

The file `syntonly.dtx` for use with L^AT_EX 2_ε.^{*}
It contains the code for `syntonly.sty`

Frank Mittelbach Rainer Schöpf

August 22, 2024

This file is maintained by the L^AT_EX Project team.
Bug reports can be opened (category `latex`) at
<https://latex-project.org/bugs.html>.

This package implements the `\syntaxonly` declaration for L^AT_EX 2_ε. This command can be used in the preamble for running a document through L^AT_EX without actually getting any output.

1 Identification

We identify the package and its current version.

```
1 <package>\ProvidesPackage{syntonly}
2 <*dtx>
3           \ProvidesFile{syntonly.dtx}
4 </dtx>
5 <*package | dtx>
6           [2024/02/08 v2.1e Standard LaTeX2e package]
7 </package | dtx>
```

2 Implementation

```
8 <*package>
```

`\dummyft@` First of all we need to define the ‘dummy’ font.

```
9 \font\dummyft@=dummy \relax
```

`\ifsyntax@` Now we can define the ‘syntax only’ feature. We define a switch `\if@syntax` so that any macro can always find out if it is really supposed to typeset text. Its default is to run in normal mode.

```
10 \newif\ifsyntax@
11 \syntax@false
```

`\syntaxonly` The `\syntaxonly` macro sets up everything for syntax checking.

```
12 \def\syntaxonly{%
```

^{*}This file has version number v2.1e, dated 2024/02/08.

First of all it sets the `\syntax@` switch to `true`.

```
13 \syntax@true
```

Then it globally sets all fonts to the dummy font. These are: the current font outside math mode,

```
14 \global\dummyft@
```

and the 3×16 math fonts for the 16 math *groups*. We use a loop to set these.

```
15 \count@\sixt@0n
16 \loop
17 \ifnum\count@ >\z@
18 \advance\count@\m@ne
19 \global\textfont\count@\dummyft@
20 \global\scriptfont\count@\dummyft@
21 \global\scriptscriptfont\count@\dummyft@
22 \repeat
```

Since all font changes occur either via `\selectfont` (in text) or `\mathversion` (for math mode), it is sufficient to change these to no-ops. In addition we must prevent the loading of math fonts, this is done by making `\getanddefine@fonts` a no-op.

```
23 \global\let\selectfont\relax
24 \global\let\mathversion@gobble
25 \global\let\getanddefine@fonts@gobbletwo
```

We prevent T_EX from complaining about the dummy font having no characters.

```
26 \tracinglostchars\z@
```

Then we disable the output routine, and set `\frenchspacing` (which is slightly faster than `\nonfrenchspacing`). Finally we set `\hbadness` to 10000 to avoid overfull box messages.

```
27 \nopages@
28 \frenchspacing
29 \hbadness\@M}
```

`\nopages@` The `\nopages@` macro disables the L^AT_EX output routine. To this end we define a very simple output routine that empties the output *and* footnote boxes (remember that the latter are insertions).

```
30 \def\nopages@{%
31 \output {\setbox\z@\box\@cclv
32 \setbox\z@\box\footins
33 \deadcycles\z@}%
```

Then we protect it against definition by a style file.

```
34 \newtoks\output
```

But this is not enough: normally the L^AT_EX output routine is responsible for dealing with floating objects. We therefore also redefine the internal macros for handling floats and marginpars.

```
35 \def\xfloat##1[##2]{%
```

There are a few things that have to be retained: the definition of `\@capttype` since it is used by the `\caption` command,

```
36 \def\@capttype{##1}%
```

the error message issued when not in outer paragraph mode,

```
37 \ifinner\@parmoderr\fi
```

and the `\@parboxrestore` command for the body of the float. This is necessary since it restores the original definitions of important commands like `\par` or `\.`

```
38 \setbox\@tempboxa\vbox\bgroup\@parboxrestore}%
```

`\end@float` must now only close the brace:

```
39 \let\end@float\egroup
```

The above would be enough also for two-column floats with the kernel algorithm. However with the refined algorithm inside `fixlxt2e` this doesn't any longer work, so there we also need to explicitly overwrite the end macro for two-column floats (the begin is still okay as it resolves to `\@xfloat` eventually).

```
40 \let\end@dblfloat\egroup
```

The redefinition of the `\marginpar` command is a bit more complicated since we have to check for the optional argument. First we redefine the command itself:

```
41 \def\marginpar{\ifinner\@parmoderr\fi
```

We open a group so that everything gathered in a temporary box can easily be thrown away by closing it again (see below).

```
42 \begingroup \@ifnextchar [\@xmpar\@ympar]
```

`\@xmpar` and `\@ympar` are now defined similar to `\@xfloat` above. If an optional argument is present `\@xmpar` typesets it in a temporary box that is thrown away later. Then it calls up `\@ympar` to process `\marginpar`'s argument.

```
43 \long\def\@xmpar[##1]{%
```

```
44 \setbox\@tempboxa\vbox{\@parboxrestore ##1}\@ympar}%
```

`\@ympar` gathers its argument in the same temporary box and throws away its contents by closing the group opened up in `\marginpar` above.

```
45 \long\def\@ympar##1{%
```

```
46 \setbox\@tempboxa\vbox{\@parboxrestore ##1}\endgroup}%
```

And that's all we had to do.

```
47 }
```

`\@preamblecmds` We disable the use of the `\syntaxonly` command after `\begin{document}`

```
48 \@onlypreamble\syntaxonly
```

```
49 </package>
```