The EverySel package*

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Abstract

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

Contents

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
distiguinsh 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 v1.2, subversion revision #1712, last revised October 28,
2011.

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 LaTeX: One is defined in the kernel and the other by the package tracefnt[1]. The CJK also redefines \selectfont.

So we have to check for three 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}{%
9   \message{ABD: EverySelectfont initializing macros}%

We have to distinguish three cases: tracefnt, CJK and everything else.

```
10      \@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.

```
11        \expandafter\CheckCommand\csname selectfont \endcsname{%
12          \ifx\f@linespread\baselinestretch \else
13            \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
14          \xdef\font@name{%
15            \csname\curr@fontshape/\f@size\endcsname}%
16          \pickup@font
17          \font@name
18          \ifnum \tracingfonts>\tw@
19            \@font@info{Switching to \font@name}\fi
20          \size@update
21          \enc@update
22          }%
23      }{%
```

The case with CJK

```
24      \@ifpackageloaded{CJK}{%
25        \expandafter\CheckCommand\csname selectfont \endcsname{%
26          \ifx\f@linespread\baselinestretch \else
27            \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
28          \xdef\font@name{%
29            \csname\curr@fontshape/\f@size\endcsname}%
30          \pickup@font
31          \font@name
32          \expandafter\ifx\csname CJK@\curr@fontshape\endcsname \relax
33          \else
34            \CJK@bold@false
35            \csname CJK@\curr@fontshape\endcsname
36          \fi
37          \size@update
38          \enc@update}%
39      }{%
```

Now the default (no tracefnt and no CJK).

```
40        \expandafter\CheckCommand\csname selectfont \endcsname{%
41          \ifx\f@linespread\baselinestretch \else
42            \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
43          \xdef\font@name{%
44            \csname\curr@fontshape/\f@size\endcsname}%
45          \pickup@font
46          \font@name
47          \size@update
48          \enc@update
49          }%
50      }%
51    }%
```

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

```
52      \DeclareRobustCommand{\selectfont}%
```

```
53        {%
54        \ifx\f@linespread\baselinestretch \else
55            \set@fontsize\baselinestretch\f@size\f@baselineskip \fi
56        \xdef\font@name{%
57            \csname\curr@fontshape/\f@size\endcsname}%
58        \pickup@font
59        \font@name
60        \@EverySelectfont@EveryHook
61        \@EverySelectfont@AtNextHook
```

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

```
62        \gdef\@EverySelectfont@AtNextHook{}%
63        \size@update
64        \enc@update
65        }%
```

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

```
66    \@ifpackageloaded{tracefnt}{%
67        \EverySelectfont{%
68          \ifnum \tracingfonts>\tw@
69            \@font@info{Switching to \font@name}\fi}%
70        }{}%
```

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

```
71    \@ifpackageloaded{CJK}{%
72        \EverySelectfont{%
73          \expandafter\ifx\csname CJK@\curr@fontshape\endcsname \relax
74          \else
75            \CJK@bold@false
76            \csname CJK@\curr@fontshape\endcsname
77          \fi}%
78        }{}%
```

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

```
79    \let\@EverySelectfont@Init\undefined
80    }
```

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

```
81 \AtBeginDocument{\@EverySelectfont@Init}
```

```
82 ⟨/package⟩
```

6 Acknowledgements

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

References

[1] Frank Mittelbach and Rainer Schöpf. The tracefnt package for use with the new font selection scheme. CTAN:tex-archive/macros/latex/base/ltfsstrc.dtx. LaTeX 2ε package.

[2] Martin Schröder. The ragged2e package. CTAN:tex-archive/macros/latex/contrib/supported/ms/ragged2e.dtx. LATEX 2$_\varepsilon$ package.

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Change History