The file `oldlfont.dtx` for use with LaTeX 2ε.[*]
It contains the code for `oldlfont.sty`

Frank Mittelbach

November 3, 2014

1 Introduction

This file contains the code for the `oldlfont` package which emulates the following LaTeX 2.09 font commands:

- The two-letter font-changing commands `\rm`, etc. are defined to cancel each other out as they did in LaTeX 2.09.

- The two-letter font-changing commands are allowed in math mode.

- The `latexsym` package is loaded.

For full compatibility mode, the file `latex209.def` is loaded by `\documentstyle`.

The following modules are used in the implementation to direct DOCSTRIP in generating the external files:

driver	produce a documentation driver file
package	produce `oldlfont.sty`
latex209	produce part of `latex209.def`

2 The Code

`\math@bgroup`
`\math@egroup`
To make ⟨*math alphabet identifier*⟩ work like simple font switches we change the meaning of `\math@bgroup` and `\math@egroup` to `\@empty`. This emulates the behavior of `oldlfont.sty` in NFSS1 setups. These definitions are not part of `latex209` automatically, since to emulate 2.09 they are not necessary (all standard fonts are declared as math symbol fonts).

```
1 \let\math@bgroup\@empty
2 \let\math@egroup\@empty
3 \let \@@math@bgroup \math@bgroup
4 \let \@@math@egroup \math@egroup
```

The rest of this document describes code that is used in `oldlfont.sty` and `latex209.def`.

```
5 ⟨*package j latex209⟩
```

When emulating the old settings we don't want a lot of NFSS information being displayed. Thus we required that the `tracefnt` package is loaded with the option `errorshow`.

```
6 \RequirePackage[errorshow]{tracefnt}
```

We define math *alphabet* identifiers for the typefaces described in the LaTeX manual. This is straightforward. Some are already defined by the kernel code. And here are the other ones defined by the old LaTeX. They all get declared as math symbol font alphabets. Thus we first allocate the additional symbol fonts.

---

[*]This file has version number v2.2k, dated 2014/09/29.

```
7 \DeclareSymbolFont{bold}{OT1}{cmr}{bx}{n}
8 \DeclareSymbolFont{sans}{OT1}{cmss}{m}{n}
9 \DeclareSymbolFont{typewriter}{OT1}{cmtt}{m}{n}
10 \DeclareSymbolFont{italic}{OT1}{cmr}{m}{it}
11 \DeclareSymbolFont{smallcaps}{OT1}{cmr}{m}{sc}
12 \DeclareSymbolFont{slanted}{OT1}{cmr}{m}{sl}
```

And here are the corresponding math identifiers.

```
13 \DeclareSymbolFontAlphabet\mathbf{bold}
14 \DeclareSymbolFontAlphabet\mathsf{sans}
15 \DeclareSymbolFontAlphabet\mathtt{typewriter}
16 \DeclareSymbolFontAlphabet\mathsc{smallcaps}
17 \DeclareSymbolFontAlphabet\mathsl{slanted}
```

We undefine the old `\mit` and `\cal` macros (whatever meaning they have) and reallocate them as symbol font alphabets.

```
18 \let\mit\undefined
19 \let\cal\undefined
20 \let\mathit\undefined
21 \DeclareSymbolFontAlphabet\mathit{italic}
22 \DeclareSymbolFontAlphabet{\mit}{letters}
23 \DeclareSymbolFontAlphabet{\cal}{symbols}
```

We define the font commands for selecting the typeface. They are probably defined by the document class/style but we want to force the old meaning.

And here are the definition as they were in LaTeX 2.09 but translated into NFSS2 language.

```
24 \DeclareRobustCommand\rm{\normalfont\rmfamily\mathgroup\symoperators}
25 \DeclareRobustCommand\sf{\normalfont\sffamily\mathgroup\symsans}
26 \DeclareRobustCommand\sl{\normalfont\slshape\mathgroup\symslanted}
27 \DeclareRobustCommand\bf{\normalfont\bfseries\mathgroup\symbold}
28 \DeclareRobustCommand\sc{\normalfont\scshape\mathgroup\symsmallcaps}
29 \DeclareRobustCommand\it{\normalfont\itshape\mathgroup\symitalic}
30 \DeclareRobustCommand\tt{\normalfont\ttfamily\mathgroup\symtypewriter}
```

We also have to define the *emphasize* font change command (i.e. `\em`). This command will look whether the current font is sloped (i.e. has a positive `\fontdimen1`) and will then select either `\rm` or `\it`.

```
31 \DeclareRobustCommand\em{%
32    \@nomath\em
33    \ifdim \fontdimen\@ne\font>\z@\rm\else\it\fi}
```

\@setfontsize   Font size changes are handled using the `\@setfontsize` command (in new class files) or by the `@setsize` command in old document style files. The latter is now defined to call `\@setfontsize` in the NFSS2 kernel code. Thus to make all size changing commands automatically return to the normal font of the document we only have to slightly modify the definition of `\@setfontsize` by adding a `\normalfont` command to it.

```
34 \def\@setfontsize#1#2#3{\@nomath#1%
35    \ifx\protect\@typeset@protect
36      \let\@currsize#1%
37    \fi
38    \fontsize{#2}{#3}\normalfont}
```

\non@alpherr   Since we emulate the old syntax we also have to silently ignore uses of a math alphabet outside math mode. Since we now use the `\sym...` switches the following setting is not longer necessary.

```
39 %\let\non@alpherr\@gobble
```

\not@math@alphabet   But we need to disable the error message that is generated from `\bfseries` etc.

```
40 \let\not@math@alphabet\@gobbletwo
```

We left out the special LaTeX fonts which are not automatically included in the base version of the font selection since these fonts contain only a few characters which are also included in the AMS fonts so anybody who is using these fonts doesn't need them. But for compatibility reasons we will define these symbols.

41 `\RequirePackage{latexsym}`
42 ⟨/package j latex209⟩