The **thaispec** package:
Thai language typesetting in \LaTeX

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

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1 Prerequisite

The package use \texttt{Th Sarabun New} font by default to typeset Thai characters which included in the collection of Thai national fonts\footnote{Thai national fonts, a.k.a. SIPAFonts. See \url{https://github.com/epsilonxe/sipafonts}}. At least this font must be installed to system wide in order to use this package. Moreover the following \LaTeX package are essentially required for the default option: \texttt{fontspec},
ucharclasses, polyglossia, setspace, datatime2, kvoptions, afterpackage, xstring, and xpath.

2 Installation

The thaispec packages are included in all major \LaTeX distributions. In case it is not installed, please visit https://github.com/epsilonxe/latex to download the latest version of thaispec.sty and put it in your working directory.

3 Recommendation

Install the collection of Thai national font said above. Python and pygments are also recommended to be installed to typeset Thai documents which some syntax highlighted codes are needed.

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 typeseted 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>
<thead>
<tr>
<th>Options</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>thainum</td>
<td>Uses Thai numbers for almost all number digits which is disable by default. Use \usepackage [thainum]{thaispec} to activate this option.</td>
</tr>
<tr>
<td>math</td>
<td>Additionally load the following packages: mathtools, amssymb, amsthm, maths pec 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 \usepackage [math]{thaispec} to activate this option.</td>
</tr>
<tr>
<td>thaifont</td>
<td>Choose the selected Thai font for Thai charaters typesetting. For example, use \usepackage [thaifont = Angsana New]{thaispec} to choose font named Angsana New. Note that the selected font must be installed to the system before loading the package.</td>
</tr>
<tr>
<td>sloppy</td>
<td>This option is for fairly better Thai justified paragraphs which is enable by default. In case this option gives a bad justified output, try \usepackage [sloopy=false]{thaispec} to disable this option.</td>
</tr>
<tr>
<td>thaispacing</td>
<td>Mostly single spacing is too tight for Thai paragraph. By default this package is loaded with one and a half spacing. In case this option gives a bad justified output, try \usepackage [thaispacing=false]{thaispec} to disable this option, i.e., This sets single spacing for all paragraphs.</td>
</tr>
</tbody>
</table>
Table 1: (continued) Loading options in \texttt{thaispec} package.

<table>
<thead>
<tr>
<th>Options</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>\texttt{thaicaption}</td>
<td>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 \texttt{\usepackage[thaicaption=false]{thaispec}} to disable this option.</td>
</tr>
</tbody>
</table>

6 Usage Examples

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

\begin{lstlisting}[language=LaTeX]
\documentclass{article}
\usepackage{thaispec}
\begin{document}
\section{ภาษาไทย}
ทดสอบการพิมพ์ภาษาไทยในเอกสาร \texttt{XeLaTeX}
\end{document}
\end{lstlisting}

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

\begin{lstlisting}[language=LaTeX]
\documentclass{article}
\usepackage[math, thaifont = Tahoma, sloppy = false]{thaispec}
\begin{document}
\section{Math ภาษาไทย}
การพิมพ์ภาษาไทยในเอกสาร $ax^2+bx+c=0$
\end{document}
\end{lstlisting}

7 Known Issues

Incorrect Thai characters with \texttt{listing} package

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

## 8 Credits

This package is motivated by a set of \LaTeX\ commands for typesetting Thai documents provided by Dittaya Wanvarie\footnote{See http://pioneer.netserv.chula.ac.th/~wdittaya/ in \LaTeX\ section.} from Chulalongkorn University.

## 9 License

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