

A Brief Introduction To fswtotex

Before we get started, you need to install Xe \LaTeX (from someplace like <http://miktex.org>). You also need to download <https://github.com/dazitzel/SignWritingLaTeX/releases/latest> and place the correct file in your path. Once those two things are completed, the rest of this works much better.

The program `fswtotex` was designed to serve as a simple way to create SignWriting¹ documents. It's primary purpose is to read in Xe \LaTeX documents with Formal SignWriting and output Xe \LaTeX documents which will be produce legible SignWriting.

The initiator of `fswtotex` tried to make it as helpful as possible, so if you happen to forget what you need to get the output you are looking for try the following:

1. Make a small file. Mine has the word `Hi` and a blank line or two and is named `hi.txt`.
2. Start `fswtotex` on that file. For me I type `fswtotex hi.txt`.

This tells me:

```
Hi
```

```
% In order for this conversion to work your document needs a few things around your SignWriting text.
```

```
\documentclass{article}

\usepackage{fontspec}
\usepackage{tikz}
\usepackage[landscape]{geometry}
\usepackage[mirror]{crop}
\usepackage{everypage}
\AddEveryPageHook{\special{pdf: put @thispage <</Rotate -90>>}}

\begin{document}

\newfontfamily\swfill{SuttonSignWritingFill.ttf}
\newfontfamily\swline{SuttonSignWritingLine.ttf}

% SignWriting text goes here

\end{document}
% This file was generated by:
%   ./fswtotex hi.txt
```

You can literally copy/paste everything from `\documentclass{article}` to `\end{document}` into a new text file, insert your Formal SignWriting text, and it's ready to go.

Four Types of Documents

So let's give several examples of the types of documents that `fswtotex` is designed to make.

SignWriting Only Document

The first we want to show is how to do documents which only have SignWriting in them. In fact, that's the default settings.

Let's start by creating a new file called `hi.fsw.tex`.

¹SignWriting is a registered trademark of the Center For Sutton Movement Writing.

This will automatically set the text into columns with correct line handling and can be used for any instance of just wanting to write a letter to attach to an e-mail (or even print, put in an envelope, and mail).

SignWriting Only Document ... Again

But what if you want a SignWriting only document and your sign language is within a culture that has right-to-left writing? In that case, your columns should go the other direction. For that to work, you need a small change to the beginning of your document to match the small differences of how you call `fswtotex`. Let's create a file called `hirtl.fsw.tex`

```
\documentclass{article}

\usepackage{fontspec}
\usepackage{tikz}
\usepackage[landscape]{geometry}
\usepackage{everypage}
\AddEveryPageHook{\special{pdf: put @thispage <</Rotate 90>>}}

\begin{document}

\newfontfamily\swfill{SuttonSignWritingFill.ttf}
\newfontfamily\swline{SuttonSignWritingLine.ttf}

M546x518S30a00482x483S33e00482x483S14711518x485S22a07533x474
M536x504S38800464x496

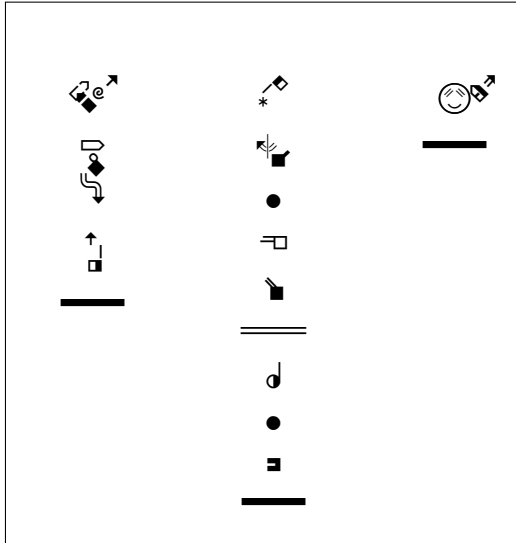
M517x518S10043487x482S20500483x507
M519x519S19220498x500S2a20c481x482
M508x508S17620492x492
M515x508S11502485x493
M511x513S11920490x487
M537x504S38700463x496
M508x515S10110492x485
M508x508S17620492x492
M508x508S14a20493x493
M536x504S38800464x496

M528x522S15a37473x486S15a51482x499S26507515x479S21100500x492
M514x536S15a06487x464S29b0b486x501S1eb27494x478
M510x523S10040495x493S26500491x478
M536x504S38800464x496

\end{document}
```

Be careful... the last one said `/Rotate -90` and this one says `/Rotate 90`!

Now run `./fswtotex --nomirror --rotate 90 hirtl.fsw.tex hirtl.tex` and follow that up with `xelatex hirtl.tex`.



SignWriting Documents with English Text

What about a SignWriting document that needs some English text mixed in.

The first thing you have to decide is how do you mix vertical text with horizontal text — I have a solution which I use, but other options exist. The second thing is to overcome all the magic that the default settings do but only when using English text.

In order to get Xe_LA_TE_X, which is designed for horizontal text, to make vertical text we rotate and mirror all the SignWriting then rotate and mirror all the pdf pages. That make the English text rather hard to read, so we have to rotate and mirror it to match the SignWriting.

Let's create a slightly different file called `hiagain.fsw.tex`.

```

\documentclass{article}

\usepackage{fontspec}
\usepackage{tikz}
\usepackage[landscape]{geometry}
\usepackage[mirror]{crop}
\usepackage{everypage}
\AddEveryPageHook{\special{pdf: put @thispage <</Rotate -90>>}}

\begin{document}

\newfontfamily\swfill{SuttonSignWritingFill.ttf}
\newfontfamily\swline{SuttonSignWritingLine.ttf}
\newcommand{\enubox}[1]{
  \reflectbox{\rotatebox[origin=r]{-90}{\begin{minipage}{0.08\textwidth}\begin{center}
    #1
  \end{center}\end{minipage}}}
}
M546x518S30a00482x483S33e00482x483S14711518x485S22a07533x474
M536x504S38800464x496

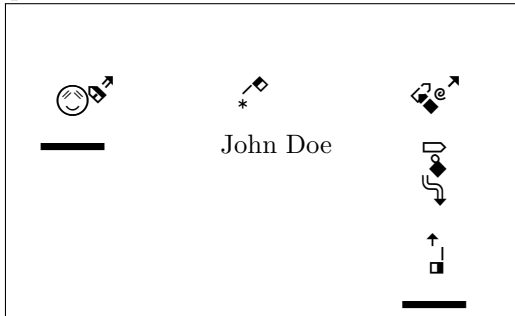
M517x518S10043487x482S20500483x507
\enubox{John Doe}

```

```
M528x522S15a37473x486S15a51482x499S26507515x479S21100500x492
M514x536S15a06487x464S29b0b486x501S1eb27494x478
M510x523S10040495x493S26500491x478
M536x504S38800464x496
```

```
\end{document}
```

Then run `fswtotex hiagain.fsw.tex hi.tex` and follow that up with `xelatex hiagain.tex` to make the pdf file.



If you happen to be mixing SignWriting with a right-to-left writing system, make the same changes mentioned above and then your command looks more like:

```
\newcommand{\enubox}[1]{
  \rotatebox[origin=l]{90}{\begin{minipage}{0.08\textwidth}\begin{center}
    #1
  \end{center}\end{minipage}}
}
```

English Documents with SignWriting

This is the hardest to do — and it's not really that hard!

Let's make a new file called `intro.fsw.tex`

```
\documentclass{article}

\usepackage{fontspec}
\usepackage{fullpage}
\usepackage{multicol}
\usepackage{tikz}

\begin{document}



\newfontfamily\swfill{SuttonSignWritingFill.ttf}
\newfontfamily\swline{SuttonSignWritingLine.ttf}
```

If you want to say ``hi'' you sign
 B546x518S30a00482x483S33e00482x483S14711518x485S22a07533x474.
 If that is all you want to say you can follow it up with the
 SignWriting full stop ``B536x504S38800464x496''.

```
\end{document}
```

Please notice that the top portion is missing several items!

Then run `fswtotex --nomirror --rotate 0 intro.fsw.tex intro.tex` and follow that up with `xelatex intro.tex` to make the pdf file. Also notice that we are using **B** instead of **M** to start our SignWriting words — that’s the hard part.

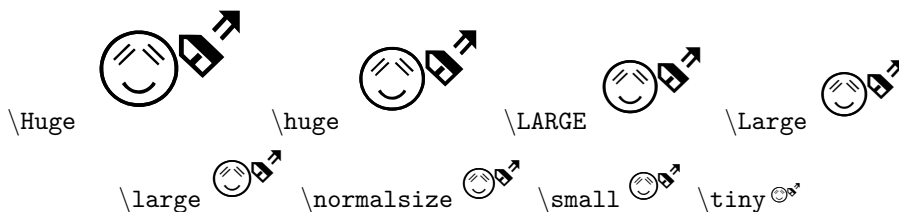
If you want to say “hi” you sign  . If that is SignWriting full stop “  ”.

You can put longer sequences of SignWriting text into columns with the `multicols` environment, sometimes using the **LMR** instead of **B** to start your SignWriting, but that would turn this into a \LaTeX introduction instead of an `fswtotex` introduction.

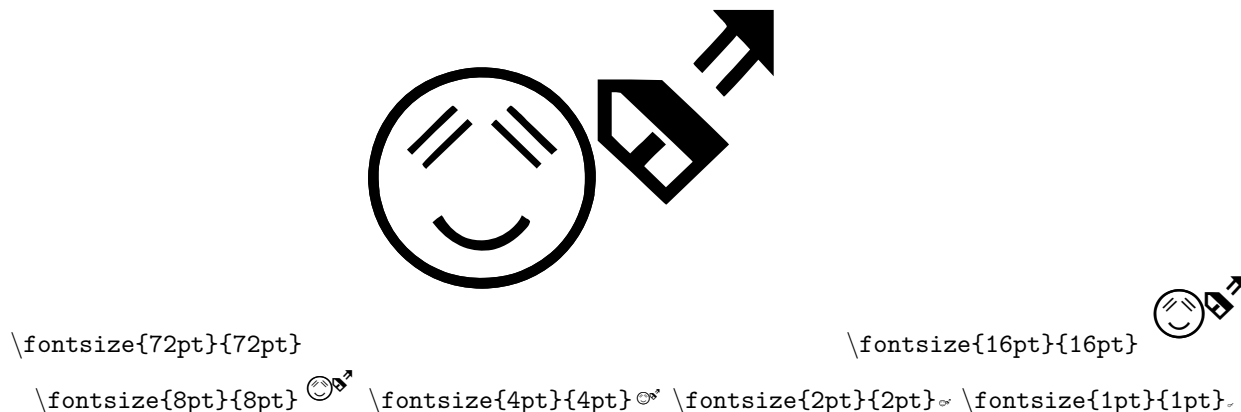
More Options

There is also an `fsize` option (`fswtotex --fsize signsize`) which then let’s you say `\newcommand{\signsign}{10}` at the beginning of your document and follow it up with things like `\renewcommand{\signsignsize}{20}` to have the SignWriting text be a different size than the English text. If you get fancy enough with your \LaTeX code you may have to use it anyway just to get `xelatex` to not error out. I found I had to include it to do things like put SignWriting in a `\raisebox` and similar things.

But if your documents are simple enough you can use the normal size commands:



Regardless of the method you use, any size is actually allowed:



I think that’s about it. If you just want to write letters or make lists, you should be set. If you want to publish something more professional, I suggest either finding an expert (they call themselves technicians/ \TeX nicians) or find *The Not So Short Introduction to \LaTeX* and move forward from there.

Thanks