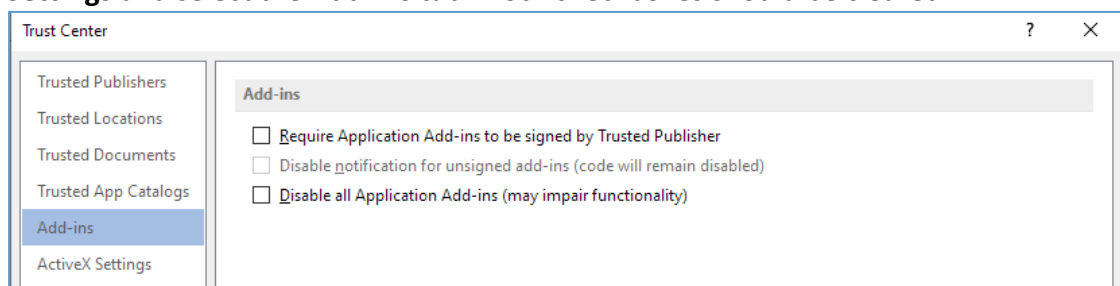
**Note:** *The Add-In should not be installed by browsing to the template using Word's File – Options – Add-Ins since if that is done, while the menu will appear, the word list and other files required for translation will not be available.*

## Possible Installation Difficulties

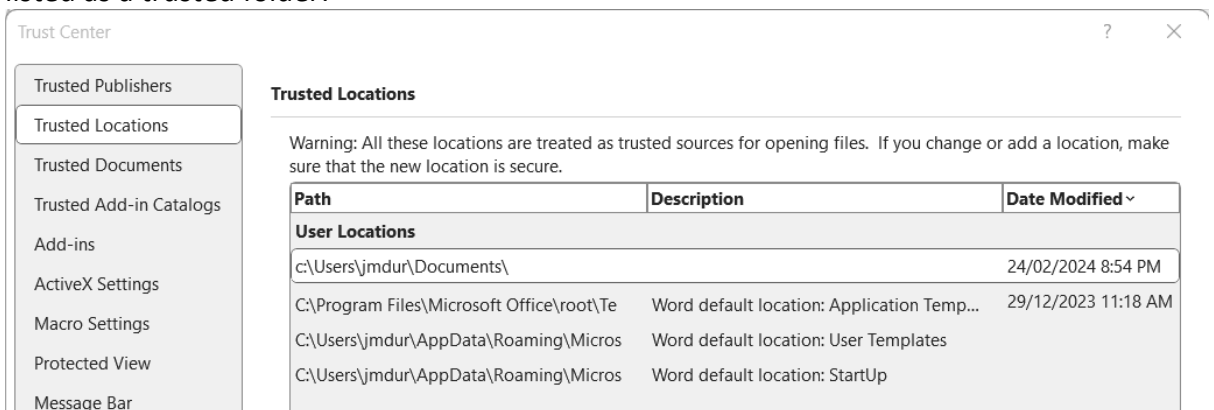
If the **Thai-Lao** tab does not appear, the following notes may help resolve the problem.

During installation, the **ThaiLao.dotm** template is copied to Microsoft Word's STARTUP folder. The following instructions may assist if the Thai-Lao tab fails to appear on the Ribbon Menu.

1. You may need administrator privileges to copy a file into the Word STARTUP folder, so elevate user permissions if prompted to do so.
2. You should not copy the template manually into the Word STARTUP folder, since the installation process also copies the word list, user guide and other files to the application data folder for reference as needed.
3. If the installation still fails, the **Thai-Lao** ribbon tab does not appear, or the Add-In still does not work correctly, go to **File – Options – Trust Center**, click **Trust Center Settings** and select the **Add-Ins** tab. Both checkboxes should be cleared:

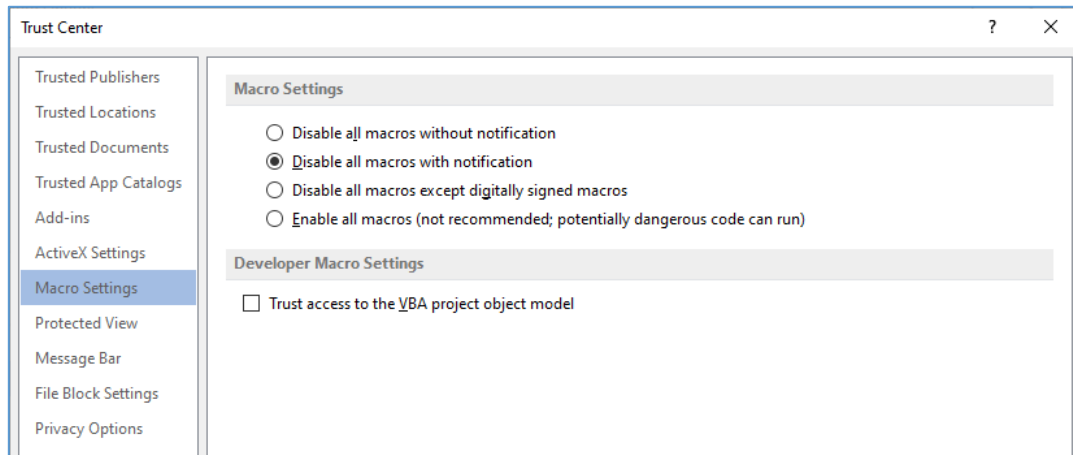


4. Then open the **Trusted Locations** tab. The Word STARTUP folder should always be listed as a trusted folder:



If not, Click **Add new location...** and add the path for the STARTUP folder. Make sure that the **Disable all Trusted Locations** checkbox (at the bottom of the window) is **not** checked.

5. If still not working, open the **Trust Center – Trust Center Settings - Macro Settings** tab, and select *Disable all macros with notification*:



Disabling macros with notification requires the SECURITY WARNING: Enable Content prompt to be accepted, but should then allow the application to execute normally. If not, select **Enable all macros** until the underlying cause of the problem can be determined and corrected.

## Uninstalling

The Add-In should be uninstalled by exiting completely from Word then double-clicking a copy of the originally downloaded **ThaiLao.dotm** template (not the copy in the STARTUP folder). If any changes have been made to the word list, you may be prompted to save a copy of the modified list before continuing.

The Add-In can also be disabled temporarily using the File – Options Add-Ins tab, selecting Word Add-Ins and clearing the checkbox for ThaiLao.dotm, but will automatically be re-loaded when Word is restarted.

The Add-In may also be completely uninstalled by deleting **ThaiLao.dotm** from Word's STARTUP folder and then restarting Word and deleting the ThaiLao application data folder (e.g. C:\<user>\AppData\Roaming\ThaiLao) and its contents.

## Appendix 2: Known Limitations of Thai-Lao Translation Add-In

The current implementation for Thai-Lao translation has the following known limitations:

- Abbreviations are not always recognized or translated correctly.
- Images embedded within paragraphs of text in a Thai document will not be copied to the Lao document.
- The text style of an entire paragraph of translated text will always be the same and based on the style of the first character in the Thai paragraph. Different styles within a paragraph will not be applied to the translated Lao.
- The Add-In cannot be used with documents that have the **AutoSave** option enabled (and are automatically backed up to a remote repository such as OneDrive).