

# The `mylatexformat`\* package

Use `mylatexformat.ltx` to make a format based on the preamble of any LaTeX file

<florent.chervet@free.fr>

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## Abstract

`mylatexformat.ltx` can be used to make a format from any  $\text{\LaTeX}$  file.

The use of formats helps to speed up compilations: packages which have been dumped in the format are loaded at very high speed.

The format is usually made from the preamble of a `.tex` file. But with `mylatexformat`, you may stop the format at any point in the preamble using the command `\endofdump` before `\begin{document}`.

As far as I am concerned, I'm using MikTeX and have not been able to test the file on other systems. However, the portability of  $\text{\TeX}$  documents is well known...

I've been using `mylatexformat.ltx` with  $\text{\LaTeX}$ ,  $\text{pdf\TeX}$  and  $\text{Xe\TeX}$  and it worked fine...

`mylatexformat` was primarily a written from `mylatex.ltx`<sup>1</sup>, but is very different in many points.

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\* `mylatexformat`: CTAN:[macros/latex/contrib/mylatexformat](#)

This documentation is produced with the +DocStrip+ utility.

- To get the documentation, run (thrice): `pdflatex mylatexformat.dtx`
- To get the index,       run:           `makeindex -s gind.ist mylatexformat.idx`
- To get the package,   run:           `etex mylatexformat.dtx`

## 1 Creating a format

### 1.1 Using MikTeX

#### 1.1.1 With preloaded pdflatex format (pdf output)

Use the following command line:

```
etex -initialize [opts] "&pdflatex" mylatexformat.ltx """abc.tex"""
```

You need 3 quotes around your .tex file if its name contains space (only one quote if it does not contain any space, but 3 quotes is more general...)

Full example:

---

```
etex -initialize -interaction=nonstopmode  
-save-size=20000 -stack-size=20000  
-jobname="Mon Beau Format Perso"  
"&pdflatex" mylatexformat.ltx """Mon Fichier TeX.tex"""
```

---

#### 1.1.2 With preloaded latex format (dvi output)

Use the following command line:

```
etex -initialize [opts] "&latex" mylatexformat.ltx """abc.tex"""
```

#### 1.1.3 With preloaded format xelatex (pdf output)

Use the following command line:

```
xetex -initialize [opts] "&xelatex" mylatexformat.ltx """abc.tex"""
```

## 1.2 Using other distributions

As I pointed out in the abstract, I have not been able to test the file on other distributions.

## 2 Using a format

### 2.1 Using MikTeX

Add the format to the very first line of your LaTeX file :

```
%&"Mon Beau Format"
```

You may use the  $\varepsilon$ -TeX option : `-dont-parse-first-line` to avoid loading the format.

### 2.2 Using other distributions

As I pointed out in the abstract, I have not been able to test the file on other distributions.

### 3 How does it work ? (and why it is different from mylatex.ltx)

mylatex.ltx has three important limitations:

- 1) The end of the format is either `\begin{document}` or the comment `%mylatex`

Therefore, after the format has been loaded, TeX checks the commentaries in the preamble in order to skip everything before `%mylatex`.

But this way, braces **must match inside commentaries !**

- 2) mylatex.ltx temporarily redefines the command `\document` in order to stop the creation of the format (execution of `\dump`) at begin document.

However, the **initial definition of the macro `\document`** is saved and reloaded after the format has been loaded.

Therefore, package that modifies this macro (such as `auxhook`<sup>2</sup> or `etoolbox`<sup>3</sup> cannot be included in the format!

- 3) If your document starts with :

`\begin{document}% commentary` or with :

`\begin{document}\makeatletter`

the format is not stopped at `\begin{document}` and an error occurs.

With mylatexformat.ltx, those limitations are lifted.

mylatexformat.ltx:

- 1) Temporarily redefines `\begin` in order to check if its argument is `<document>`.

Therefore, packages like `auxhook` or `etoolbox` can be included in the format.

- 2) Stops the format when it encounters `\begin{document}` or `\endofdump`.

- 3) Does not read inside commentaries

- 4) After the format has been loaded, each line is checked to see if it **contains** either:

`\begin{document}`

or: `\endofdump`

or: `\csname endofdump\endcsname*`

Report is written in the `.log` file, with the job name, the name of the preloaded format, the list of preloaded files and the first input line read after loading of format.

\* this way, the command `\csname endofdump\endcsname` is silently ignored (equiv. to `\relax`) in case the format is not used.



### 4 Implementation

```
1 (*package)
2 %%%
3 %%%
4 %%%
5 %%% From an original idea by David Carlisle - mylatex.ltx 1994/09/27
6 %%% © lppl 2010 - F Chervet - 2010/04/25
7 %%%
8 %%%
9 %%% Use this file to make a format based on the preamble of any LaTeX
10 %%% file.
11 %%%
```

2. auxhook: [CTAN:macros/latex/contrib/oberdiek/auxhook](#) H. Oberdiek  
3. etoolbox: [CTAN:macros/latex/contrib/etoolbox](#) P. Lehman

```
12%%% The format is made from the very beginning of the file up to either:  
13%%%   i) the command : \endofdump  
14%%%           placed in the preamble  
15%%%   ii) the command : \csname endofdump\endcsname  
16%%%           placed in the preamble  
17%%% iii) \begin{document}  
18%%%           if \endofdump nor \csname endofdump\endcsname  
19%%%           haven't been found in the preamble.  
20%%%  
21%%% A format helps to speed up compilations, packages which have been  
22%%% dumped in the format are loaded at very high speed.  
23%%% -----  
24%%% There are no restrictions on the distribution or modification of  
25%%% this file, except that other people should not attempt to alter  
26%%% the master copy on the ctan archives.  
27%%%  
28%%% Making the format -----  
29%%% ^^^^^^^^^^^^^^ USING MikTeX  
30%%% * With preloaded pdflatex format (pdf output) :  
31%%%   etex -initialize [opts] "&pdflatex" mylatexformat.ltx """"abc.tex""""  
32%%% => compile your document using :  
33%%%     pdflatex  
34%%%     or texify --tex-option=-output-format=pdf  
35%%%  
36%%% * With preloaded latex format (dvi output) :  
37%%%   etex -initialize [opts] "&latex" mylatexformat.ltx """"abc.tex""""  
38%%% => compile your document using  
39%%%     latex  
40%%%     or texify --tex-option=-output-format=dvi  
41%%%  
42%%% * With preloaded format xelatex (pdf output) :  
43%%%   xetex -initialize [opts] "&xelatex" mylatexformat.ltx """"abc.tex""""  
44%%% => compile your document using xelatex  
45%%%  
46%%% NOTA BENE: Please, notice the 3 quotes !  
47%%% ^^^^^^  
48%%%  
49%%% In fact, 3 quotes are necessary only if you "file name.tex" contains a space !  
50%%%-----  
51%%%-----  
52%%% Exemple of a command line for making format using pdfTeX :  
53%%%  
54%%%   etex -initialize -interaction=nonstopmode  
55%%%           -save-size=20000 -stack-size=20000  
56%%%           -jobname="Mon Beau Format Perso"  
57%%%           "&pdflatex" mylatexformat.ltx "Mon Fichier TeX.tex"  
58%%%  
59%%% "Mon Beau Format Perso.fmt" (en Français dans le texte) will be created  
60%%% (or overwritten) in the current working directory.  
61%%%  
62%%% Using the format -----  
63%%% ^^^^^^^^^^ USING MikTeX  
64%%% Add the format to the very first line of your LaTeX file :  
65%%% --> first line : %%&"format file name"  
66%%% without the .fmt extension.  
67%%% [You may use the option : -dont-parse-first-line option  
68%%% to avoid loading the format]  
69%%%-----  
70%%%-----  
71%%% The following informations come from mylatex.ltx from David Carlisle:  
72%%% Given a LaTeX file 'abc.tex', use initex as follows:  
73%%%-----
```

```
74% initex &latex mylatexformat.ltx abc      (Generic TeX)
75% initex \&latex mylatexformat.ltx abc      (unix and other TeX's)
76% tex /i &latex mylatexformat.ltx abc      (emtex)
77%
78% If you are on a Mac or using some shell that makes it inconvenient
79% to use a command line such as the above examples then you may
80% make a file 'mylatex.tex' with the single line
81% \input mylatex.ltx abc
82% and then pass the file mylatex.tex to your (ini)tex shell to produce
83% the format, ie something equivalent to initex &latex mylatex.tex.
84%
85% If you are using OzTeX, see the separate instructions below.
86%
87% This should make a format file mylatex.fmt which you can then use
88% as follows
89%
90% Using the new format
91% ^^^^^^^^^^^^^^^^^^^^^^^^^^
92%
93% tex &mylatex abc          (generic TeX)
94% virtex \&mylatex abc       (Unix TeX)
95%
96% This will process your document, abc.tex, just as LaTeX does, but
97% quicker as the contents of the preamble will be stored in the
98% format file and will not need to be run each time.
99%
100% If (vir)tex fails to find your mylatex.fmt then it is not searching
101% in the current directory, either modify your TEXFORMATS path (or
102% equivalent) to search '.' or (on unix/dos) use ./ as in:
103% virtex \&./mylatex abc
104%
105% Making and using the format with OzTeX
106% ^^^^^^^^^^^^^^^^^^^^^^^^^^
107%
108% Given a LaTeX file 'abc.tex', do this: select 'TeX...' from OzTeX's
109% TeX menu, and go to the folder containing the file 'abc.tex' as if you
110% were selecting the file 'abc.tex'. Then hit the Cancel button - this
111% procedure sets OzTeX's working folder to the one containing abc.tex.
112% Next, select iniTeX from the TeX menu, and type:
113%
114% &latex mylatex.ltx abc
115%
116% This should make a format file mylatex.fmt which you can save in the
117% same folder as the file you're working on.
118%
119% To use the new format, put this at the very start of the very first
120% line of your document:
121%
122% %&mylatex
123%
124% Further Notes
125%
126% The file abc.tex must contain a line *just* with
127% \begin{document}
128% Everything up to (but not including) the \begin{document} will
129% be saved in the format and not executed in subsequent runs.
130%
131% If you are modifying the document (or working on a similar document)
132% you may wish to add new commands to your document preamble.
133% The 'mylatex' format normally skips the whole preamble (believing
134% it to be pre-loaded) and so such new commands do not take effect.
135% You could re-make the format, preloading the new preamble, but that
```

```
136% might be inconvenient to do every time, and so an alternative scheme
137% has been introduced.
138% If the preamble contains a comment mylatex (ie a line just
139% containing a % white space and the word mylatex) then the mylatex
140% format will start reading the preable at that point so any new
141% commands can be placed after such a comment and they will be
142% executed.
143% -----
144%
145%
146%
147%\RequirePackage{etex}% RequirePackage may be used before the class
148%\makeatletter
149% In principle \openout stream= filename need not be space terminated,
150% and need not be immediate, but this covers \makeindex \makeglossary
151% and index package's \newindex which are all the cases of \openout
152% that occur before \begin{document} that I could see.
153% Thanks to Ross Moore for pointing out \AtBeginDocument is too late
154% eg changebar package *closes* the stream in \AtBeginDocument, so need
155% to make sure it is opened before that. Make a special purpose hook.
156%
157% Save the original definition.
158\makeatletter
159\let\etex@primitive@\openout\openout
160\def\openout#1 {\g@addto@macro\MYLATEXopens{\immediate\etex@primitive@\openout#1}}
161\let\MYLATEXopens\empty
162% \begin is overloaded in order to stop \dump at begin document
163% if the macro \endofdump is not given somewhere in the preamble.
164% Rem: it is NOT POSSIBLE to redefine \document, for the macro
165% \document is changed or patched by some classes or packages
166% (auxhook, etoolbox etc.)
167\let\MYLATEX@latex@\begin\begin
168\def\begin#1{%
169  \expandafter\ifx\csname#1\endcsname\document
170    \expandafter\expandafter\expandafter\endofdump\expandafter\@gobble
171  \else\expandafter\MYLATEX@latex@\begin
172  \fi{#1}}
173% The version of \document to use on the initex run.
174% Just preloads some fonts, puts back \document and \openout,
175% sets up the banner to display the file list of files preloaded,
176% then sets up some special catcodes so the preamble will be
177% skipped on normal runs with the new format.
178\def\endofdump{%
179% Force some font preloading.
180 {\setbox\z@\hbox{%
181    $$% math (not bold, some setups don't have \boldmath)
182    \normalfont% normal
183    {\bfseries\itshape}\{\itshape\}\ttfamily\sffamily
184    \ifdefined\large\large\fi
185    \ifdefined\Large\Large\fi
186    \ifdefined\LARGE\LARGE\fi
187    \ifdefined\Huge\Huge\fi
188    \ifdefined\small\small\fi
189    \ifdefined\footnotesize\footnotesize\fi
190    \ifdefined\tiny\tiny\fi
191  }}%
192  \let\openout\etex@primitive@\openout
193  \let\etex@primitive@\openout\@undefined
194  \let\begin\MYLATEX@latex@\begin
195  \let\MYLATEX@latex@\begin\@undefined
196  \makeatother
197  \everyjob\expandafter{\the\everyjob}
```

```

198      \begingroup
199          \listfiles
200          \expandafter\MYLATEXcustomised\@dofilelist
201      \endgroup}%
202 \catcode`\\=13\relax%
203 \let\endofdump\relax
204 \dump
205 }
206 % Banner for \everyjob.
207 \edef\MYLATEXcustomised#1#2#3\typeout#4{%
208     \noexpand\typeout{=====
209     \noexpand\typeout{JOB NAME\noexpand@spaces\noexpand@spaces\noexpand\space\noexpand\space:%
210             \string"\noexpand\jobname\string"}%
211     \noexpand\typeout{CUSTOMISED FORMAT :\string"\jobname\string"}%
212     \noexpand\typeout{PRELOADED FILES:}%
213 #3%
214     \noexpand\typeout{=====
215     \noexpand\typeout{(mylatexformat)Info: starting reading document%
216                         \string"\noexpand\jobname\string"}%
217 }
218 %% While the preamble is being skipped (inside a group)
219 %% the EOL is active and defined to grab each line and
220 %% inspect it looking for :
221 %%         \endofdump
222 %% or      \csname endofdump\endcsname
223 %% or      \begin{document}.
224 %%
225 %% The special catcodes required are not enabled until after the
226 %% first TeX command in the file, so as to avoid problems with
227 %% the special processing that TeX does on the first line, choosing
228 %% the format, or the file name etc.
229 {% Entering simple groupe (level 1) => skip the preamble
230 \catcode`\^^M=\active%
231 \catcode`\=/=0 %
232 /catcode`\=13 %
233 /catcode`/& 8 %
234 /gdef\{/catcode`\=/=0 /catcode`\^^M=13 ^^M}% /catcode`\/=9 ^^M}%
235 %%
236 /long/gdef^^M{/begingroup%
237     /long/def/MYLATEX@endofdump##1/endofdump##2##3&##4##5##6/MYLATEX{##5}%
238     /long/def/MYLATEX@endofdump@cs##1/csname endofdump/endcsname##2##3&##4##5##6/MYLATEX{##5}%
239     /long/def/MYLATEX@document ##1document##2##3&##4##5##6/MYLATEX{##5}%
240     /long/def/MYLATEX@begindocument##1/begin##2##3/MYLATEX##4{%
241         /MYLATEX@document ##2document&&{/MYLATEX@start1{##4}}{^^M}/MYLATEX}%
242     /long/def/MYLATEX@start##1##2{%
243         /typeout{(mylatexformat)/@spaces/space/on@line./space(%
244             /ifcase##1 /string/endofdump/else/string/begin{document}/fi)}%
245         /typeout{=====
246         \endgroup%
247         /catcode`\^^M=5/relax%
248         /let^^M/par%
249         /MYLATEXopens##2}%
250     /long/gdef^^M##1^^M{%
251         /MYLATEX@endofdump##1/endofdump&&
252             {/MYLATEX@start0{##1}}%
253             {/MYLATEX@endofdump@cs##1/csname endofdump/endcsname&&%
254                 {/MYLATEX@start0{##1}}%
255                 {/MYLATEX@begindocument##1/begin/relax/MYLATEX{##1}}%
256                 /MYLATEX}%
257             /MYLATEX}%
258         ^^M}%
259 }% Leaving simple groupe (level 1) => start reading document

```

```
260% Trick lookahead to allow mylatex.ltx and the document filename to be
261% given on the same command line. (initex & latex mylatex.ltx {abc.tex})
262\expandafter\input\endinput%
263</package>
```

5 History

[2010/04/30 v1.0]

- First version.

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