The \texttt{slantsc} package

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Abstract
This package enables the use of small capitals in different font shapes, e.g., slanted or bold slanted for all fonts that provide appropriate font shapes. The only prerequisite is that the corresponding \texttt{fd} file has to define the font shapes \texttt{scsl} resp. \texttt{scit} for slanted resp. italic small capitals.

Contents

1 The user interface 1
2 Using other fonts than European Modern 3
3 The implementation 4

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1 The user interface

To use this package place

\texttt{\usepackage{slantsc}}

in the preamble of your document. No options are necessary.

In \LaTeX{}, you can combine different font parameters like a bold series with an italic shape,

{\texttt{\bfseries\itshape\texttt{bold italic text}}}
to get **bold italic text**. But you are not able to combine two font shapes.

Since *italic*, *slanted*, and *small caps* are shapes, you are not able write in **SLANTED SMALL CAPITALS**, for instance. This problem is avoided by the package `smallcap`, available from the CTAN network, which redefines small caps to be a font family rather than a shape. But what to do if your font provides small capitals in roman style and in sans serifs? You are not able to access the sans serif version, then.

The `slantsc` package has a different approach. It preserves small caps to be a font shape, but it enables to combine the small caps shape with the other shapes (upright, italic, slanted). Thus, you use the normal font shape switching commands \texttt{\textshape, \textitshape, \textslshape, and \textscshape}. The first three commands act as usual among themselves. But if you use the \texttt{\textscshape} command, it just adds the information ”*small capitals*” to the current font shape.

For example, if the current font shape is italic and you use \texttt{\textscshape}, the following text is written in italic small capitals:

\texttt{\textitshape This is italic text, \textscshape now additionally in Small Capitals.}

This leads to:

*This is italic text, now additionally in Small Capitals.*

If you are in a small-capitals area, using one of the other font switching commands does not affect the small capitals status, but the rest of the font shape:

\texttt{\textitshape\textscshape This is italic Small Capitals text, \textupshape now Upright.}

This leads to:

*This is italic Small Capitals text, now Upright.*

As usual, the change of font shape is terminated by the end of the group, e.g., by using braces:

\texttt{\textitshape This is italic {\textscshape with Small Capitals} and without.}

This leads to:

*This is italic with Small Capitals and without.*

\texttt{\textitshape This is italic \textscshape with Small Capitals \textnoscshape and without.}

This leads to:
**This is italic with Small Capitals and without.**

\textup, \textit, \textsl, \textsc as well as the \textbf command, e.g.

This is \textbf{the person \textsc{Harald Harders} who wrote} this documentation.

which leads to:

This is *the person HARALD HARDERS who wrote* this documentation.

If you want another default font than the default, you may redefine the \textdefault command. If you, for instance, want to use an italic small caps font as default font, you may simply use

\renewcommand\textdefault{\scdefault\itdefault}

or

\renewcommand\textdefault{\scitdefault}

in the preamble of your document. Both variants are equivalent. Notice, that you have to use the command \textdefault before the other command for combined font shapes. If you want an upright small caps font as default, just use:

\renewcommand\textdefault{\scdefault}

You may not use \textdefault\updefault as argument! To switch to the default font, you may use the \defaultfont command.

If you want to set the font shape directly, using the \fontshape command, e.g.:

\fontshape{\scdefault\itdefault}\selectfont

The argument of this command is used in the same way as for the \textdefault command.

### 2 Using other fonts than European Modern

This package works with all fonts that provide slanted and italic versions of the small capitals.\footnote{If bold versions are also available, they are of course also supported.} It is important that these font shapes are declared in a specific way that \slantsc can find them.
slantsc uses two additional font shapes scsl and scit which are slanted small caps and italic small caps, respectively. These font shapes have to be declared in the corresponding file with the file name (encoding)/(font family).fd, e.g., t1lmr.fd for the Latin Modern fonts. For instance, the Latin Modern font family (version 0.86) provides slanted small capitals. The corresponding entry in the fd file looks like this:

\DeclareFontShape{T1}{lmr}{m}{scsl}{<-> cork-lmcsco10}{}

This command declares to use the font cork-lmcsco10 for the encoding T1, the font family lmr, the font series m (normal) and the font shape scsl (slanted small caps).

Unfortunately, Latin Modern does not contain the bold variant of the slanted small caps. But if it had it, the entry would look like that:

\DeclareFontShape{T1}{lmr}{bx}{scsl}{<-> ...}{}

Since nearly no font family will contain real italic small caps variants, the best approach is to substitute them by slanted variants. This could be done for Latin Modern by the following commands:

\DeclareFontShape{T1}{lmr}{m}{scit}{<->ssub * lmr/m/scsl}{}
\DeclareFontShape{T1}{lmr}{bx}{scit}{<->ssub * lmr/bx/scsl}{}

With the OT1 encoded Computer Modern fonts, slanted small capitals are not available, since these fonts do not contain them. Nevertheless, the font encoding is not forced to T1 by this package because it works with all encodings, if the font shapes are present.

3 The implementation

Heading of the package:

1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{slantsc} [2012/01/01 v2.11 Provide Slanted an Italic Small Caps]

More robust string comparisons.

4 \RequirePackage{ifthen}

Declare additional font shapes for European Computer Modern. I think, this should normally go to t1cmr.fd, but it is never read, since it is hardcoded to the format file.

\footnote{In this section, I assume that you haven’t redefined the default values for the different shapes. If you have done so, you have do adopt all strings according to your changes.}
Since European Computer Modern does not have real italic Small Caps substitute them silently by slanted ones.

\providecommand*\scitdefault{\scdefault\itdefault}
\providecommand*\scsldefault{\scdefault\sldefault}
\DeclareRobustCommand\upshape{
\fontshape\scdefault
}\selectfont
\DeclareRobustCommand\slshape{
\fontshape\sldefault
}\selectfont

\scitdefault Default shortcut for italic small caps.
\scsldefault Default shortcut for slanted small caps.
\upshape Redefine the macro \texttt{\upshape} that switches to an upright font. If small caps are "on", switch to ordinary small caps, otherwise switch to the normal upright font.
\slshape Redefine the macro \texttt{\slshape} that switches to a slanted font. If small caps are "on", switch to slanted small caps, otherwise switch to the normal slanted font.
Redefine the macro \texttt{\itshape} that switches to an italic font. If small caps are “on”, switch to italic small caps, otherwise switch to the normal italic font.

\begin{verbatim}
\DeclareRobustCommand\itshape{%
  \not@math@alphabet\itshape\relax
  \fontshape\scitdefault
  \selectfont%
}
\end{verbatim}

Font shape is with small caps.

\begin{verbatim}
\ifthenelse{\equal{\f@shape}{\scdefault}\or\equal{\f@shape}{\scitdefault}\or\equal{\f@shape}{\scsldefault}}{%
  \fontshape\scitdefault
}{%
  Current font shape is without small caps or not known.
  \fontshape\itdefault%
}{%
}
\end{verbatim}

Redefine the macro \texttt{\scshape} that switches to small capitals. If the actual font is italic, switch to italic small caps, if it is slanted, switch to slanted small caps, otherwise switch to ordinary small caps.

\begin{verbatim}
\DeclareRobustCommand\scshape{%
  \not@math@alphabet\scshape\relax
  \ifthenelse{\equal{\f@shape}{\scdefault}\or\equal{\f@shape}{\scitdefault}\or\equal{\f@shape}{\scsldefault}}{%
}{%
  Current font shape is without small caps or not known.
  If current font is italic, switch to italic small caps.
  \fontshape\scitdefault%
}{%}
  If current font is slanted, switch to slanted small caps.
  \fontshape\scsldefault%
}{%}
  If current font is either upright or unknown, switch to upright small caps.
  \fontshape\scdefault%
}{%}
\end{verbatim}

\texttt{\scshape} is “added” to the other font shape information. Thus, you normally, using one of the font-shape commands \texttt{\upshape}, \texttt{\slshape}, \texttt{\itshape}, and \texttt{\scshape} switches from one font shape to another, forgetting the old font shape. The new approach is switches only between \texttt{\upshape}, \texttt{\slshape}, and \texttt{\itshape}. \texttt{\scshape} is “added” to the other font shape information. Thus, you
are not able to use either of the commands $\upshape$, $\slshape$, and $\itshape$
to switch off small caps again. Therefore, you may use the command $\noscsshape$
which preserves the used font shape but moves from small caps to ordinary characters.

\begin{verbatim}
\DeclareRobustCommand\noscsshape{%
  \not@math@alphabet\noscsshape\relax
  Font shape is with small caps.
  \ifthenelse{\equal{\f@shape}{\scdefault}\or\equal{\f@shape}{\scitdefault}\or\equal{\f@shape}{\scsldefault}}{%
    \ifthenelse{\equal{\f@shape}{\scitdefault}}{%
      \fontshape\itdefault
    }{%
      \ifthenelse{\equal{\f@shape}{\scsldefault}}{%
        \fontshape\sldefault
      }{%
        \fontshape\updefault
      }%
    }%
  }{%
    \selectfont
  }%
}
\end{verbatim}

Change History

2.00
  General: Describe $\fontshape$ command ....................... 3
  Describe $\shapedefault$ command ......................... 3
  $\itshape$: Avoid using booleans because that causes problems with explicit use of $\fontshape$ .... 6
  $\noscsshape$: Avoid using booleans because that causes problems with explicit use of $\fontshape$ 6
  $\scitdefault$: Use commands for combined shapes ............ 5
  $\slshape$: Avoid using booleans because that causes problems with explicit use of $\fontshape$ .... 5
  $\upshape$: Avoid using booleans because that causes problems with explicit use of $\fontshape$ .... 5

2.10
  General: State date and version explicitly in $\ProvidesPackage$ . 1

2.11
  General: Update e-mail address . . 1
Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

<table>
<thead>
<tr>
<th>D</th>
<th>\itdefault 14, 42, 51, 68 \itshape \noscshape N \noscshape . 6, 9, 12, 13</th>
</tr>
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| E   | \emph \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal \equal 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| 8 |