

The EverySel package*

Martin Schröder

Barmer Straße 14

44137 Dortmund

Germany

martin@oneiros.de

May 30, 2009

Abstract

This packages provides hooks into the NFSS-command `\selectfont` called `\EverySelectfont` and `\AtNextSelectfont` analogous to `\AtBeginDocument`.

Contents

1	Introduction	1	5	The implementation	2
			5.1	Allocations	2
2	Usage	1	5.2	The user-visible commands	2
3	Options	2	5.3	Inserting the hooks	2
4	Required packages	2	6	Acknowledgements	4

1 Introduction

This package provides the hooks `\EverySelectfont` and `\AtNextSelectfont` whose arguments are executed just after \LaTeX has loaded a new font using `\selectfont` (which means that it will be executed after *every* font loaded via NFSS).

An example application would be a package for setting ragged text which needs to distinguish between monospaced and proportional fonts. Such a package exists: `ragged2e`^[2].

2 Usage

`\EverySelectfont` `\EverySelectfont{⟨code⟩}` declares `⟨code⟩` that is saved internally and executed just after *each* `\selectfont`.

Warning: The `⟨code⟩` is saved globally; there is currently no way to remove it.

`\AtNextSelectfont` `\AtNextSelectfont{⟨code⟩}` declares `⟨code⟩` that is saved internally and executed

*The version number of this file is v1.1, subversion revision #1373, last revised May 30, 2009. The name EverySel is a tribute to the 8 + 3 file-naming convention of certain “operating systems” and their “file systems”; strictly speaking it should be EverySelectfont.

just after *and only the next* `\selectfont`.

Repeated use of the commands is permitted: the code in their argument is stored (and executed) in the order of their declarations.

The argument of `\AtNextSelectfont` is executed *after* the argument of `\EverySelectfont`.

3 Options

The package has no options.

4 Required packages

The package requires no further packages.

5 The implementation

1 `\package`

5.1 Allocations

First we allocate the hooks

`\@EverySelectfont@EveryHook` The code to be executed just after the normal `\selectfont`.

2 `\newcommand{\@EverySelectfont@EveryHook}{}`

`\@EverySelectfont@AtNextHook` The code to be executed just after the normal `\selectfont` and `\@EverySelectfont@EveryHook`.

3 `\newcommand{\@EverySelectfont@AtNextHook}{}`

5.2 The user-visible commands

`\EverySelectfont` These commands are modeled after `\AtBeginDocument`.

`\AtNextSelectfont` 4 `\newcommand*{\EverySelectfont}[1]`
 5 `{\g@addto@macro\@EverySelectfont@EveryHook{#1}}`
 6 `\newcommand*{\AtNextSelectfont}[1]`
 7 `{\g@addto@macro\@EverySelectfont@AtNextHook{#1}}`

5.3 Inserting the hooks

The hooks are placed *inside* `\selectfont`. Unfortunately for us there are *two* versions of `\selectfont` in normal L^AT_EX: One is defined in the kernel and the other by the package `tracefnt`[1]. So we have to check for two versions.

`\@EverySelectfont@Init` We do this in the macro `\@EverySelectfont@Init`, which is executed just after `\begin{document}` (with the aid of `\AtBeginDocument`), when we know for sure which version of `\selectfont` we have to overload.

8 `\newcommand*{\@EverySelectfont@Init}{%`

We have to distinguish two cases: `tracefnt` and no `tracefnt`.

9 `\@ifpackageloaded{tracefnt}{%`

And we have a problem: `\selectfont` is defined using `\DeclareRobustCommand`, which really defines `\selectfont␣`. So instead of simply using `\CheckCommand` we also have to use `\expandafter` and `\csname... \endcsname`.

```

10     \expandafter\CheckCommand\csname selectfont \endcsname{%
11         \ifx\f@linespread\baselinestretch \else
12             \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
13     \xdef\font@name{%
14         \csname\curr@fontshape/\f@size\endcsname}%
15     \pickup@font
16     \font@name
17     \ifnum \tracingfonts>\tw@
18         \@font@info{Switching to \font@name}\fi
19     \size@update
20     \enc@update
21     }%
22 }{%

```

Now the case without `tracefnt`.

```

23     \expandafter\CheckCommand\csname selectfont \endcsname{%
24         \ifx\f@linespread\baselinestretch \else
25             \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
26     \xdef\font@name{%
27         \csname\curr@fontshape/\f@size\endcsname}%
28     \pickup@font
29     \font@name
30     \size@update
31     \enc@update
32     }%
33 }%

```

After the checks we can be sure we have the correct version of `\selectfont`, so we redefine it with our hooks.

```

34 \DeclareRobustCommand{\selectfont}%
35     {%
36     \ifx\f@linespread\baselinestretch \else
37         \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
38     \xdef\font@name{%
39         \csname\curr@fontshape/\f@size\endcsname}%
40     \pickup@font
41     \font@name
42     \@EverySelectfont@EveryHook
43     \@EverySelectfont@AtNextHook

```

We have to reset `\@EverySelectfont@AtNextHook` after each use.

```

44     \gdef\@EverySelectfont@AtNextHook{}%
45     \size@update
46     \enc@update
47     }%

```

The additions of `tracefnt` to `\selectfont` can be implemented using `\EverySelectfont`.

```

48     \@ifpackageloaded{tracefnt}{%
49         \EverySelectfont{%
50             \ifnum \tracingfonts>\tw@

```

```

51         \font@info{Switching to \font@name}\fi}%
52     }-{}%

```

Since `\@EverySelectfont@Init` should only be used once it is self-destructing.

```

53     \let\@EverySelectfont@Init\undefined
54 }

```

Finally we insert `\EverySelectfont@Init` into `\begin{document}`.

```

55 \AtBeginDocument{\@EverySelectfont@Init}

```

```

56 \end{package}

```

6 Acknowledgements

David Carlisle provided the solution for my problems with `\CheckCommand`.

References

- [1] Frank Mittelbach and Rainer Schöpf. The `tracefmt` package for use with the new font selection scheme. [CTAN:tex-archive/macros/latex/base/ltfsstrc.dtx](https://ctan.org/ctan-archive/macros/latex/base/ltfsstrc.dtx). L^AT_EX 2_ε package.
- [2] Martin Schröder. The `ragged2e` package. [CTAN:tex-archive/macros/latex/contrib/supported/ms/ragged2e.dtx](https://ctan.org/ctan-archive/macros/latex/contrib/supported/ms/ragged2e.dtx). L^AT_EX 2_ε package.

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.

Symbols	D
<code>\@EverySelectfont@AtNextHook</code>	<code>\DeclareRobustCommand</code> 34
<u>3</u> , 7, 43, 44	
<code>\@EverySelectfont@EveryHook</code>	E
<u>2</u> , 5, 42	<code>\else</code> 11, 24, 36
<code>\@EverySelectfont@Init</code> <u>8</u>	<code>\enc@update</code> 20, 31, 46
<code>\font@info</code> 18, 51	<code>\endcsname</code> 10, 14, 23, 27, 39
<code>\ifpackageloaded</code> 9, 48	<code>\EverySelectfont</code> 1, <u>4</u> , 49
A	<code>\expandafter</code> 10, 23
<code>\AtBeginDocument</code> 55	F
<code>\AtNextSelectfont</code> <u>1</u> , <u>4</u>	<code>\f@baselineskip</code> 12, 25, 37
B	<code>\f@linespread</code> 11, 24, 36
<code>\baselinestretch</code> 11, 12, 24, 25, 36, 37	<code>\f@size</code> 12, 14, 25, 27, 37, 39
C	<code>\fi</code> 12, 18, 25, 37, 51
<code>\CheckCommand</code> 10, 23	<code>\font@name</code> 13, 16, 18, 26, 29, 38, 41, 51
<code>\csname</code> 10, 14, 23, 27, 39	G
<code>\curr@fontshape</code> 14, 27, 39	<code>\g@addto@macro</code> 5, 7

<code>\gdef</code>	44		
		I	
<code>\ifnum</code>	17, 50		
<code>\ifx</code>	11, 24, 36		
		L	
<code>\let</code>	53		
		N	
<code>\newcommand</code>	2, 3, 4, 6, 8		
		P	
<code>\pickup@font</code>	15, 28, 40		
		S	
<code>\selectfont</code>	34		
<code>\set@fontsize</code>	12, 25, 37		
<code>\size@update</code>	19, 30, 45		
		T	
<code>\tracingfonts</code>	17, 50		
<code>\tw@</code>	17, 50		
		U	
<code>\undefined</code>	53		
		X	
<code>\xdef</code>	13, 26, 38		

Change History

v1.00	
General: New	1
v1.01	
General: Fixed use of <code>\newline</code> in title.	1
v1.02	
General: Minor documentation enhancements	1
v1.03	
General: Moved to LPPL	1
v1.1	
General: New address, LPPL 1.3	1