

L^AT_EX Support For The Sans Mono Condensed Fonts

Boris Veytsman*

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Abstract

This package provides L^AT_EX support for The Sans Mono Condensed Font, designed by Lucas de Groot, 1996 and available from Font Fabrik. It has everything you need to typeset in this font - except the font itself, of course.

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*borisv@lk.net, boris@varphi.com

Table 1: PFB Files

File	Font
<code>thsmc121.pfb</code>	The Sans Mono Condensed Light
<code>thsmcp25.pfb</code>	The Sans Mono Condensed Plain
<code>thsmci29.pfb</code>	The Sans Mono Condensed Italic
<code>thsmcb02.pfb</code>	The Sans Mono Condensed Bold
<code>thsmcb96.pfb</code>	The Sans Mono Condensed Black

1 Introduction

This package provides support files for The Sans Mono Condensed Font by Lucas de Groot. It is a new monospaced font originally designed for typesetting program code. According to the Fontname scheme [1] we use the family name `fts`.

The package is written for the set of fonts currently used by *No Starch Press*, <http://www.nostarch.com>. It is possible that other versions of the fonts have slightly different metrics, and package should be changed to accommodate this. To make this easier, I release the package under BSD-style license. This is even more appropriate since most of the files is generated following the great course [2].

The support is limited to T1 and TS1 encoding. No VTeX support files are included.

2 Installation

First, you need to purchase the fonts themselves: the `pfb` files are *not* included in the package. If you got the fonts from *No Starch press*, do not rename the `pfb` files. However, if there are uppercase letters in your file names, downcase them. If you obtained the files from another source, rename the fonts according to Table 1. If your T_EX system is TDS-compliant, install the files into `$TEXMF/fonts/type1/public/thsmc`. Then download <http://ctan.tug.org/install/fonts/psfonts/fontfabrik/thsmc.tds.zip> and unzip the file in `$TEXMF`. Add `+fts.map` to the configuration files of `dvips`, `pdftex` and your dvi previewer.

Run `updmap` and `texhash` programs to update the configuration files and file names database.

The style `thsmc.sty` provides a number of commands for using the font family (see Section 3)

3 Using L^AT_EX Style

The package `thsmc.sty` makes The Sans Mono your default typewriter family. The package provides a number of weights: `lc` for Light Condensed, `mc` for Plain Condensed, `bc` for Bold Condensed and `ebc` for Heavy Condensed. The default substitutions are `mc` for `m`, `bc` for `b` and `bx`, and `ebc` for `eb`.

option scaled If you mix The Mono Sans with other fonts, you may want to scale it to get

better blending. The package option `scaled` can be used for this, for example `\usepackage[scaled=0.95]{thmsec}`.

4 Implementation

4.1 Identification

We start with the declaration who we are. Most `.dtx` files put driver code in a separate driver file `.drv`. We roll this code into the main file, and use the pseudo-guard `<gobble>` for it.

```
1 <style>\NeedsTeXFormat{LaTeX2e}
2 <*gobble>
3 \ProvidesFile{thsmc.dtx}
4 </gobble>
5 <style>\ProvidesClass{thsmc}
6 <fts - drv>\ProvidesFile{fts-drv.tex}
7 <fts - map>\ProvidesFile{fts-map.tex}
8 [2008/03/20 v1.0d Using The Mono Sans Condensed Font in LaTeX]
```

And the driver code:

```
9 <*gobble>
10 \documentclass{ltxdoc}
11 \usepackage{booktabs}
12 \usepackage{url}
13 \usepackage[breaklinks,colorlinks,linkcolor=black,citecolor=black,
14             pagecolor=black,urlcolor=black,hyperindex=false]{hyperref}
15 \PageIndex
16 \CodelineIndex
17 \RecordChanges
18 \EnableCrossrefs
19 \begin{document}
20   \DocInput{thsmc.dtx}
21 \end{document}
22 </gobble>
```

4.2 Fontinst Driver

This follows [2].

First, the preamble

```
23 <*fts - drv>
24 \input fontinst.sty
```

We have only condensed fonts, so we need to define substitutions. The only substitution missing here is `{1}{1c}`. The reason is, if we do define it, the standard substitution `{m}{1}` screens our `{m}{mc}`. Of course, we can use `\installfontas` to override this, but what if somebody has real The Sans Mono in normal width?

```
25 \substitutesilent{bx}{bc}
26 \substitutesilent{b}{bc}
27 \substitutesilent{eb}{ebc}
28 \substitutesilent{m}{mc}
29 \setint{smallcapsscale}{750}
30 \setint{slant}{167}
```

Somehow the afm files for this font declare `IsFixedPitch` false, which is bogus. OK, we correct it:

```
31 \setint{monowidth}{1}
```

Starting recording transforms:

```
32 \recordtransforms{fts-rec.tex}
```

A bunch of fonts:

```
33 \transformfont{fts18rc}{\reencodefont{8r}{\fromafm{thsmc121}}}
34 \transformfont{fts8rc}{\reencodefont{8r}{\fromafm{thsmcp25}}}
35 \transformfont{ftsri8rc}{\reencodefont{8r}{\fromafm{thsmci29}}}
36 \transformfont{fts8rc}{\reencodefont{8r}{\fromafm{thsmcb02}}}
37 \transformfont{ftsc8rc}{\reencodefont{8r}{\fromafm{thsmcb96}}}
```

Fake oblique fonts

```
38 \transformfont{ftslo8rc}{\slantfont{\int{slant}}}%
39 \reencodefont{8r}{\fromafm{thsmc121}}}
40 \transformfont{ftsro8rc}{\slantfont{\int{slant}}}%
41 \reencodefont{8r}{\fromafm{thsmcp25}}}
42 \transformfont{ftsbo8rc}{\slantfont{\int{slant}}}%
43 \reencodefont{8r}{\fromafm{thsmcb02}}}
44 \transformfont{ftsco8rc}{\slantfont{\int{slant}}}%
45 \reencodefont{8r}{\fromafm{thsmcb96}}}
```

There is no hook in `fontinst.sty` for writing our own preamble to `.fd` file. However, we need to add scaling commands to the preamble. OK, we will patch `fontinst`:

```
46 \fontinstcc
47 \def\fd_family#1#2#3{
48   \a_toks{#3}
49   \edef\lowercase_file{\lowercase{
50     \edef\noexpand\lowercase_file{#1#2.fd}}}
51   \lowercase_file
52   \open_out{\lowercase_file}
53   \out_line{\percent_char~Filename:~\lowercase_file}
54   \out_line{\percent_char~Created~by:~tex~\jobname}
55   \out_line{\percent_char~Created~using~fontinst~v\fontinstversion}
56   \out_line{}
57   \out_line{\percent_char~THIS~FILE~SHOULD~BE~PUT~IN~A~TEX~INPUTS~
58     DIRECTORY}
59   \out_line{}
60   \out_line{\string\ProvidesFile{\lowercase_file}}
61   \out_lline{[
62     \the\year/
63     \ifnum10>\month0\fi\the\month/
64     \ifnum10>\day0\fi\the\day\space
65     Fontinst~v\fontinstversion\space
66     font~definitions~for~#1/#2.
67   ]}
68   \out_line{}
```

Here is our patch:

```
69 \out_line{\string\expandafter\string\ifx\string\csname\space
70 Thsmc@scale\string\endcsname\string\relax}
71 \out_line{\space\string\let\string\Thsmc@@scale\string@empty}
72 \out_line{\string\else}
73 \out_line{\space\string\edef\string\Thsmc@@scale\left_brace_char
74 s*[\string\csname\space Thsmc@scale\string\endcsname]
75 \right_brace_char\percent_char}
76 \out_line{\string\fi\percent_char}
77 \out_line{}
```

End of the patch.

```
78 \out_line{\string\DeclareFontFamily{#1}{#2}{\the\font\font}}
79 {
80 \csname #1-#2\endcsname
81 \out_line{ }
82 \let\do_shape=\substitute_shape
83 \csname #1-#2\endcsname
84 \let\do_shape=\remove_shape
85 \csname #1-#2\endcsname
86 }
87 \x_cs\g_let{#1-#2}\x_relax
88 \out_line{ }
89 \out_line{\string\endinput}
90 \close_out{Font~definitions}
91 }
92 \normalcc
```

Now we install the fonts. First T1. There is no point in hyphenating monowidth fonts, so we suppress `\hyphenchar`.

```
93 \installfonts
94 \installfamily{T1}{fts}{\hyphenchar\font=-1}
95 \installfont{ftsl8tc}{ftsl8rc,newlatin}{t1}{T1}{fts}{lc}{n}{
96 <->\string\Thsmc@@scale}
97 \installfont{ftsl08tc}{ftsl08rc,newlatin}{t1}{T1}{fts}{lc}{sl}{
98 <->\string\Thsmc@@scale}
99 \installfont{ftsr8tc}{ftsr8rc,newlatin}{t1}{T1}{fts}{mc}{n}{
100 <->\string\Thsmc@@scale}
101 \installfont{ftsro8tc}{ftsro8rc,newlatin}{t1}{T1}{fts}{mc}{sl}{
102 <->\string\Thsmc@@scale}
103 \installfont{ftsri8tc}{ftsri8rc,newlatin}{t1}{T1}{fts}{mc}{it}{
104 <->\string\Thsmc@@scale}
105 \installfont{ftsb8tc}{ftsb8rc,newlatin}{t1}{T1}{fts}{bc}{n}{
106 <->\string\Thsmc@@scale}
107 \installfont{ftsbo8tc}{ftsbo8rc,newlatin}{t1}{T1}{fts}{bc}{sl}{
108 <->\string\Thsmc@@scale}
109 \installfont{ftsc8tc}{ftsc8rc,newlatin}{t1}{T1}{fts}{ebc}{n}{
110 <->\string\Thsmc@@scale}
111 \installfont{ftsco8tc}{ftsco8rc,newlatin}{t1}{T1}{fts}{ebc}{sl}{
112 <->\string\Thsmc@@scale}
```

```

113 \installfont{ftslc8tc}{ftsl8rc,newlatin}{t1c}{T1}{fts}{lc}{sc}{
114 <->\string\Thsmc@@scale}
115 \installfont{ftsrc8tc}{ftsr8rc,newlatin}{t1c}{T1}{fts}{mc}{sc}{
116 <->\string\Thsmc@@scale}
117 \installfont{ftsb8tc}{ftsb8rc,newlatin}{t1c}{T1}{fts}{bc}{sc}{
118 <->\string\Thsmc@@scale}
119 \installfont{ftsc8tc}{ftsc8rc,newlatin}{t1c}{T1}{fts}{ebc}{sc}{
120 <->\string\Thsmc@@scale}
121 \endinstallfonts

    And then TS1.

122 \installfonts
123 \installfamily{TS1}{fts}{\hyphenchar\font=-1}
124 \installfont{ftsl8cc}{ftsl8rc,textcomp}{ts1}{TS1}{fts}{lc}{n}{
125 <->\string\Thsmc@@scale}
126 \installfont{ftsl8cc}{ftsl8rc,textcomp}{ts1}{TS1}{fts}{lc}{sl}{
127 <->\string\Thsmc@@scale}
128 \installfont{ftsr8cc}{ftsr8rc,textcomp}{ts1}{TS1}{fts}{mc}{n}{
129 <->\string\Thsmc@@scale}
130 \installfont{ftsr8cc}{ftsr8rc,textcomp}{ts1}{TS1}{fts}{mc}{sl}{
131 <->\string\Thsmc@@scale}
132 \installfont{ftsri8cc}{ftsri8rc,textcomp}{ts1}{TS1}{fts}{mc}{it}{
133 <->\string\Thsmc@@scale}
134 \installfont{ftsb8cc}{ftsb8rc,textcomp}{ts1}{TS1}{fts}{bc}{n}{
135 <->\string\Thsmc@@scale}
136 \installfont{ftsb8cc}{ftsb8rc,textcomp}{ts1}{TS1}{fts}{bc}{sl}{
137 <->\string\Thsmc@@scale}
138 \installfont{ftsc8cc}{ftsc8rc,textcomp}{ts1}{TS1}{fts}{ebc}{n}{
139 <->\string\Thsmc@@scale}
140 \installfont{ftsc8cc}{ftsc8rc,textcomp}{ts1}{TS1}{fts}{ebc}{sl}{
141 <->\string\Thsmc@@scale}
142 \installfontas{ftsl8cc}{TS1}{fts}{lc}{sc}{
143 <->\string\Thsmc@@scale}
144 \installfontas{ftsr8cc}{TS1}{fts}{mc}{sc}{
145 <->\string\Thsmc@@scale}
146 \installfontas{ftsb8cc}{TS1}{fts}{bc}{sc}{
147 <->\string\Thsmc@@scale}
148 \installfontas{ftsc8cc}{TS1}{fts}{ebc}{sc}{
149 <->\string\Thsmc@@scale}
150 \endinstallfonts

    And the end:

151 \endrecordtransforms
152 \bye
153 </fts - drv>

```

4.3 Fontmap Generation

This is a standard procedure [2]

```

154 <*fts - map>

```

```

155 \input finstmsc.sty
156 \resetstr{PSfontsuffix}{.pfb}
157 \adddriver{dvips}{fts.map}
158 \input fts-rec.tex
159 \donedrivers
160 \bye
161 </fts – map>

```

4.4 Style File

The scaling code is from the `helvet` package:

```

162 <*style>
163 \RequirePackage[T1]{fontenc}
164 \RequirePackage{textcomp}
165 \RequirePackage{keyval}
166 \define@key{Thsmc}{scaled}[1]{%
167   \def\Thsmc@scale{#1}}
168 \def\ProcessOptionsWithKV#1{%
169   \let\Thsmc@tempa\empty
170   \let\Thsmc@tempa\empty
171   \ifx@classoptionslist\relax\else
172     \for\CurrentOption:=\classoptionslist\do{%
173       \ifundefined{KV@#1\CurrentOption}%
174         {}%
175       {%
176         \edef\Thsmc@tempa{\Thsmc@tempa,\CurrentOption,}%
177         \@expandtwoargs\removeelement\CurrentOption
178         \@unusedoptionlist\@unusedoptionlist
179       }%
180     }%
181   \fi
182   \edef\Thsmc@tempa{%
183     \noexpand\setkeys{#1}{%
184       \Thsmc@tempa\@optionlist{\@currname.\@current}%
185     }%
186   }%
187   \Thsmc@tempa
188   \let\CurrentOption\empty
189 }
190 \ProcessOptionsWithKV{Thsmc}
191 \AtEndOfPackage{%
192   \let\@unprocessedoptions\relax
193 }
194 \renewcommand{\ttdefault}{fts}
195 </style>

```


Acknowledgement This package was written for No Starch Press, <http://www.nostarch.com>.

References

- [1] Karl Berry. *Fontname. Filenames For T_EX Fonts*, September 2005. <http://ctan.tug.org/tex-archive/info/fontname>.
- [2] Philipp Lehman. *The Font Installation Guide*, December 2004. <http://www.ctan.org/tex-archive/info/Type1fonts/fontinstallationguide>.

Change History

v1.0		v1.0b	
General: First fully functional ver-		General: Documentation update . .	1
sion	1	v1.0c	
v1.0a		General: Installation update	1
General: Changed font family to fts		v1.0d	
from flm	1	General: Documentation update . .	1

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