



Ivan Valbusa

The
fontsize
package

v0.8.3 – 2021/04/18

The serif typeface is Cochineal, created by Michael Sharpe on the basis of Sebastian Kosch's Crimson. The typewriter font is Inconsolata, designed by Raph Levien and the sans serif text is typeset in Linux Biolinum, created by Philipp H. Pol.

Legalese

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Feedback

If you have any questions, feedback or requests please email me at `ivan dot valbusa at gmail dot com`. If you need specific features not already implemented, remember to attach the example files.

User's guide to fontsize

A small package to change the font size

v0.8.3 – 2021/04/18

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Abstract

The fontsize package allows you to set arbitrary sizes for the main font of the document and to adjust the line spacing accordingly. It also provides new font sizing commands and lets you generate your own .clo file for better tuning.

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Credits

The code is an excerpt of the scrextend and scrfontsizes packages (Neukam et al. 2020), with few minor changes to make it completely independent of the KOMA-script bundle and with a couple of new features. The package is updated to version 3390 2019-11-18 17:09:35Z of the scrkernel-fonts.dtx file.

Caveat

Although effective with any value of the font size (as long as the font is scalable), the package is meant for small font size changes. For truly optimal results you should (re)define your own .clo file. In fact note that the file generated with \generateclofile, as well as the macros redefined via \changefontsize, are a subset of the standard .clo files.

1 Usage

The package can be loaded, as usual, with:

```
\usepackage[<options>]{fontsize}
```

1.1 Options

fontsize = $\langle\text{fontsize}\rangle$ default: 10pt

Sets the normal size to $\langle\text{fontsize}\rangle$ and the normal line spacing to $1.2\langle\text{fontsize}\rangle$. The other sizes (`\tiny`, `\scriptsize`, ecc.) and line spacings are set proportionally. You can use any unit recognized by T_EX and you can omit the unit as well (in which case it defaults to pt).

Note that `fontsize` does not redefine some commands of the standard `.clo` files such as those related to the page layout and few others. For example the 12pt class option redefine `\Huge` (via `\let\Huge=\huge`) which is not redefined by `fontsize=12pt`. For these reasons, if possible, you should always set a font size class option that comes close to the one loaded by the package. For example with `fontsize=12.2pt` you should load the 12pt class option.

parindent = $\langle\text{dimen}\rangle$ default: $1.5\langle\text{fontsize}\rangle$

Sets the value of `\parindent`. You can use any unit recognized by T_EX but for consistency it is preferable to use a font-dependent unit such as em.

Note that the "em" is simply an arbitrary unit that comes with a particular font. The value of `\parindent` given in ems depends on both the font used and on how or where it is set: whether before or after `\begin{document}`. For this reason, don't expect 1 em to always be equivalent to the currently specified $\langle\text{fontsize}\rangle$. If you don't like this behavior, use absolute units such as pt, cm or mm.

cloname = $\langle\text{name}\rangle$ default: `fontsize`

If declared *before* `fontsize`, it loads the file named $\langle\text{name}\rangle\langle\text{fontsize}\rangle.clo$ to setup the font sizes. This file can be generated through the `\generateclofile` command (see below).

1.2 Commands

\changefontsize[$\langle\text{baselineskip}\rangle$]{ $\langle\text{fontsize}\rangle$ } iff $\langle\text{baselineskip}\rangle \geq \langle\text{fontsize}\rangle$

Sets the normal size to $\langle\text{fontsize}\rangle$ and the normal line spacing to $\langle\text{baselineskip}\rangle$. The other sizes (`\tiny`, `\scriptsize`, ecc.) and line spacings are set proportionally. If the first optional argument is omitted, the command has the same effect of the `fontsize` option. You can use any unit recognized by T_EX and you can omit the unit as well (in which case it defaults to pt).

```
\changefontsize[13.5pt]{11.5pt}
```

\generateclofile{ $\langle\text{name}\rangle$ }[$\langle\text{baselineskip}\rangle$]{ $\langle\text{fontsize}\rangle$ } iff $\langle\text{baselineskip}\rangle \geq \langle\text{fontsize}\rangle$

Generates a file named $\langle\text{name}\rangle\langle\text{fontsize}\rangle.clo$ in which the normal size is $\langle\text{fontsize}\rangle$ and the normal line spacing is $\langle\text{baselineskip}\rangle$. The other sizes (`\tiny`, `\scriptsize`, `\small`, ecc.) and line spacings are set proportionally. You can use any unit recognized by T_EX and you can omit the unit as well (in which case it defaults to pt). If `cloname= $\langle\text{name}\rangle$` and `fontsize= $\langle\text{fontsize}\rangle$` , the generated file will be automatically used to setup the main sizes.

In fact the .clo file is only needed if you intend to modify it. In this case remember to comment the command, otherwise the edited file will be overwritten.

```
\usepackage[cloname=fs,fontsize=11.5]{fontsize} % loads fs11.5.clo
\generateclofile{fs}[13.5]{11.5} % creates fs11.5.clo
```

`\printsamples{⟨baselineskip⟩}{⟨fontsize⟩}[⟨sizes⟩]` iff $\langle\text{baselineskip}\rangle \geq \langle\text{fontsize}\rangle$

A command thought to test the fontsize settings. It prints a text sample for every size given in the third optional argument. If this argument is omitted, it prints a sample for each available size. See the examples on page 8.

```
\printsamples{13pt}{11pt}[normalsizer,normalsizerr,normalsizerrr]
\printsamples{13.5pt}{12pt}
```

`\sampletext{⟨text⟩}`

Defines the $\langle\text{text}\rangle$ to be used by `\printsamples`.

1.3 New font sizing commands

The package provides three additional font sizing commands for each standard size (plus the new `\HUGE` command). See table 1 for details.

<code>\tiny</code>	Lipsum	<code>\LARGE</code>	Lipsum
<code>\tinyr</code>	Lipsum	<code>\LARGE r</code>	Lipsum
<code>\tinyrr</code>	Lipsum	<code>\LARGE rr</code>	Lipsum
<code>\tinyrrr</code>	Lipsum	<code>\LARGE rrr</code>	Lipsum
<code>\scriptsize</code>	Lipsum	<code>\huge</code>	Lipsum
<code>\scriptsize r</code>	Lipsum	<code>\huger</code>	Lipsum
<code>\scriptsize rr</code>	Lipsum	<code>\huger</code>	Lipsum
<code>\scriptsize rrr</code>	Lipsum	<code>\huger</code>	Lipsum
<code>\footnotesize</code>	Lipsum	<code>\Huge</code>	Lipsum
<code>\footnotesize r</code>	Lipsum	<code>\Huger</code>	Lipsum
<code>\footnotesize rr</code>	Lipsum	<code>\Huger</code>	Lipsum
<code>\footnotesize rrr</code>	Lipsum	<code>\Huger</code>	Lipsum
<code>\small</code>	Lipsum	<code>\Hugerr</code>	Lipsum
<code>\small r</code>	Lipsum	<code>\Hugerr</code>	Lipsum
<code>\small rr</code>	Lipsum	<code>\HUGEr</code>	Lipsum
<code>\small rrr</code>	Lipsum	<code>\HUGEr</code>	Lipsum
<code>\normalsize</code>	Lipsum	<code>\HUGErr</code>	Lipsum
<code>\normalsize r</code>	Lipsum	<code>\HUGErr</code>	Lipsum
<code>\normalsize rr</code>	Lipsum	<code>\HUGErrr</code>	Lipsum
<code>\normalsize rrr</code>	Lipsum		Lipsum
<code>\large</code>	Lipsum		Lipsum
<code>\larger</code>	Lipsum		Lipsum
<code>\largerr</code>	Lipsum		Lipsum
<code>\largerrr</code>	Lipsum		Lipsum
<code>\Large</code>	Lipsum		Lipsum
<code>\Larger</code>	Lipsum		Lipsum
<code>\Largerr</code>	Lipsum		Lipsum
<code>\Largerrr</code>	Lipsum		Lipsum



If you want these commands to work as expected, the font must be smoothly scalable. This is the case of many Type 1 and Open Type fonts such as Cochineal used in this document (Sharpe 2020), but if the font has optical sizes, unusual things can happen: some larger sizes may appear smaller. For example, with the Latin Modern typeface (Jackowski and Nowacki 2009) a similar situation can be encountered when normal size is set to 12 pt:

<code>\largerr</code>	15.84 pt	Hello world	
<code>\larger</code>	15.12 pt	Hello world	
<code>\large</code>	14.40 pt	Hello world	

In fact the font used for the `\larger` ‘Hello world’ is bigger than that used for the `\large` one. This optical effect is due to the minor thickness of the stems, which makes the words appear shorter and clearer, but not less high (as you can see in the figure on the right which shows the letter H appropriately scaled to see the differences better).

Table 1: The value of all available sizes (rounded to the second decimal place) relative to `\normalsize` ranging from 8 pt to 12 pt with increments of 0.5 pt. The first row of each size shows the font size; the second row (colored in gray) shows the default line spacing

<code>\tiny</code>	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00
	4.80	5.06	5.40	5.65	6.00	6.30	6.55	6.90	7.14
<code>\tinyr</code>	4.33	4.60	4.88	5.15	5.42	5.69	5.96	6.23	6.50
	5.20	5.48	5.85	6.12	6.50	6.83	7.09	7.48	7.74
<code>\tinyrr</code>	4.67	4.96	5.25	5.54	5.83	6.12	6.42	6.71	7.00
	5.60	5.90	6.30	6.59	7.00	7.35	7.64	8.05	8.33
<code>\tinyrrr</code>	5.00	5.31	5.62	5.94	6.25	6.56	6.88	7.19	7.50
	6.00	6.32	6.75	7.07	7.50	7.87	8.18	8.62	8.93
<code>\scriptsize</code>	5.33	5.67	6.00	6.33	6.67	7.00	7.33	7.67	8.00
	6.40	6.74	7.20	7.54	8.00	8.40	8.73	9.20	9.52
<code>\scriptsize r</code>	5.67	6.02	6.38	6.73	7.08	7.44	7.79	8.15	8.50
	6.80	7.16	7.65	8.01	8.50	8.93	9.27	9.78	10.12
<code>\scriptsize rr</code>	6.00	6.38	6.75	7.12	7.50	7.88	8.25	8.62	9.00
	7.20	7.59	8.10	8.48	9.00	9.45	9.82	10.35	10.71
<code>\scriptsize rrr</code>	6.33	6.73	7.13	7.52	7.92	8.31	8.71	9.10	9.50
	7.60	8.01	8.55	8.95	9.50	9.98	10.36	10.93	11.31
<code>\footnotesize</code>	6.67	7.08	7.50	7.92	8.33	8.75	9.17	9.58	10.00
	8.00	8.43	9.00	9.42	10.00	10.50	10.91	11.50	11.90
<code>\footnotesize r</code>	6.83	7.25	7.68	8.10	8.53	8.96	9.38	9.81	10.24
	8.19	8.63	9.21	9.64	10.24	10.75	11.17	11.77	12.18
<code>\footnotesize rr</code>	6.98	7.42	7.86	8.29	8.73	9.17	9.60	10.04	10.48
	8.38	8.83	9.43	9.87	10.48	11.00	11.43	12.05	12.47
<code>\footnotesize rrr</code>	7.14	7.59	8.03	8.48	8.93	9.37	9.82	10.27	10.71
	8.57	9.03	9.64	10.09	10.71	11.25	11.69	12.32	12.75
<code>\small</code>	7.30	7.76	8.21	8.67	9.13	9.58	10.04	10.49	10.95
	8.76	9.23	9.86	10.32	10.95	11.50	11.94	12.59	13.03

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\smallr	7.47	7.94	8.41	8.88	9.34	9.81	10.28	10.75	11.21
	8.97	9.45	10.09	10.56	11.21	11.77	12.23	12.89	13.34
\smallrr	7.65	8.13	8.61	9.08	9.56	10.04	10.52	11.00	11.48
	9.18	9.67	10.33	10.81	11.48	12.05	12.52	13.20	13.66
\smallrrr	7.82	8.31	8.80	9.29	9.78	10.27	10.76	11.25	11.74
	9.39	9.89	10.56	11.06	11.74	12.32	12.80	13.50	13.97
\normalsize	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00
	9.60	10.20	10.80	11.40	12.00	12.60	13.20	13.80	14.40
\normalsize r	8.40	8.93	9.45	9.98	10.50	11.03	11.55	12.08	12.60
	10.08	10.62	11.34	11.87	12.60	13.23	13.74	14.49	14.99
\normalsize rr	8.80	9.35	9.90	10.45	11.00	11.55	12.10	12.65	13.20
	10.56	11.13	11.88	12.44	13.20	13.86	14.40	15.18	15.71
\normalsize rrr	9.20	9.77	10.35	10.92	11.50	12.07	12.65	13.22	13.80
	11.04	11.63	12.42	13.00	13.80	14.49	15.05	15.87	16.42
\large	9.60	10.20	10.80	11.40	12.00	12.60	13.20	13.80	14.40
	11.52	12.14	12.96	13.57	14.40	15.12	15.71	16.56	17.14
\larger	10.08	10.71	11.34	11.97	12.60	13.23	13.86	14.49	15.12
	12.10	12.74	13.61	14.24	15.12	15.88	16.49	17.39	17.99
\largerr	10.56	11.22	11.88	12.54	13.20	13.86	14.52	15.18	15.84
	12.67	13.35	14.26	14.92	15.84	16.63	17.28	18.22	18.85
\largerrr	11.04	11.73	12.42	13.11	13.80	14.49	15.18	15.87	16.56
	13.25	13.96	14.90	15.60	16.56	17.39	18.06	19.04	19.71
\Large	11.52	12.24	12.96	13.68	14.40	15.12	15.84	16.56	17.28
	13.82	14.57	15.55	16.28	17.28	18.14	18.85	19.87	20.56
\Larger	12.10	12.85	13.61	14.36	15.12	15.88	16.63	17.39	18.14
	14.52	15.29	16.33	17.09	18.14	19.05	19.79	20.87	21.59
\Largerr	12.67	13.46	14.26	15.05	15.84	16.63	17.42	18.22	19.01
	15.21	16.02	17.11	17.91	19.01	19.96	20.73	21.86	22.62
\Largerrr	13.25	14.08	14.90	15.73	16.56	17.39	18.22	19.04	19.87
	15.90	16.75	17.88	18.72	19.87	20.87	21.68	22.85	23.65
\LARGE	13.82	14.69	15.55	16.42	17.28	18.14	19.01	19.87	20.74
	16.59	17.48	18.66	19.54	20.74	21.77	22.62	23.85	24.68
\LARGE r	14.52	15.42	16.33	17.24	18.14	19.05	19.96	20.87	21.77
	17.42	18.35	19.60	20.51	21.77	22.86	23.75	25.04	25.91
\LARGE rr	15.21	16.16	17.11	18.06	19.01	19.96	20.91	21.86	22.81
	18.25	19.23	20.53	21.49	22.81	23.95	24.88	26.23	27.15
\LARGE rrr	15.90	16.89	17.89	18.88	19.88	20.87	21.86	22.86	23.85
	19.08	20.10	21.46	22.47	23.85	25.04	26.02	27.43	28.38
\huge	16.59	17.63	18.67	19.70	20.74	21.78	22.81	23.85	24.89
	19.91	20.98	22.40	23.45	24.89	26.13	27.15	28.62	29.62
\huger	17.42	18.51	19.60	20.69	21.78	22.86	23.95	25.04	26.13
	20.90	22.03	23.52	24.62	26.13	27.44	28.50	30.05	31.09

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\hugerr	18.25	19.39	20.53	21.67	22.81	23.95	25.09	26.23	27.37
	21.90	23.07	24.63	25.79	27.37	28.74	29.86	31.48	32.57
\hugerrr	19.08	20.27	21.46	22.65	23.85	25.04	26.23	27.42	28.61
	22.89	24.12	25.75	26.96	28.61	30.04	31.21	32.91	34.05
<hr/>									
\Huge	19.90	21.15	22.39	23.64	24.88	26.12	27.37	28.61	29.86
	23.88	25.17	26.87	28.13	29.86	31.35	32.57	34.33	35.53
\Huger	20.89	22.19	23.50	24.80	26.11	27.42	28.72	30.03	31.33
	25.07	26.41	28.20	29.52	31.33	32.90	34.18	36.03	37.29
\Hugerr	21.87	23.24	24.61	25.97	27.34	28.71	30.07	31.44	32.81
	26.25	27.65	29.53	30.91	32.81	34.45	35.79	37.73	39.04
\Hugerrr	22.86	24.28	25.71	27.14	28.57	30.00	31.43	32.86	34.28
	27.43	28.90	30.86	32.30	34.28	36.00	37.40	39.43	40.80
<hr/>									
\HUGE	24.05	25.55	27.05	28.56	30.06	31.56	33.07	34.57	36.07
	28.86	30.41	32.46	33.98	36.07	37.88	39.35	41.48	42.93
\HUGEr	25.24	26.82	28.39	29.97	31.55	33.13	34.70	36.28	37.86
	30.29	31.91	34.07	35.67	37.86	39.75	41.30	43.54	45.05
\HUGErr	26.43	28.08	29.74	31.39	33.04	34.69	36.34	38.00	39.65
	31.72	33.42	35.68	37.35	39.65	41.63	43.25	45.60	47.18
\HUGErrr	27.62	29.35	31.08	32.80	34.53	36.26	37.98	39.71	41.44
	33.15	34.93	37.29	39.04	41.44	43.51	45.20	47.65	49.31

2 Some text samples

The following samples are obtained with the \printsamples command (see section 1.2):

\printsamples{12.6pt}{10.6pt}[normalsizeerr,normalsizerrr,large,larger,largerr]

Text samples for \normalsize 10.6pt on 12.6pt

\normalsizeerr: 11.7pt on 13.8pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\normalsizerrr: 12.2pt on 14.4pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\large: 12.7pt on 15pt. As any dedicated reader can clearly see, the Ideal of practical

reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\larger: 13.4pt on 15.8pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

\largerr: 14pt on 16.5pt. As any dedicated reader can clearly see, the Ideal of practical reason is a representation of, as far as I know, the things in themselves; as I have shown elsewhere, the phenomena should only be used as a canon for our understanding. The paralogisms of practical reason are what first give rise to the architectonic of practical reason. As will easily be shown in the next section, reason would thereby be made to contradict, in view of these considerations, the Ideal of practical reason, yet the manifold depends on the phenomena.

3 The Code

The parts added to the basic code of `scrextend` and `scrfontsizes` are highlighted in blue.

All the options of the package are defined via `xkeyval` (Adriaens 2014), while the `xfp` package (The L^AT_EX Project 2021) provides the `\fpeval` command to use instead of `\dimexpr` for some size calculations. Only two new package options, called `cloname` and `parindent` are defined.

```
1 \ifpackageloaded{xkeyval}{\RequirePackage{xkeyval}}
2 \ifpackageloaded{xfp}{\RequirePackage{xfp}}
3 \DeclareOptionX{cloname}[fontsize]{\def\@fontsizefilebase{#1}}
4 \DeclareOptionX{parindent}[1.5\@tempdimb]{\def\@fontsizeparindent{#1}}
```

Excerpt from `scrextend.sty` Here the `scrextend` code begins. All the KOMA related codes have been removed and only a few names have been changed. The value of `\@fontsizefilebase` is set to `fontsize` instead of `scrsz`.

```
5 \DeclareOptionX{fontsize}[10]{%
6   \expandafter\@defaultunits\expandafter\@tempdima#1 pt\relax\@nnil
7   \edef\@tempa{#1}%
8   \setlength{\@tempdimb}{\@tempdima}%
9   \edef\@tempb{\strip@pt\@tempdimb}%
}
```

```

10 \addtolength{\@tempdimb}{-10\p@}%
11 \edef\@ptsize{\strip@pt\@tempdimb}%
12 \edef\@tempa{%
13   \noexpand\makeatletter
14   \noexpand\InputIfFileExists{\@fontsizefilebase\@tempa.clo}{%
15     \noexpand\PackageInfo{fontsize}{%
16       File '@fontsizefilebase\@tempa.clo' used to setup font sizes}%
17     }{%
18       \noexpand\InputIfFileExists{\@fontsizefilebase\@tempb pt.clo}{%
19         \noexpand\PackageInfo{fontsize}{%
20           File '@fontsizefilebase\@tempb pt.clo' used instead of%
21           \noexpand\MessageBreak
22           file '@fontsizefilebase\@tempa.clo' to setup font sizes}%
23         }{%
24           \noexpand\changefontsize{#1}%
25         }%
26       }%
27     \noexpand\catcode'\noexpand\@=\the\catcode'\@
28   }%
29   \expandafter\AtEndOfPackage\expandafter{\@tempa}%
30 }

```

Now we can execute and process the new options defined above. As `cloname` is responsible for defining `\@fontsizefilebase` it must precede `fontsize` which uses this command. The `\ctm@setlength` and `\changefontsize` commands are simply new names, respectively, for `\scr@setlength` and `\changefontsizes` used in `scrextend.sty`.

```

31 \ExecuteOptionsX{cloname,fontsize,parindent}
32 \ProcessOptionsX*\relax

```

```

33 \newcommand*\ctm@setlength[4]{%
34   \ifdim #2<\ifdim #2=\z@ \z@ \else \p@\fi
35   \ifdim #3<\ifdim #3=\z@ \z@ \else \p@\fi
36   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
37   \setlength{#1}{\p@ \@plus\p@ \@minus\p@}%
38   \else
39   \setlength{#1}{\p@ \@plus\p@ \@minus#4}%
40   \fi
41   \else
42   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
43   \setlength{#1}{\p@ \@plus#3 \@minus\p@}%
44   \else
45   \setlength{#1}{\p@ \@plus#3 \@minus#4}%
46   \fi
47   \fi
48   \else
49   \ifdim #3<\ifdim #3=\z@ \z@ \else \p@\fi
50   \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
51   \setlength{#1}{#2 \@plus\p@ \@minus\p@}%
52   \else
53   \setlength{#1}{#2 \@plus\p@ \@minus#4}%
54   \fi

```

```

55 \else
56 \ifdim #4<\ifdim #4=\z@ \z@ \else \p@\fi
57 \setlength{#1}{#2 \@plus#3 \@minus\p@}%
58 \else
59 \setlength{#1}{#2 \@plus#3 \@minus#4}%
60 \fi
61 \fi
62 \fi
63 }
64 \providecommand*\changefontsize[2][1.2\@tempdima]{%
65 \@defaultunits\@tempdima#2pt\relax\@nnil
66 \setlength{\@tempdimc}{\@tempdima}%
67 \addtolength{\@tempdimc}{-10\p@}%
68 \edef\@ptsize{\strip@pt\@tempdimc}%
69 \@defaultunits\@tempdimb#1pt\relax\@nnil

```

The value of \@tempdimc set in scrextend.sty

```
\setlength{\@tempdimc}{\dimexpr (100\@tempdimb / \@tempdima * \p@)}
```

returns an error when the the line spacing is greater than 163.84 pt or the value passed to the fontsize option is grater than 136.53 pt. This is due to the intermediate calculation: $100\@tempdimb = 16\,384$ pt, which is the maximum dimension that may be stored in plain T_EX and L^AT_EX. The problem, which is probably more theoretical than practical, can be solved (thanks to Claudio Beccari) simply by changing it to this:

```

70 \setlength{\@tempdimc}{\fpeval{100*\@tempdimb/\@tempdima}pt}%

71 \edef\@tempb{\the\@tempdimc}%
72 \setlength{\@tempdimc}{\@tempdima}%
73 \def\@tempa##1##2##3##4##5\@nnil{\def##1{##2.##3##4}}%
74 \expandafter\@tempa\expandafter\@tempb\@tempb\@nnil%
75 \ctm@setlength{\abovedisplayskip}%
76 {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
77 \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdimb}{\z@}%
78 \ctm@setlength{\belowdisplayshortskip}%
79 {.5\@tempdimb}{.25\@tempdimb}{.25\@tempdimb}%
80 \setlength{\belowdisplayskip}{\abovedisplayskip}%
81 \edef\normalsize{%
82 \noexpand\setfontsize\noexpand\normalsize
83 {\the\@tempdima}{\the\@tempdimb}%
84 \abovedisplayskip \the\abovedisplayskip
85 \abovedisplayshortskip \the\abovedisplayshortskip
86 \belowdisplayskip \the\belowdisplayskip
87 \belowdisplayshortskip \the\belowdisplayshortskip
88 \let\noexpand\@listi\noexpand\@listI
89 }%
90 \setlength{\@tempdima}{0.9125\@tempdimc}%
91 \setlength{\@tempdimb}{\@tempb\@tempdima}%
92 \ctm@setlength{\abovedisplayskip}%
93 {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
94 \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdimb}{\z@}%

```

```

95 \ctm@setlength{\belowdisplayskip}%
96 {.5\@tempdima}{.25\@tempdima}{.25\@tempdima}%
97 \setlength{\belowdisplayskip}{\abovedisplayskip}%
98 \edef\small{%
99   \noexpand\@setfontsize\noexpand\small
100   {\the\@tempdima}{\the\@tempdima}%
101   \abovedisplayskip \the\abovedisplayskip
102   \abovedisplayshortskip \the\abovedisplayshortskip
103   \belowdisplayskip \the\belowdisplayskip
104   \belowdisplayshortskip \the\belowdisplayshortskip
105   \let\noexpand\@listi\noexpand\@listi@small
106 }%
107 \setlength{\@tempdima}{.83334\@tempdimc}%
108 \setlength{\@tempdima}{\@tempb\@tempdima}%
109 \ctm@setlength{\abovedisplayskip}%
110 {.8333\@tempdima}{.1667\@tempdima}{.5\@tempdima}%
111 \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdima}{\z@}%
112 \ctm@setlength{\belowdisplayskip}%
113 {.5\@tempdima}{.25\@tempdima}{.25\@tempdima}%
114 \setlength{\belowdisplayskip}{\abovedisplayskip}%
115 \edef\footnotesize{%
116   \noexpand\@setfontsize\noexpand\footnotesize
117   {\the\@tempdima}{\the\@tempdima}%
118   \abovedisplayskip \the\abovedisplayskip
119   \abovedisplayshortskip \the\abovedisplayshortskip
120   \belowdisplayskip \the\belowdisplayskip
121   \belowdisplayshortskip \the\belowdisplayshortskip
122   \let\noexpand\@listi\noexpand\@listi@footnotesize
123 }%
124 \setlength{\@tempdima}{.66667\@tempdimc}%
125 \setlength{\@tempdima}{\@tempb\@tempdima}%
126 \edef\scriptsize{%
127   \noexpand\@setfontsize\noexpand\scriptsize
128   {\the\@tempdima}{\the\@tempdima}%
129 }%
130 \setlength{\@tempdima}{.5\@tempdimc}%
131 \setlength{\@tempdima}{\@tempb\@tempdima}%
132 \edef\tiny{%
133   \noexpand\@setfontsize\noexpand\tiny
134   {\the\@tempdima}{\the\@tempdima}%
135 }%
136 \setlength{\@tempdima}{1.2\@tempdimc}%
137 \setlength{\@tempdima}{\@tempb\@tempdima}%
138 \edef\large{%
139   \noexpand\@setfontsize\noexpand\large
140   {\the\@tempdima}{\the\@tempdima}%
141 }%
142 \setlength{\@tempdima}{1.44\@tempdimc}%
143 \setlength{\@tempdima}{\@tempb\@tempdima}%
144 \edef\Large{%
145   \noexpand\@setfontsize\noexpand\Large

```

```

146   {\the\@tempdima}{\the\@tempdimb}%
147 }%
148 \setlength{\@tempdima}{1.728\@tempdimc}%
149 \setlength{\@tempdimb}{\@tempb\@tempdima}%
150 \edef\LARGE{%
151   \noexpand\@setfontsize\noexpand\LARGE
152   {\the\@tempdima}{\the\@tempdimb}%
153 }%
154 \setlength{\@tempdima}{2.074\@tempdimc}%
155 \setlength{\@tempdimb}{\@tempb\@tempdima}%
156 \edef\huge{%
157   \noexpand\@setfontsize\noexpand\huge
158   {\the\@tempdima}{\the\@tempdimb}%
159 }%
160 \setlength{\@tempdima}{2.488\@tempdimc}%
161 \setlength{\@tempdimb}{\@tempb\@tempdima}%
162 \edef\Huge{%
163   \noexpand\@setfontsize\noexpand\Huge
164   {\the\@tempdima}{\the\@tempdimb}%
165 }%

```

We will now define some new font sizing commands. There are three variants for each standard command: $\langle cmd \rangle r$ > $\langle cmd \rangle rr$ > $\langle cmd \rangle rrr$. Every level is scaled proportionally in order to preserve the default value of the corresponding standard command.

```

166 \def\fontsize@pre{%
167   \ctm@setlength{\abovedisplayskip}%
168   {.8333\@tempdimb}{.1667\@tempdimb}{.5\@tempdimb}%
169   \ctm@setlength{\abovedisplayshortskip}{\z@}{.25\@tempdimb}{\z@}%
170   \ctm@setlength{\belowdisplayshortskip}%
171   {.5\@tempdimb}{.25\@tempdimb}{.25\@tempdimb}%
172   \setlength{\belowdisplayskip}{\abovedisplayskip}%
173 }
174 \def\fontsize@app{%
175   \abovedisplayskip \the\abovedisplayskip%
176   \abovedisplayshortskip \the\abovedisplayshortskip%
177   \belowdisplayskip \the\belowdisplayskip%
178   \belowdisplayshortskip \the\belowdisplayshortskip%
179 }

```

Definition of \smallr , \smallrr , \smallrrr .

Scale factor: 0,021875.

```

180 \setlength{\@tempdima}{0.934375\@tempdimc}%
181 \setlength{\@tempdimb}{\@tempb\@tempdima}%
182 \fontsize@pre
183 \edef\smallr{%
184   \noexpand\@setfontsize\noexpand\smallr
185   {\the\@tempdima}{\the\@tempdimb}%
186   \fontsize@app
187   \let\noexpand\@listi\noexpand\@listi@small
188 }%

```

```

189 \setlength{\@tempdima}{0.95625\@tempdimc}%
190 \setlength{\@tempdimb}{\@tempb\@tempdima}%
191 \fontsize@pre
192 \edef\smallrr{%
193   \noexpand\@setfontsize\noexpand\smallrr
194   {\the\@tempdima}{\the\@tempdimb}%
195   \fontsize@app
196   \let\noexpand\@listi\noexpand\@listi@small
197 }%
198 \setlength{\@tempdima}{0.978125\@tempdimc}%
199 \setlength{\@tempdimb}{\@tempb\@tempdima}%
200 \fontsize@pre
201 \edef\smallrrr{%
202   \noexpand\@setfontsize\noexpand\smallrrr
203   {\the\@tempdima}{\the\@tempdimb}%
204   \fontsize@app
205   \let\noexpand\@listi\noexpand\@listi@small
206 }%

```

Definition of \footnotesizer, \footnotesizerr, \footnotesizerrr.
Scale factor: 0.01979.

```

207 \setlength{\@tempdima}{0.85313\@tempdimc}%
208 \setlength{\@tempdimb}{\@tempb\@tempdima}%
209 \fontsize@pre
210 \edef\footnotesizer{%
211   \noexpand\@setfontsize\noexpand\footnotesizer
212   {\the\@tempdima}{\the\@tempdimb}%
213   \fontsize@app
214   \let\noexpand\@listi\noexpand\@listi@footnotesize
215 }%
216 \setlength{\@tempdima}{0.87292\@tempdimc}%
217 \setlength{\@tempdimb}{\@tempb\@tempdima}%
218 \fontsize@pre
219 \edef\footnotesizerr{%
220   \noexpand\@setfontsize\noexpand\footnotesizerr
221   {\the\@tempdima}{\the\@tempdimb}%
222   \fontsize@app
223   \let\noexpand\@listi\noexpand\@listi@footnotesize
224 }%
225 \setlength{\@tempdima}{0.89271\@tempdimc}%
226 \setlength{\@tempdimb}{\@tempb\@tempdima}%
227 \fontsize@pre
228 \edef\footnotesizerrr{%
229   \noexpand\@setfontsize\noexpand\footnotesizerrr
230   {\the\@tempdima}{\the\@tempdimb}%
231   \fontsize@app
232   \let\noexpand\@listi\noexpand\@listi@footnotesize
233 }%

```

Definition of \scriptsize, \scriptsizeerr, \scriptsizeerrr.

Scale factor: 0,0416675.

```
234 \setlength{\@tempdima}{0.7083375\@tempdimc}%
235 \setlength{\@tempdimb}{\@tempb\@tempdima}%
236 \edef\scriptsize{%
237   \noexpand\@setfontsize\noexpand\scriptsize
238   {\the\@tempdima}{\the\@tempdimb}%
239 }%
240 \setlength{\@tempdima}{0.750005\@tempdimc}%
241 \setlength{\@tempdimb}{\@tempb\@tempdima}%
242 \edef\scriptsizeerr{%
243   \noexpand\@setfontsize\noexpand\scriptsizeerr
244   {\the\@tempdima}{\the\@tempdimb}%
245 }%
246 \setlength{\@tempdima}{0.7916725\@tempdimc}%
247 \setlength{\@tempdimb}{\@tempb\@tempdima}%
248 \edef\scriptsizeerrr{%
249   \noexpand\@setfontsize\noexpand\scriptsizeerrr
250   {\the\@tempdima}{\the\@tempdimb}%
251 }%
```

Definition of \tiny, \tinyrr, \tinyrrr.

Scale factor: 0.0416675.

```
252 \setlength{\@tempdima}{0.5416675\@tempdimc}%
253 \setlength{\@tempdimb}{\@tempb\@tempdima}%
254 \edef\tiny{%
255   \noexpand\@setfontsize\noexpand\tiny
256   {\the\@tempdima}{\the\@tempdimb}%
257 }%
258 \setlength{\@tempdima}{0.583335\@tempdimc}%
259 \setlength{\@tempdimb}{\@tempb\@tempdima}%
260 \edef\tinyrr{%
261   \noexpand\@setfontsize\noexpand\tinyrr
262   {\the\@tempdima}{\the\@tempdimb}%
263 }%
264 \setlength{\@tempdima}{0.6250025\@tempdimc}%
265 \setlength{\@tempdimb}{\@tempb\@tempdima}%
266 \edef\tinyrrr{%
267   \noexpand\@setfontsize\noexpand\tinyrrr
268   {\the\@tempdima}{\the\@tempdimb}%
269 }%
```

Definition of \normalsizer, \normalsizerr, \normalsizerrr.

Scale factor: 0.05.

```
270 \setlength{\@tempdima}{1.05\@tempdimc}%
271 \setlength{\@tempdimb}{\@tempb\@tempdima}%
272 \fontsize@pre
273 \edef\normalsizer{%
274   \noexpand\@setfontsize\noexpand\normalsizer
275   {\the\@tempdima}{\the\@tempdimb}%
276 }
```

```

276 \fontsize@app
277 \let\noexpand\@listi\noexpand\@listI
278 }%
279 \setlength{\@tempdima}{1.1\@tempdimc}%
280 \setlength{\@tempdimb}{\@tempb\@tempdima}%
281 \fontsize@pre
282 \edef\normalsizerr{%
283   \noexpand\@setfontsize\noexpand\normalsizerr
284   {\the\@tempdima}{\the\@tempdimb}%
285   \fontsize@app
286   \let\noexpand\@listi\noexpand\@listI
287 }%
288 \setlength{\@tempdima}{1.15\@tempdimc}%
289 \setlength{\@tempdimb}{\@tempb\@tempdima}%
290 \fontsize@pre
291 \edef\normalsizerrr{%
292   \noexpand\@setfontsize\noexpand\normalsizerrr
293   {\the\@tempdima}{\the\@tempdimb}%
294   \fontsize@app
295   \let\noexpand\@listi\noexpand\@listI
296 }%

```

Definition of \larger, \largerr, \largerrr.

Scale factor: 0,06.

```

297 \setlength{\@tempdima}{1.26\@tempdimc}%
298 \setlength{\@tempdimb}{\@tempb\@tempdima}%
299 \edef\larger{%
300   \noexpand\@setfontsize\noexpand\larger
301   {\the\@tempdima}{\the\@tempdimb}%
302 }%
303 \setlength{\@tempdima}{1.32\@tempdimc}%
304 \setlength{\@tempdimb}{\@tempb\@tempdima}%
305 \edef\largerr{%
306   \noexpand\@setfontsize\noexpand\largerr
307   {\the\@tempdima}{\the\@tempdimb}%
308 }%
309 \setlength{\@tempdima}{1.38\@tempdimc}%
310 \setlength{\@tempdimb}{\@tempb\@tempdima}%
311 \edef\largerrr{%
312   \noexpand\@setfontsize\noexpand\largerrr
313   {\the\@tempdima}{\the\@tempdimb}%
314 }%

```

Definition of \Larger, \Largerr, \Largerrr.

Scale factor: 0,072.

```

315 \setlength{\@tempdima}{1.512\@tempdimc}%
316 \setlength{\@tempdimb}{\@tempb\@tempdima}%
317 \edef\Larger{%
318   \noexpand\@setfontsize\noexpand\Larger
319   {\the\@tempdima}{\the\@tempdimb}%

```

```

320 }%
321 \setlength{\@tempdima}{1.584\@tempdimc}%
322 \setlength{\@tempdimb}{\@tempb\@tempdima}%
323 \edef\Largerr{%
324   \noexpand\@setfontsize\noexpand\Largerr
325   {\the\@tempdima}{\the\@tempdimb}%
326 }%
327 \setlength{\@tempdima}{1.656\@tempdimc}%
328 \setlength{\@tempdimb}{\@tempb\@tempdima}%
329 \edef\Largerrr{%
330   \noexpand\@setfontsize\noexpand\Largerrr
331   {\the\@tempdima}{\the\@tempdimb}%
332 }%

```

Definition of \LARGE r, \LARGE r r, \LARGE r r r.

Scale factor: 0,0865.

```

333 \setlength{\@tempdima}{1.8145\@tempdimc}%
334 \setlength{\@tempdimb}{\@tempb\@tempdima}%
335 \edef\LARGE r{%
336   \noexpand\@setfontsize\noexpand\LARGE r
337   {\the\@tempdima}{\the\@tempdimb}%
338 }%
339 \setlength{\@tempdima}{1.901\@tempdimc}%
340 \setlength{\@tempdimb}{\@tempb\@tempdima}%
341 \edef\LARGE r r{%
342   \noexpand\@setfontsize\noexpand\LARGE r r
343   {\the\@tempdima}{\the\@tempdimb}%
344 }%
345 \setlength{\@tempdima}{1.9875\@tempdimc}%
346 \setlength{\@tempdimb}{\@tempb\@tempdima}%
347 \edef\LARGE r r r{%
348   \noexpand\@setfontsize\noexpand\LARGE r r r
349   {\the\@tempdima}{\the\@tempdimb}%
350 }%

```

Definition of \huger, \hugerr, \hugerrr.

Scale factor: 0,1035.

```

351 \setlength{\@tempdima}{2.1775\@tempdimc}%
352 \setlength{\@tempdimb}{\@tempb\@tempdima}%
353 \edef\huger{%
354   \noexpand\@setfontsize\noexpand\huger
355   {\the\@tempdima}{\the\@tempdimb}%
356 }%
357 \setlength{\@tempdima}{2.281\@tempdimc}%
358 \setlength{\@tempdimb}{\@tempb\@tempdima}%
359 \edef\hugerr{%
360   \noexpand\@setfontsize\noexpand\hugerr
361   {\the\@tempdima}{\the\@tempdimb}%
362 }%
363 \setlength{\@tempdima}{2.3845\@tempdimc}%

```

```

364 \setlength{\@tempdimb}{\@tempb\@tempdima}%
365 \edef\hugerrr{%
366   \noexpand\@setfontsize\noexpand\hugerrr
367   {\the\@tempdima}{\the\@tempdimb}%
368 }%

```

Definition of \Huger, \Hugerr, \Hugerrr.

Scale factor: 0.123.

```

369 \setlength{\@tempdima}{2.611\@tempdimc}%
370 \setlength{\@tempdimb}{\@tempb\@tempdima}%
371 \edef\Huger{%
372   \noexpand\@setfontsize\noexpand\Huger
373   {\the\@tempdima}{\the\@tempdimb}%
374 }%
375 \setlength{\@tempdima}{2.734\@tempdimc}%
376 \setlength{\@tempdimb}{\@tempb\@tempdima}%
377 \edef\Hugerr{%
378   \noexpand\@setfontsize\noexpand\Hugerr
379   {\the\@tempdima}{\the\@tempdimb}%
380 }%
381 \setlength{\@tempdima}{2.857\@tempdimc}%
382 \setlength{\@tempdimb}{\@tempb\@tempdima}%
383 \edef\Hugerrr{%
384   \noexpand\@setfontsize\noexpand\Hugerrr
385   {\the\@tempdima}{\the\@tempdimb}%
386 }%

```

Definition of \HUGE, \HUGER, \HUGERR, \HUGERRR.

Scale factor: 0,149.

```

387 \setlength{\@tempdima}{3.006\@tempdimc}%
388 \setlength{\@tempdimb}{\@tempb\@tempdima}%
389 \edef\HUGE{%
390   \noexpand\@setfontsize\noexpand\HUGE
391   {\the\@tempdima}{\the\@tempdimb}%
392 }%
393 \setlength{\@tempdima}{3.155\@tempdimc}%
394 \setlength{\@tempdimb}{\@tempb\@tempdima}%
395 \edef\HUGER{%
396   \noexpand\@setfontsize\noexpand\HUGER
397   {\the\@tempdima}{\the\@tempdimb}%
398 }%
399 \setlength{\@tempdima}{3.304\@tempdimc}%
400 \setlength{\@tempdimb}{\@tempb\@tempdima}%
401 \edef\HUGERR{%
402   \noexpand\@setfontsize\noexpand\HUGERR
403   {\the\@tempdima}{\the\@tempdimb}%
404 }%
405 \setlength{\@tempdima}{3.453\@tempdimc}%
406 \setlength{\@tempdimb}{\@tempb\@tempdima}%
407 \edef\HUGERRR{%

```

Table 2: The values of some specific lengths set by the package, in relation to some significant settings of the normal size. The values are expressed in pt and rounded to the second decimal place.

Normal size		10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	11.00
\parindent		15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	16.50
\smallskipamount	(^{plus} _{minus} 1 pt)	2.73	2.75	2.78	2.81	2.84	2.86	2.89	2.92	2.95	2.97	3.00
\medskipamount	(^{plus} _{minus} 2 pt)	5.45	5.51	5.56	5.62	5.67	5.73	5.78	5.84	5.89	5.95	6.00
\bigskipamount	(^{plus} _{minus} 4 pt)	10.91	11.02	11.13	11.24	11.35	11.45	11.56	11.67	11.78	11.89	12.00

```

408 \noexpand\@setfontsize\noexpand\HUGErrr
409 {\the\@tempdima}{\the\@tempdimb}%
410 }%

411 \normalsize%

```

The KOMA files do not define \parindent and other lengths that are strictly linked to the font rather than to the dimensions of the page and the text. So we first define \parindent which defaults to $1.5\langle\text{fontsize}\rangle$:

```

412 \setlength\parindent{\@fontsizeparindent}%

```

For the following lengths, all values are calculated proportionally to the main font. I took the bk11.clo file as a reference point. Note that the differences in lengths affected by fontsize inside the bk*.clo files only concern \headheight, \headsep, \topskip and \footskip.

```

413 \setlength\smallskipamount{\fpeval{1.090909091\@tempdimb/4}pt \@plus 1\p@ \@minus 1\p@}%
414 \setlength\medskipamount{\fpeval{1.090909091\@tempdimb/2}pt \@plus 2\p@ \@minus 2\p@}%
415 \setlength\bigskipamount{\fpeval{1.090909091\@tempdimb}pt \@plus 4\p@ \@minus 4\p@}%

416 \setlength{\@tempdimb}{\f@baselineskip}%
417 \ctm@setlength{\parsep}%
418 {.3333\@tempdimb}{.1667\@tempdimb}{.0833\@tempdimb}%
419 \ctm@setlength{\topsep}%
420 {.6667\@tempdimb}{.1667\@tempdimb}{.3333\@tempdimb}%
421 \@tempswafalse
422 \begingroup
423 \def\@listextra{\aftergroup\@tempswatrue}%
424 \csname @listi\endcsname
425 \endgroup
426 \edef\@listi{\leftmargin\leftmarginI
427 \topsep \the\topsep
428 \parsep \the\parsep
429 \itemsep \parsep
430 \if@tempswa\noexpand\@listextra\fi
431 }%
432 \let\@listI\@listi
433 \ctm@setlength{\parsep}%
434 {.1667\@tempdimb}{.0833\@tempdimb}{.0833\@tempdimb}%

```

```

435 \ctm@setlength{\topsep}%
436 {.3333\@tempdimb}{.1667\@tempdimb}{.1667\@tempdimb}%
437 \@tempwafalse
438 \begingroup
439 \def\@list@extra{\aftergroup\@tempwattrue}%
440 \csname @listi\endcsname
441 \endgroup
442 \edef\@listi@small{\leftmargin\leftmargini
443   \topsep \the\topsep
444   \parsep \the\parsep
445   \itemsep \parsep
446   \if@tempwa\noexpand\@list@extra\fi
447 }%
448 \ctm@setlength{\parsep}%
449 {.125\@tempdimb}{.0625\@tempdimb}{.0625\@tempdimb}%
450 \ctm@setlength{\topsep}%
451 {.25\@tempdimb}{.125\@tempdimb}{.125\@tempdimb}%
452 \@tempwafalse
453 \begingroup
454 \def\@list@extra{\aftergroup\@tempwattrue}%
455 \csname @listi\endcsname
456 \endgroup
457 \edef\@listi@footnotesize{\leftmargin\leftmargini
458   \topsep \the\topsep
459   \parsep \the\parsep
460   \itemsep \parsep
461   \if@tempwa\noexpand\@list@extra\fi
462 }%
463 \ctm@setlength{\parsep}%
464 {.1667\@tempdimb}{.0833\@tempdimb}{.0833\@tempdimb}%
465 \ctm@setlength{\topsep}%
466 {.3333\@tempdimb}{.1667\@tempdimb}{.0833\@tempdimb}%
467 \@tempwafalse
468 \begingroup
469 \def\@list@extra{\aftergroup\@tempwattrue}%
470 \csname @listii\endcsname
471 \endgroup
472 \edef\@listii{\leftmargin\leftmarginii
473   \labelwidth=\dimexpr \leftmargin-\labelsep
474   \topsep \the\topsep
475   \parsep \the\parsep
476   \itemsep \parsep
477   \if@tempwa\noexpand\@list@extra\fi
478 }%
479 \ctm@setlength{\topsep}%
480 {.1667\@tempdimb}{.0833\@tempdimb}{.0833\@tempdimb}%
481 \setlength{\partopsep}{\z@ \@plus\z@ \@minus\p@}%
482 \@tempwafalse
483 \begingroup
484 \def\@list@extra{\aftergroup\@tempwattrue}%
485 \csname @listiii\endcsname

```

```

486 \endgroup
487 \edef\@listiii{\leftmargin\leftmarginiii
488   \labelwidth=\dimexpr \leftmargin-\labelsep
489   \topsep \the\topsep
490   \parsep \z@
491   \partopsep \the\partopsep
492   \itemsep \topsep
493   \if@tempswa\noexpand\@list@extra\fi
494 }%
495 \@tempswafalse
496 \begingroup
497 \def\@list@extra{\aftergroup\@tempwattrue}%
498 \csname @listiv\endcsname
499 \endgroup
500 \edef\@listiv{\leftmargin\leftmarginiv
501   \labelwidth=\dimexpr \leftmargin-\labelsep\relax
502   \if@tempswa\noexpand\@list@extra\fi
503 }%
504 \@tempswafalse
505 \begingroup
506 \def\@list@extra{\aftergroup\@tempwattrue}%
507 \csname @listv\endcsname
508 \endgroup
509 \edef\@listv{\leftmargin\leftmarginv
510   \labelwidth=\dimexpr \leftmargin-\labelsep\relax
511   \if@tempswa\noexpand\@list@extra\fi
512 }%
513 \@tempswafalse
514 \begingroup
515 \def\@list@extra{\aftergroup\@tempwattrue}%
516 \csname @listvi\endcsname
517 \endgroup
518 \edef\@listvi{\leftmargin\leftmarginvi
519   \labelwidth=\dimexpr \leftmargin-\labelsep\relax
520   \if@tempswa\noexpand\@list@extra\fi
521 }%
522 \@listi
523 \setlength{\@tempdimb}{\f@baselineskip}%
524 \setlength{\footnotesep}{.555\@tempdimb}%
525 \ctm@setlength{\skip\footins}%
526 {.75\@tempdimb}{.3333\@tempdimb}{.1667\@tempdimb}%
527 \ctm@setlength{\floatsep}%
528 {\@tempdimb}{.1667\@tempdimb}{.1667\@tempdimb}%
529 \ctm@setlength{\textfloatsep}%
530 {1.6667\@tempdimb}{.1667\@tempdimb}{.3333\@tempdimb}%
531 \setlength{\intextsep}{\floatsep}%
532 \setlength{\dblfloatsep}{\floatsep}%
533 \setlength{\dbltextfloatsep}{\textfloatsep}%
534 \setlength{\@fptop}{\z@ \@plus 1fil}%
535 \setlength{\@fpsep}{.6667\@tempdimb \@plus 2fil}%
536 \setlength{\@fpbot}{\@fptop}%

```

```

537 \setlength{\@dblftop}{\@fptop}%
538 \setlength{\@dblfpsep}{\@fpsep}%
539 \setlength{\@dblfpbot}{\@fptop}%
540 \ctm@setlength{\partopsep}{.2\@tempdimb}{.1\@tempdimb}{.1\@tempdimb}%
541 }

```

Excerpt from `scrfontsizes.sty` Here is a portion of the `scrfontsizes` package. It simply provides the `\generateclofile` command, without the KOMA related definitions. There are no reserved names for the `.clo` files. The command name is a new name for the KOMA `\generatefontfile`. In fact what the command generates is a `.clo` file.

```

542 \newcommand*\generateclofile[1]{%
543 \kernel@ifnextchar [{\@generatefontfile{#1}}{\@@generatefontfile{#1}}}%
544 }
545 \newcommand*\@generatefontfile{}
546 \def\@generatefontfile#1[#2]#3{%
547 \begingroup

```

At least starting from version 3.31 of `scrfontsizes`, the code of the `\@generatefontfile` and `\@@generatefontfile` commands sets the `\parskip` value to 0pt. We also use `[#2]` in place of `[{#2}]` for the optional argument of `\changefontsize` used immediately below.

```

548 \setlength{\parskip}{0pt}%
549 \changefontsize[#2]{#3}%
550 \generate@fontfile{#1}{#3}%
551 \endgroup
552 }
553 \newcommand\@@generatefontfile[2]{%
554 \begingroup
555 \setlength{\parskip}{0pt}%
556 \changefontsize{#2}%
557 \generate@fontfile{#1}{#2}%
558 \endgroup
559 }
560 \newcommand*\@@@generatefontfile[2][{}]{
561 \newcommand*\@fontfile{}
562 \let\@fontfile\@mainaux
563 \newcommand*\generate@fontfile[2]{%
564 \def\@ind{\space\space}%
565 \immediate\openout\@fontfile #1#2.clo
566 \immediate\write\@fontfile{\@percentchar^^J%
567 \@percentchar\space This is file ‘#1#2.clo’, generated with^^J%

```

In the next three lines we only replace ‘`scrfontsizes`’ with ‘`fontsize`’ and ‘Markus Kohm’ with ‘Ivan Valbusa’, in order to get the correct information in the `.log` file.

```

568 \@percentchar\space fontsize
569 \csname ver@fontsize.\@pkgextension\endcsname,^^J%
570 \@percentchar\space Copyright (c) Ivan Valbusa.^^J%
571 \@percentchar^^J%
572 \string\ProvidesFile{#1#2.clo}%

```

```

573 \the\year/\ifnum\month<10 0\fi\the\month/\ifnum\day<10 0\fi\the\day%
574 \space generated font size class option (#2)]}%
575 \immediate\write\@fontfile{%
576 \string\def\string\normalsize{\@percentchar^^J%
577 \@ind\string\@setfontsize\string\normalsize{\f@size}{\f@baselineskip}%
578 \@percentchar^^J%
579 \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
580 \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
581 \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
582 \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
583 \@ind\string\let\string\@listi\string\@listI^^J%
584 }\@percentchar%
585 }%
586 \begingroup\small\@listi
587 \immediate\write\@fontfile{%
588 \string\def\string\small{\@percentchar^^J%
589 \@ind\string\@setfontsize\string\small{\f@size}{\f@baselineskip}%
590 \@percentchar^^J%
591 \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
592 \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
593 \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
594 \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
595 \@ind\string\def\string\@listi{\@percentchar^^J%
596 \@ind\@ind\string\leftmargin\string\leftmarginI^^J%
597 \@ind\@ind\string\topsep \the\topsep^^J%
598 \@ind\@ind\string\parsep \the\parsep^^J%
599 \@ind\@ind\string\itemsep \string\parsep^^J%
600 \@ind}\@percentchar^^J%
601 }\@percentchar%
602 }%
603 \endgroup
604 \begingroup\footnotesize\@listi
605 \immediate\write\@fontfile{%
606 \string\def\string\footnotesize{\@percentchar^^J%
607 \@ind\string\@setfontsize\string\footnotesize{\f@size}{\f@baselineskip}%
608 \@percentchar^^J%
609 \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
610 \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
611 \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
612 \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
613 \@ind\string\def\string\@listi{\@percentchar^^J%
614 \@ind\@ind\string\leftmargin\string\leftmarginI^^J%
615 \@ind\@ind\string\topsep \the\topsep^^J%
616 \@ind\@ind\string\parsep \the\parsep^^J%
617 \@ind\@ind\string\itemsep \string\parsep^^J%
618 \@ind}\@percentchar^^J%
619 }\@percentchar%
620 }%
621 \endgroup
622 \begingroup\scriptsize
623 \immediate\write\@fontfile{%

```

```

624 \string\def\string\scriptsize{%
625   \string\@setfontsize\string\scriptsize{\f@size}{\f@baselineskip}%
626   }\@percentchar%
627 }%
628 \endgroup
629 \begingroup\tiny
630 \immediate\write\@fontfile{%
631   \string\def\string\tiny{%
632     \string\@setfontsize\string\tiny{\f@size}{\f@baselineskip}%
633     }\@percentchar%
634   }%
635 \endgroup
636 \begingroup\large
637 \immediate\write\@fontfile{%
638   \string\def\string\large{%
639     \string\@setfontsize\string\large{\f@size}{\f@baselineskip}%
640     }\@percentchar%
641   }%
642 \endgroup
643 \begingroup\Large
644 \immediate\write\@fontfile{%
645   \string\def\string\Large{%
646     \string\@setfontsize\string\Large{\f@size}{\f@baselineskip}%
647     }\@percentchar%
648   }%
649 \endgroup
650 \begingroup\LARGE
651 \immediate\write\@fontfile{%
652   \string\def\string\LARGE{%
653     \string\@setfontsize\string\LARGE{\f@size}{\f@baselineskip}%
654     }\@percentchar%
655   }%
656 \endgroup
657 \begingroup\huge
658 \immediate\write\@fontfile{%
659   \string\def\string\huge{%
660     \string\@setfontsize\string\huge{\f@size}{\f@baselineskip}%
661     }\@percentchar%
662   }%
663 \endgroup
664 \begingroup\Huge
665 \immediate\write\@fontfile{%
666   \string\def\string\Huge{%
667     \string\@setfontsize\string\Huge{\f@size}{\f@baselineskip}%
668     }\@percentchar%
669   }%
670 \endgroup

```

The new sizing commands previously defined are recalled here and written in the .clo file if the \generateclfile command is used.

```

671 \begingroup\tinyr

```

```

672 \immediate\write\@fontfile{%
673   \string\def\string\tinyr{%
674     \string\@setfontsize\string\tinyr{\f@size}{\f@baselineskip}%
675   }\@percentchar%
676 }%
677 \endgroup
678 \begingroup\tinyrr
679 \immediate\write\@fontfile{%
680   \string\def\string\tinyrr{%
681     \string\@setfontsize\string\tinyrr{\f@size}{\f@baselineskip}%
682   }\@percentchar%
683 }%
684 \endgroup
685 \begingroup\tinyrrr
686 \immediate\write\@fontfile{%
687   \string\def\string\tinyrrr{%
688     \string\@setfontsize\string\tinyrrr{\f@size}{\f@baselineskip}%
689   }\@percentchar%
690 }%
691 \endgroup
692 \begingroup\scriptsize
693 \immediate\write\@fontfile{%
694   \string\def\string\scriptsize{%
695     \string\@setfontsize\string\scriptsize{\f@size}{\f@baselineskip}%
696   }\@percentchar%
697 }%
698 \endgroup
699 \begingroup\scriptsize
700 \immediate\write\@fontfile{%
701   \string\def\string\scriptsize{%
702     \string\@setfontsize\string\scriptsize{\f@size}{\f@baselineskip}%
703   }\@percentchar%
704 }%
705 \endgroup
706 \begingroup\scriptsize
707 \immediate\write\@fontfile{%
708   \string\def\string\scriptsize{%
709     \string\@setfontsize\string\scriptsize{\f@size}{\f@baselineskip}%
710   }\@percentchar%
711 }%
712 \endgroup
713 \def\fs@apppnormal{
714   \@percentchar^^J%
715   \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
716   \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
717   \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
718   \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
719   \@ind\string\let\string\@listi\string\@listI^^J%
720 }
721 \def\fs@appsmall{%
722   \@percentchar^^J%

```

```

723 \@ind\string\abovedisplayskip\space \the\abovedisplayskip^^J%
724 \@ind\string\abovedisplayshortskip\space \the\abovedisplayshortskip^^J%
725 \@ind\string\belowdisplayskip\space \the\belowdisplayskip^^J%
726 \@ind\string\belowdisplayshortskip\space \the\belowdisplayshortskip^^J%
727 \@ind\string\def\string\@listi{\@percentchar^^J%
728   \@ind\@ind\string\leftmargin\string\leftmargini^^J%
729   \@ind\@ind\string\topsep \the\topsep^^J%
730   \@ind\@ind\string\parsep \the\parsep^^J%
731   \@ind\@ind\string\itemsep \string\parsep^^J%
732   \@ind}\@percentchar^^J%
733 }
734 \begingroup\smallr\@listi
735 \immediate\write\@fontfile{%
736   \string\def\string\smallr{\@percentchar^^J%
737     \@ind\string\@setfontsize\string\smallr{\f@size}{\f@baselineskip}%
738     \fs@appsmall%
739   }\@percentchar%
740 }%
741 \endgroup
742 \begingroup\smallrr\@listi
743 \immediate\write\@fontfile{%
744   \string\def\string\smallrr{\@percentchar^^J%
745     \@ind\string\@setfontsize\string\smallrr{\f@size}{\f@baselineskip}%
746     \fs@appsmall%
747   }\@percentchar%
748 }%
749 \endgroup
750 \begingroup\smallrrr\@listi
751 \immediate\write\@fontfile{%
752   \string\def\string\smallrrr{\@percentchar^^J%
753     \@ind\string\@setfontsize\string\smallrrr{\f@size}{\f@baselineskip}%
754     \fs@appsmall%
755   }\@percentchar%
756 }%
757 \endgroup
758 \begingroup\footnotesizer\@listi
759 \immediate\write\@fontfile{%
760   \string\def\string\footnotesizer{\@percentchar^^J%
761     \@ind\string\@setfontsize\string\footnotesizer{\f@size}{\f@baselineskip}%
762     \fs@appsmall%
763   }\@percentchar%
764 }%
765 \endgroup
766 \begingroup\footnotesizerr\@listi
767 \immediate\write\@fontfile{%
768   \string\def\string\footnotesizerr{\@percentchar^^J%
769     \@ind\string\@setfontsize\string\footnotesizerr{\f@size}{\f@baselineskip}%
770     \fs@appsmall%
771   }\@percentchar%
772 }%
773 \endgroup

```

```

774 \begingroup\footnotesizerrr\@listi
775 \immediate\write\@fontfile{%
776   \string\def\string\footnotesizerrr{\@percentchar^^J%
777     \@ind\string\@setfontsize\string\footnotesizerrr{\f@size}{\f@baselineskip}%
778     \fs@appsmall%
779   }\@percentchar%
780 }%
781 \endgroup
782 \begingroup\normalsizer
783 \immediate\write\@fontfile{%
784   \string\def\string\normalsizer{\@percentchar^^J%
785     \@ind\string\@setfontsize\string\normalsizer{\f@size}{\f@baselineskip}%
786     \fs@appnormal%
787   }\@percentchar%
788 }%
789 \endgroup
790 \begingroup\normalsizerr
791 \immediate\write\@fontfile{%
792   \string\def\string\normalsizerr{\@percentchar^^J%
793     \@ind\string\@setfontsize\string\normalsizerr{\f@size}{\f@baselineskip}%
794     \fs@appnormal%
795   }\@percentchar%
796 }%
797 \endgroup
798 \begingroup\normalsizerrr
799 \immediate\write\@fontfile{%
800   \string\def\string\normalsizerrr{\@percentchar^^J%
801     \@ind\string\@setfontsize\string\normalsizerrr{\f@size}{\f@baselineskip}%
802     \fs@appnormal%
803   }\@percentchar%
804 }%
805 \endgroup
806 \begingroup\larger
807 \immediate\write\@fontfile{%
808   \string\def\string\larger{%
809     \string\@setfontsize\string\larger{\f@size}{\f@baselineskip}%
810   }\@percentchar%
811 }%
812 \endgroup
813 \begingroup\largerr
814 \immediate\write\@fontfile{%
815   \string\def\string\largerr{%
816     \string\@setfontsize\string\largerr{\f@size}{\f@baselineskip}%
817   }\@percentchar%
818 }%
819 \endgroup
820 \begingroup\largerrr
821 \immediate\write\@fontfile{%
822   \string\def\string\largerrr{%
823     \string\@setfontsize\string\largerrr{\f@size}{\f@baselineskip}%
824   }\@percentchar%

```

```

825 }%
826 \endgroup
827 \begingroup\Large
828 \immediate\write\@fontfile{%
829   \string\def\string\Large{%
830     \string\@setfontsize\string\Large{\f@size}{\f@baselineskip}%
831   }\@percentchar%
832 }%
833 \endgroup
834 \begingroup\Larger
835 \immediate\write\@fontfile{%
836   \string\def\string\Larger{%
837     \string\@setfontsize\string\Larger{\f@size}{\f@baselineskip}%
838   }\@percentchar%
839 }%
840 \endgroup
841 \begingroup\Largerr
842 \immediate\write\@fontfile{%
843   \string\def\string\Largerr{%
844     \string\@setfontsize\string\Largerr{\f@size}{\f@baselineskip}%
845   }\@percentchar%
846 }%
847 \endgroup
848 \begingroup\Largerrr
849 \immediate\write\@fontfile{%
850   \string\def\string\Largerrr{%
851     \string\@setfontsize\string\Largerrr{\f@size}{\f@baselineskip}%
852   }\@percentchar%
853 }%
854 \endgroup
855 \begingroup\LARGE
856 \immediate\write\@fontfile{%
857   \string\def\string\LARGE{%
858     \string\@setfontsize\string\LARGE{\f@size}{\f@baselineskip}%
859   }\@percentchar%
860 }%
861 \endgroup
862 \begingroup\LARGEerr
863 \immediate\write\@fontfile{%
864   \string\def\string\LARGEerr{%
865     \string\@setfontsize\string\LARGEerr{\f@size}{\f@baselineskip}%
866   }\@percentchar%
867 }%
868 \endgroup
869 \begingroup\LARGEerrr
870 \immediate\write\@fontfile{%
871   \string\def\string\LARGEerrr{%
872     \string\@setfontsize\string\LARGEerrr{\f@size}{\f@baselineskip}%
873   }\@percentchar%
874 }%
875 \endgroup

```

```

876 \begingroup\huger
877 \immediate\write\@fontfile{%
878   \string\def\string\huger{%
879     \string\@setfontsize\string\huger{\f@size}{\f@baselineskip}%
880   }\@percentchar%
881 }%
882 \endgroup
883 \begingroup\hugerr
884 \immediate\write\@fontfile{%
885   \string\def\string\hugerr{%
886     \string\@setfontsize\string\hugerr{\f@size}{\f@baselineskip}%
887   }\@percentchar%
888 }%
889 \endgroup
890 \begingroup\hugerrr
891 \immediate\write\@fontfile{%
892   \string\def\string\hugerrr{%
893     \string\@setfontsize\string\hugerrr{\f@size}{\f@baselineskip}%
894   }\@percentchar%
895 }%
896 \endgroup
897 \begingroup\Huger
898 \immediate\write\@fontfile{%
899   \string\def\string\Huger{%
900     \string\@setfontsize\string\Huger{\f@size}{\f@baselineskip}%
901   }\@percentchar%
902 }%
903 \endgroup
904 \begingroup\Hugerr
905 \immediate\write\@fontfile{%
906   \string\def\string\Hugerr{%
907     \string\@setfontsize\string\Hugerr{\f@size}{\f@baselineskip}%
908   }\@percentchar%
909 }%
910 \endgroup
911 \begingroup\Hugerrr
912 \immediate\write\@fontfile{%
913   \string\def\string\Hugerrr{%
914     \string\@setfontsize\string\Hugerrr{\f@size}{\f@baselineskip}%
915   }\@percentchar%
916 }%
917 \endgroup
918 \begingroup\HUGE
919 \immediate\write\@fontfile{%
920   \string\def\string\HUGE{%
921     \string\@setfontsize\string\HUGE{\f@size}{\f@baselineskip}%
922   }\@percentchar%
923 }%
924 \endgroup
925 \begingroup\HUGEr
926 \immediate\write\@fontfile{%

```

```

927 \string\def\string\HUGEr{%
928   \string\@setfontsize\string\HUGEr{\f@size}{\f@baselineskip}%
929   }\@percentchar%
930 }%
931 \endgroup
932 \begingroup\HUGErr
933 \immediate\write\@fontfile{%
934   \string\def\string\HUGErr{%
935     \string\@setfontsize\string\HUGErr{\f@size}{\f@baselineskip}%
936     }\@percentchar%
937   }%
938 \endgroup
939 \begingroup\HUGErrr
940 \immediate\write\@fontfile{%
941   \string\def\string\HUGErrr{%
942     \string\@setfontsize\string\HUGErrr{\f@size}{\f@baselineskip}%
943     }\@percentchar%
944   }%
945 \endgroup

```

```

946 \immediate\write\@fontfile{\string\normalsize}%

```

The new lengths previously defined are recalled here and written in the .clo file if the `\generateclofile` command is used.

```

947 \begingroup
948 \immediate\write\@fontfile{%
949   \string\setlength{\string\parindent}{\the\parindent}^^J%
950   \string\setlength{\string\headheight}{\the\headheight}^^J%
951   \string\setlength{\string\smallskipamount}{\the\smallskipamount}^^J%
952   \string\setlength{\string\medskipamount}{\the\medskipamount}^^J%
953   \string\setlength{\string\bigskipamount}{\the\bigskipamount}^^J%
954 }%
955 \endgroup

956 \immediate\write\@fontfile{%
957   \string\setlength{\string\footnotesep}{\the\footnotesep}\@percentchar
958 }%
959 \immediate\write\@fontfile{%
960   \string\setlength{\string\skip\string\footins}{\the\skip\footins}\@percentchar
961 }%
962 \immediate\write\@fontfile{%
963   \string\setlength{\string\floatsep}{\the\floatsep}\@percentchar
964 }%
965 \immediate\write\@fontfile{%
966   \string\setlength{\string\textfloatsep}{\the\textfloatsep}\@percentchar
967 }%
968 \immediate\write\@fontfile{%
969   \string\setlength{\string\intextsep}{\the\intextsep}\@percentchar
970 }%
971 \immediate\write\@fontfile{%
972   \string\setlength{\string\dblfloatsep}{\the\dblfloatsep}\@percentchar

```

```

973 }%
974 \immediate\write\@fontfile{%
975   \string\setlength{\string\dbltextfloatsep}{\the\dbltextfloatsep}\@percentchar
976 }%
977 \immediate\write\@fontfile{%
978   \string\setlength{\string\@fptop}{\the\@fptop}\@percentchar
979 }%
980 \immediate\write\@fontfile{%
981   \string\setlength{\string\@fpsep}{\the\@fpsep}\@percentchar
982 }%
983 \immediate\write\@fontfile{%
984   \string\setlength{\string\@fpbot}{\the\@fpbot}\@percentchar
985 }%
986 \immediate\write\@fontfile{%
987   \string\setlength{\string\@dblfpbot}{\the\@dblfpbot}\@percentchar
988 }%
989 \immediate\write\@fontfile{%
990   \string\setlength{\string\@dblfpsep}{\the\@dblfpsep}\@percentchar
991 }%
992 \immediate\write\@fontfile{%
993   \string\setlength{\string\@dblfpbot}{\the\@dblfpbot}\@percentchar
994 }%
995 \immediate\write\@fontfile{%
996   \string\setlength{\string\parttopsep}{\the\parttopsep}\@percentchar
997 }%
998 \begingroup
999 \@listi
1000 \immediate\write\@fontfile{%
1001   \string\def\string\@listi{\@percentchar^^J%
1002     \@ind\string\leftmargin\string\leftmarginii^^J%
1003     \@ind\string\topsep \the\topsep^^J%
1004     \@ind\string\parsep \the\parsep^^J%
1005     \@ind\string\itemsep \string\parsep^^J%
1006   }\@percentchar
1007 }%
1008 \endgroup
1009 \immediate\write\@fontfile{%
1010   \string\let\string\@listI\string\@listi
1011 }%
1012 \begingroup
1013 \@listii
1014 \immediate\write\@fontfile{%
1015   \string\def\string\@listii{\@percentchar^^J%
1016     \@ind\string\leftmargin\string\leftmarginiii^^J%
1017     \@ind\string\labelwidth\string\leftmarginiii^^J%
1018     \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1019     \@ind\string\topsep \the\topsep^^J%
1020     \@ind\string\parsep \the\parsep^^J%
1021     \@ind\string\itemsep \string\parsep^^J%
1022   }\@percentchar
1023 }%

```

```

1024 \endgroup
1025 \begingroup
1026 \@listiii
1027 \immediate\write\@fontfile{%
1028   \string\def\string\@listiii{\@percentchar^^J%
1029     \@ind\string\leftmargin\string\leftmarginiii^^J%
1030     \@ind\string\labelwidth\string\leftmarginiii^^J%
1031     \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1032     \@ind\string\topsep \the\topsep^^J%
1033     \@ind\string\parsep \the\parsep^^J%
1034     \@ind\string\partopsep \the\partopsep^^J%
1035     \@ind\string\itemsep \string\topsep^^J%
1036   }\@percentchar
1037 }%
1038 \endgroup
1039 \begingroup
1040 \@listiv
1041 \immediate\write\@fontfile{%
1042   \string\def\string\@listiv{\@percentchar^^J%
1043     \@ind\string\leftmargin\string\leftmarginiv^^J%
1044     \@ind\string\labelwidth\string\leftmarginiv^^J%
1045     \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1046   }\@percentchar
1047 }%
1048 \endgroup
1049 \begingroup
1050 \@listv
1051 \immediate\write\@fontfile{%
1052   \string\def\string\@listv{\@percentchar^^J%
1053     \@ind\string\leftmargin\string\leftmarginv^^J%
1054     \@ind\string\labelwidth\string\leftmarginv^^J%
1055     \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1056   }\@percentchar
1057 }%
1058 \endgroup
1059 \begingroup
1060 \@listvi
1061 \immediate\write\@fontfile{%
1062   \string\def\string\@listvi{\@percentchar^^J%
1063     \@ind\string\leftmargin\string\leftmarginvi^^J%
1064     \@ind\string\labelwidth\string\leftmarginvi^^J%
1065     \@ind\string\advance\string\labelwidth-\string\labelsep^^J%
1066   }\@percentchar
1067 }%
1068 \endgroup
1069 \immediate\write\@fontfile{%
1070   \string\@listi^^J%
1071   \string\endinput^^J%
1072   \@percentchar^^J%
1073   \@percentchar\space End of file ‘#1#2.clo’.
1074 }

```

```

1075 \immediate\closeout\@fontfile
1076 }
1077 \@onlypreamble\generatetocfile

```

We will now define some internal commands to test the package functions. Since version 0.6 I have been using the \LaTeX 3 solution provided by Enrico Gregorio in place of the old macros based on etoolbox (Lehman and Wright 2019).

```

1078 \newcommand{\sampletext}[1]{\def\fs@sampletext{#1}}
1079 \def\fs@sampletext{%
1080   As any dedicated reader can clearly see, the Ideal of practical reason
1081   is a representation of, as far as I know, the things in themselves; as
1082   I have shown elsewhere, the phenomena should only be used as a canon for
1083   our understanding. The paralogisms of practical reason are what first give
1084   rise to the architectonic of practical reason. As will easily be shown in
1085   the next section, reason would thereby be made to contradict, in view of
1086   these considerations, the Ideal of practical reason, yet the manifold
1087   depends on the phenomena.}
1088
1089 \ExplSyntaxOn
1090
1091 \NewDocumentCommand{\printsamples}
1092 {
1093   m
1094   m
1095   O{tiny, tinyr, tinyrr, tinyrrr,
1096     scriptsize, scriptsize, scriptsize, scriptsize,
1097     footnotesize, footnotesize, footnotesize, footnotesize,
1098     small, smallr, smallrr, smallrrr,
1099     normalsize, normalsize, normalsize, normalsize,
1100     large, large, large, large,
1101     Large, Large, Large, Large,
1102     LARGE, LARGE, LARGE, LARGE,
1103     huge, huge, huge, huge,
1104     Huge, Huge, Huge, Huge,
1105     HGE, HGE, HGE, HGE,
1106   }
1107 }
1108 {
1109   \fontsize_printsamples:nnn { #1 } { #2 } { #3 }
1110 }
1111
1112 % helper function to print the rounded sizes
1113 \cs_new:Nn \__fontsize_round_f:n
1114 {
1115   \fp_eval:n { round(\use:c{f@#1}, 1) } pt
1116 }
1117
1118 % the main function
1119 \cs_new_protected:Nn \fontsize_printsamples:nnn
1120 {
1121   % group to bound the font changes

```

```

1122 \group_begin:
1123 % set the size
1124 \changefontsize[#1]{#2}\selectfont
1125 % header
1126 \subsubsection*{Text~samples~for~\symbol{92}normalsize~#2~on~#1}
1127 % map through the desired sizes
1128 \clist_map_inline:nn { #3 }
1129 {
1130   \use:c{##1} % set the font size
1131   \noindent\texttt{\symbol{92}##1}:~ % print the font size command
1132   __fontsize_round_f:n {size}~on~ % print the size in points
1133   __fontsize_round_f:n {baselineskip}.~ % print the baseline skip in points
1134   \fs@sampletext % sample text
1135   \par\addvspace{\medskipamount} % finish up
1136 }
1137 % close the group
1138 \group_end:
1139 }
1140 \ExplSyntaxOff

```

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Change History

v0.1		files: \smallskiamount,
General: First public release	1	\medskiamount, \bigskiamount.
v0.2		Redefined \parindent and
General: Updated documentation and		\headheight.
code comments.	1	v0.4
v0.3		
General: Added definitions of some		General: Maintenance release. Updated
lengths omitted from KOMA-script		documentation.
		1

v0.5	General: New font sizing commands from \normalsize up. New command \printssamples. Updated documentation. 1	when the line spacing is grater than 163.84 pt. 1
v0.6	General: New font sizing commands from \small down. Updated documentation. 1	v0.8.1 General: New \sampletext command. Some lengths are now defined via xfp package. Removed \headheight definition. Updated documentation. 1
v0.7	General: New font sizing commands \HUGE, \HUGEr, \HUGErr, \HUGErrr. Changed default name for the .clo file to fontsize. Updated documentation. 1	v0.8.2 General: New \parindent option. Updated documentation. 1
v0.8	General: Corrected a bug occurring	v0.8.3 General: Corrected a bug in the \parindent option. Updated documentation. 1

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