

The `thaispec` package: Thai language typesetting in X_ƎƎ_Ǝ

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Version 2021.03.01

This package allows you to input Thai characters directly to Ǝ_ƎƎ_Ǝ documents and choose any (system wide) Thai fonts for typesetting via X_ƎƎ_Ǝ. It also tries to appropriately justify paragraphs with no more external tools.

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1 Prerequisite

The package requires TH `Sarabun New`¹, included in the collection of Thai national fonts, by default to typeset Thai characters. The following Ǝ_ƎƎ_Ǝ package

¹Thai national fonts, a.k.a. SIPAFonts. See <https://github.com/epsilonxe/sipafonts>

are essentially required for the default option: `fontspec`, `ucharclasses`, `polyglossia`, `setspace`, `kvoptions`, and `xpatch`.

2 Installation

Although the `thaispec` packages are included in all major L^AT_EX distributions, you may need to manually install or upgrade to the latest version.

In a case that it is neither installed nor outdated, please visit <https://github.com/epsilonxe/latex> to download the latest version of `thaispec.sty` and put it in your working directory.

More conveniently, but require familiar to command line interface, please run the following commands to install or update to the most recent version of `thaispec` via TexLive Manager. However, you may need administrator right to launch these commands. So consider to add `sudo` before each of the following commands.

```
$tlmgr install thaispec
$tlmgr update thaispec
```

3 Recommendation

Install the collection of Thai national fonts said above. Python and `pygments` are also recommended to be installed if syntax highlight needed in the document.

4 Package loading

In the preamble, add the command

```
\usepackage{thaispec}
```

then you can input Thai characters in the document and typeset the document as usual. This will typeset the document by choosing TH Sarabun New for all Thai characters. The package also predefines `\today` and `\Today` for today Thai date printing in short and long formats respectively. The Latin character will be typeset as usual.

5 Loading options

This section lists additional loading options by their features. Multiple options can be loaded with the following command.

```
\usepackage[option_1, option_2, ...]{thaispec}
```

The below table lists available options in the latest version.

Table 1: Loading options in `thaispec` package.

Options	Features
<code>thainum</code>	<p>Uses Thai numbers for almost all number digits which is disable by default. Use</p> <pre><code>\usepackage [thainum]{thaispec}</code></pre> <p>to activate this option.</p>
<code>math</code>	<p>Additionally load the following packages: <code>mathtools</code>, <code>amssymb</code>, <code>amsthm</code>, <code>mathspec</code> orderly. Moreover it sets various theorem environments like definition, theorem, corollary to Thai. If your document consists of math objects, this option is then recommended. Use</p> <pre><code>\usepackage [math]{thaispec}</code></pre> <p>to activate this option.</p>
<code>thaifont</code>	<p>Choose the selected Thai font for Thai charaters typesetting. For example, use</p> <pre><code>\usepackage [thaifont = Angsana New]{thaispec}</code></pre> <p>to choose font named <code>Angsana New</code>. Note that the selected font must be installed to the system before loading the package.</p>
<code>sloppy</code>	<p>This option is for fairly better Thai justified paragraphs which is enable by default. In case this option gives a bad justified output, try</p> <pre><code>\usepackage [sloppy=false]{thaispec}</code></pre> <p>to disable this option.</p>
<code>thaispacing</code>	<p>Mostly single spacing is too tight for Thai paragraph. By defalut this package is loaded with one and a half spacing. In case this option gives a bad justified output, try</p> <pre><code>\usepackage [thaispacing=false]{thaispec}</code></pre> <p>to disable this option, i.e., This sets single spacing for all paragraphs.</p>

Table 1: (continued) Loading options in `thaispec` package.

Options	Features
<code>thaicaption</code>	<p>The package sets various captions in Thai. This includes captions of chapter, section and table of contents. It is activated by default. If you do not want this, use</p> <pre><code>\usepackage [thaicaption=false]{thaispec}</code></pre> <p>to disable this option.</p>

6 Usage Examples

The following example is a basic example of using `thaispec` package. It is loaded with the default setting for typesetting in \XeLaTeX , i.e., only Thai characters are typesetted with TH Sarabun New font, other characters are typesetted as usual, and paragraphs are justified by `\sloppy` macro.

```

1 \documentclass{article}
2 \usepackage{thaispec}
3 \begin{document}
4 \section{ภาษาไทย}
5 ทดสอบการพิมพ์ภาษาไทยในเอกสาร \XeLaTeX
6 \end{document}

```

In order to use another Thai font face for any characters in a math document without `\sloppy` macro, the following example can be used to achieve the goal.

```

1 \documentclass{article}
2 \usepackage[math, thaifont = Tahoma, sloppy = false]{thaispec}
3 \begin{document}
4 \section{Math ภาษาไทย}
5 การพิมพ์ภาษาไทยในเอกสาร  $ax^2+bx+c=0$ 
6 \end{document}

```

7 Known Issues

7.1 Incorrect Thai characters with `listing` package

If you typeset some codes consisting of Thai characters in `lstlisting` environment provided by `listing` package, this will possibly cause you a problem with incorrect Thai characters. The recommendation is choosing `minted` package instead of `listing` package. However you need to additionally install `pygments`

python module in order to use `minted` package. If you do not install `pygments`, try using

```
$ pip install pygments
```

Moreover, you need to enable shell-escape when typeset the document. For example, use

```
$ xelatex -shell-escape your-tex-file.tex
```

to typeset your tex file.

7.2 TeXPad in macOS

As said above, the shell-escape must be enabled. Additionally, the *Hide Intermediate Files* option must be disabled and copy the pygment launcher to `/usr/local/bin`. The launcher can be located with the command

```
$ which pygments
```

Instead of copying the launcher directly, one may put its symbolic link to `/usr/local/bin`. If there is an error due to `minted` package, we recommend to delete the `minted` output directory prior typesetting.

8 Credits

This package is motivated by a set of L^AT_EX commands for typesetting Thai documents provided by Dittaya Wanvarie ² from Chulalongkorn University.

9 License

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<http://www.latex-project.org/lppl.txt>

and version 1.3 or later is part of all distributions of LaTeX version 2005/12/01 or later.

²See <http://pioneer.netserv.chula.ac.th/~wdittaya/> in L^AT_EX section.