

The `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 `fd` file has to define the font shapes `sctl` resp. `scit` for slanted resp. italic small capitals.

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1 The user interface

To use this package place

```
\usepackage{slantsc}
```

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

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

```
{\bfseries\itshape 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 `\upshape`, `\itshape`, `\slshape`, and `\scshape`. The first three commands act as usual among themselves. But if you use the `\scshape` 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 `\scshape`, the following text is written in italic small capitals:

```
\itshape This is italic text, \scshape 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:

```
\itshape\scshape This is italic Small Capitals text, \upshape 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:

```
\itshape This is italic {\scshape with Small Capitals} and without.
```

This leads to:

This is italic WITH SMALL CAPITALS and without.

`\noscspace` Sometimes, you may want to switch off small capitals without using a group. To be able to do so, this package provides the `\noscspace` command, which works as follows:

```
\itshape This is italic \scshape with Small Capitals \noscspace and without.
```

This leads to:

This is italic WITH SMALL CAPITALS and without.

`\textup` Instead of the font switching commands you may also use the `\text...` commands
`\textit` `\textup`, `\textit`, `\textsl`, `\textsc` as well as the `\emph` command, e.g.
`\textsl` This is `\emph{the person \textsc{Harald Harders} who wrote}` this
`\textsc` documentation.
`\emph`

which leads to:

This is the person HARALD HARDERS who wrote this documentation.

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

```
\renewcommand\shapedefault{\scdefault\itdefault}
```

or

```
\renewcommand\shapedefault{\scitdefault}
```

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

```
\renewcommand\shapedefault{\scdefault}
```

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

`\fontshape` 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 `\shapedefault`
command.

2 Using other fonts than European Modern

This package works with all fonts that provide slanted and italic versions of the
small capitals.¹ It is important that these font shapes are declared in a specific
way that `\slantsc` can find them.

¹If bold versions are also available, they are of course also supported.

`slantsc` uses two additional font shapes `scsl` and `scit` which are slanted small caps and italic small caps, respectively.² These font shapes have to be declared in the corresponding file with the file name $\langle encoding \rangle \langle font family \rangle .fd$, 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}
3 [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.

²In this section, I assume that you haven't redefined the default values for the different shapes. If you have done so, you have to adapt all strings according to your changes.

```

5 \DeclareFontFamily{T1}{cmr}{}
6 \DeclareFontShape{T1}{cmr}{m}{scsl}%
7 {<5><6><7><8><9><10><10.95><12><14.4>%
8   <17.28><20.74><24.88><29.86><35.83>genb*ecsc}{}
9 \DeclareFontShape{T1}{cmr}{bx}{scsl}%
10 {<5><6><7><8><9><10><10.95><12><14.4>%
11   <17.28><20.74><24.88><29.86><35.83>genb*ecoc}{}

```

Since European Computer Modern does not have real italic Small Caps substitute them silently by slanted ones.

```

12 \DeclareFontShape{T1}{cmr}{m}{scit}{<->ssub * cmr/m/scsl}{}
13 \DeclareFontShape{T1}{cmr}{bx}{scit}{<->ssub * cmr/bx/scsl}{}

```

\scitdefault Default shortcut for italic small caps.

```

14 \providecommand*\scitdefault{\scdefault\itdefault}

```

\scsldefault Default shortcut for slanted small caps.

```

15 \providecommand*\scsldefault{\scdefault\sldefault}

```

\upshape Redefine the macro `\upshape` that switches to an upright font. If small caps are “on”, switch to ordinary small caps, otherwise switch to the normal upright font.

```

16 \DeclareRobustCommand\upshape{%
17   \not@math@alphabet\upshape\relax

```

Font shape is with small caps.

```

18   \ifthenelse{\equal{\f@shape}{\scdefault}}{\or
19     \equal{\f@shape}{\scitdefault}}{\or\equal{\f@shape}{\scsldefault}}{}%
20     \fontshape\scdefault
21   }{}%

```

Current font shape is without small caps or not known.

```

22   \fontshape\updefault
23   }%
24   \selectfont
25 }

```

\slshape Redefine the macro `\slshape` that switches to a slanted font. If small caps are “on”, switch to slanted small caps, otherwise switch to the normal slanted font.

```

26 \DeclareRobustCommand\slshape{%
27   \not@math@alphabet\slshape\relax

```

Font shape is with small caps.

```

28   \ifthenelse{\equal{\f@shape}{\scdefault}}{\or
29     \equal{\f@shape}{\scitdefault}}{\or\equal{\f@shape}{\scsldefault}}{}%
30     \fontshape\scsldefault
31   }{}%

```

Current font shape is without small caps or not known.

```

32   \fontshape\sldefault
33   }%
34   \selectfont
35 }

```

`\itshape` Redefine the macro `\itshape` that switches to an italic font. If small caps are “on”, switch to italic small caps, otherwise switch to the normal italic font.

```

36 \DeclareRobustCommand\itshape{%
37   \not@math@alphabet\itshape\relax
Font shape is with small caps.
38   \ifthenelse{\equal{\f@shape}{\scdefault}}{\or
39     \equal{\f@shape}{\scitdefault}}{\or\equal{\f@shape}{\scsldefault}}{%
40     \fontshape\scitdefault
41   }{%
Current font shape is without small caps or not known.
42     \fontshape\itdefault
43   }%
44   \selectfont
45 }

```

`\scshape` Redefine the macro `\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.

```

46 \DeclareRobustCommand\scshape{%
47   \not@math@alphabet\scshape\relax
Font shape is with small caps. Nothing to do.
48   \ifthenelse{\equal{\f@shape}{\scdefault}}{\or
49     \equal{\f@shape}{\scitdefault}}{\or\equal{\f@shape}{\scsldefault}}{%
50   }{%
Current font shape is without small caps or not known.
  If current font is italic, switch to italic small caps.
51     \ifthenelse{\equal{\f@shape}{\itdefault}}{%
52       \fontshape\scitdefault
53     }{%
If current font is slanted, switch to slanted small caps.
54       \ifthenelse{\equal{\f@shape}{\sldefault}}{%
55         \fontshape\scsldefault
56       }{%
If current font is either upright or unknown, switch to upright small caps.
57         \fontshape\scdefault
58       }%
59     }%
60   }%
61   \selectfont
62 }

```

`\noscsshape` Normally, using one of the font-shape commands `\upshape`, `\slshape`, `\itshape`, and `\scshape` switches from one font shape to another, forgetting the old font shape. The new approach is switches only between `\upshape`, `\slshape`, and `\itshape`. `\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. Therefor, you may use the command `\noscsshape` which preserves the used font shape but moves from small caps to ordinary characters.

```
63 \DeclareRobustCommand\noscsshape{%
64   \not@math@alphabet\noscsshape\relax
Font shape is with small caps.
65   \ifthenelse{\equal{\f@shape}{\scdefault}}{\or
66     \equal{\f@shape}{\scitdefault}}{\or\equal{\f@shape}{\scsldefault}}{%
If current font is italic small caps, switch to italic.
67     \ifthenelse{\equal{\f@shape}{\scitdefault}}{%
68       \fontshape\itdefault
69     }{%
If current font is slanted small caps, switch to slanted.
70     \ifthenelse{\equal{\f@shape}{\scsldefault}}{%
71       \fontshape\sldefault
72     }{%
If current font is upright small caps, switch to upright.
73       \fontshape\updefault
74     }%
75   }%
76 }{%
Current font shape is without small caps or not known. Nothing to do.
77 }%
78 \selectfont
79 }
```

Change History

2.00	explicit use of <code>\fontshape</code>	6
General: Describe <code>\fontshape</code> command	<code>\scsldefault</code> : Use commands for combined shapes	3 5
Describe <code>\shapedefault</code> command	<code>\slshape</code> : Avoid using booleans because that causes problems with explicit use of <code>\fontshape</code>	3 5
<code>\itshape</code> : Avoid using booleans because that causes problems with explicit use of <code>\fontshape</code>	<code>\upshape</code> : Avoid using booleans because that causes problems with explicit use of <code>\fontshape</code>	6 5
<code>\noscsshape</code> : Avoid using booleans because that causes problems with explicit use of <code>\fontshape</code>	2.10	6
<code>\scitdefault</code> : Use commands for combined shapes	General: State date and version explicitly in <code>\ProvidesPackage</code> .	5 1
<code>\scshape</code> : Avoid using booleans because that causes problems with	2.11	5
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