

THE SANSMATHACCENT PACKAGE

ARIEL BARTON

It is sometimes desirable to typeset math in sans serif. This is particularly true when constructing slides, and so is done by default in the `beamer` class.

However, the Computer Modern sans serif fonts do not contain the information TeX needs to position accents correctly. So math accents end up placed badly:

$$\tilde{M} \quad \dot{u} \quad \hat{T} \quad \bar{v} \quad \mathring{A}$$

The `sansmathaccent` package implements Hendrik Vogt's solution as a L^AT_EX package:

$$\tilde{M} \quad \dot{u} \quad \hat{T} \quad \bar{v} \quad \mathring{A}$$

1. USAGE

This package was uploaded to CTAN in April 2012. If you have installed or updated your T_EX distribution since then, this package might have been installed on your system.

If not, you will need to install it. MikT_EX should do this automatically if you try to typeset a document that uses the package. MacT_EX users can install and update CTAN packages using the program “TeX Live Utility” in the `/Applications/TeX` folder. T_EX Live users can use the command-line utility `tlmgr` (see <http://tug.org/texlive/doc/tlmgr.html>).

If that does not work, consult one of the following web pages for advice on how to install a fonts package by hand:

<http://www.tug.org/fonts/fontinstall.html>

<http://www.tug.org/fonts/fontinstall-personal.html>

http://en.wikibooks.org/wiki/LaTeX/Packages/Installing_Extra_Packages

To correct the accents in a `beamer` document, say `\usepackage{sansmathaccent}`:

```
\documentclass{beamer}
\usepackage{sansmathaccent}
\begin{document}
\begin{frame}{}
$\tilde{M}$ $\dot{u}$ $\hat{T}$
\end{frame}
\end{document}
```

In an article, book, letter, or other document class other than `beamer`, first use the `sfmath` package to switch to sans serif math, then use `sansmathaccent` to correct the accents:

```
\documentclass{article}
\usepackage{sfmath}
\usepackage{sansmathaccent}
\begin{document}
```

```

 $\tilde{M}$   $\dot{u}$   $\hat{T}$ 
\end{document}

```

2. WARNINGS

`sansmathaccent` is not a standalone package; it is a package to correct a specific problem that appears in `beamer` and `sfmath`. If neither of those packages is used, `sansmathaccent` will do nothing.

Observe also that `sansmathaccent` will only work with Computer Modern sans serif math text; if you use a package such as `helvet` or `pxfonts` to change the sans serif math font away from the default, `sansmathaccent` will not help you.

Feedback is appreciated and may be sent to `origamist@gmail.com`.

3. LICENSE

This work (the `sansmathaccent` package) consists of the following files:

- `sansmathaccent.map`
- `sansmathaccent.pdf`
- `sansmathaccent.sty`
- `sansmathaccent.tex`
- `mathkerncmssi8.tfm`
- `mathkerncmssi9.tfm`
- `mathkerncmssi10.tfm`
- `mathkerncmssi12.tfm`
- `mathkerncmssi17.tfm`
- `ot1mathkerncmss.fd`

This work may be distributed and/or modified under the conditions of the L^AT_EX Project Public License, either version 1.3 of this license or (at your option) any later version.

The latest version of the license is in

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

and version 1.3 or later is part of all distributions of L^AT_EX version 2003/06/01 or later.

This work has the LPPL maintenance status “author-maintained”.

3.1. Derived Works included in this package. The files

- `mathkerncmssi8.tfm`
- `mathkerncmssi9.tfm`
- `mathkerncmssi10.tfm`
- `mathkerncmssi12.tfm`
- `mathkerncmssi17.tfm`
- `ot1mathkerncmss.fd`

were derived from the files

- `cmssi8.tfm`
- `cmssi9.tfm`
- `cmssi10.tfm`
- `cmssi12.tfm`
- `cmssi17.tfm`
- `ot1cmss.fd`

all of which are part of the L^AT_EX base distribution and can be found at ctan.org.

The Font Description file `ot1mathkerncmss.fd` was edited (by hand) to use the `mathkerncmssi` fonts rather than the `cmssi` fonts.

The edited T_EX Font Metric (`.tfm`) files were generated using the utilities `tftopl` and `pltotf` and using Hendrik Vogt's patch (included in the documentation as Section 4).

4. PATCH FILE

The following is the patch file used to generate the corrected TFM files. It is included for reference; you don't need to read this section to use the package. The patch file was written by Hendrik Vogt and used with permission.

```
17a18,61
> (LABEL C E)
> (LABEL C H)
> (LABEL C M)
> (LABEL C N)
> (LABEL C Q)
> (LABEL C i)
> (LABEL C j)
> (KRN 0 177 R 0.1)
> (STOP)
> (LABEL C J)
> (KRN 0 177 R 0.22)
> (STOP)
> (LABEL C e)
> (LABEL C m)
> (LABEL C n)
> (LABEL C r)
> (LABEL C B)
> (LABEL C R)
> (LABEL C S)
> (LABEL C Z)
> (KRN 0 177 R 0.08)
> (STOP)
> (LABEL C c)
> (LABEL C q)
> (LABEL C s)
> (LABEL C z)
> (KRN 0 177 R 0.06)
> (STOP)
> (LABEL C v)
> (LABEL C x)
> (KRN 0 177 R 0.04)
> (STOP)
> (LABEL C h)
> (KRN 0 177 R 0.02)
> (STOP)
> (LABEL C l)
```

```
> (LABEL C U)
> (KRN O 177 R 0.11)
> (STOP)
> (LABEL C d)
> (LABEL C C)
> (LABEL C G)
> (KRN O 177 R 0.12)
> (STOP)
25a70
> (KRN O 177 R 0.1)
61a107
> (KRN O 177 R 0.04)
62a109
> (KRN O 177 R 0.03)
68a116
> (KRN O 177 R 0.08)
70a119
> (KRN O 177 R 0.04)
77a127
> (KRN O 177 R 0.1)
79a130
> (KRN O 177 R 0.07)
86a138
> (KRN O 177 R 0.08)
87a140
> (KRN O 177 R 0.06)
93a147
> (KRN O 177 R 0.09)
95a150
> (KRN O 177 R 0.06)
103a159
> (KRN O 177 R 0.08)
104a161
> (KRN O 177 R 0.1)
111a169
> (KRN O 177 R 0.05)
112a171
> (KRN O 177 R 0.06)
120a180
> (KRN O 177 R 0.08)
122a183
> (KRN O 177 R 0.07)
124a186
> (KRN O 177 R 0.08)
127a190
> (KRN O 177 R 0.14)
134a198
> (KRN O 177 R 0.05)
```

```
140a205
> (KRN 0 177 R 0.01)
143a209
> (KRN 0 177 R 0.1)
```

The above was saved as a file `sansmathaccent.patch`. Then the following commands were executed:

```
for i in 8 9 10 12 17
do tftopl $(kpsewhich cmssi$i.tfm) > mathkerncmssi$i.pl
patch mathkerncmssi$i.pl sansmathaccent.patch
pltotf mathkerncmssi$i.pl
done
```

This generated the desired TFM files.