

The **mylatexformat*** package

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

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Abstract

mylatexformat.ltx can be used to make a format from any L^AT_EX 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 T_EX documents is well known...

I've been using mylatexformat.ltx with L^AT_EX, pdfT_EX and XeT_EX and it worked fine...

mylatexformat was primarily a written from mylatex.ltx¹, 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

The .dtx file is embedded into this pdf file thank to embedfile by H. Oberdiek.

1. mylatex.ltx: CTAN:macros/latex/contrib/carlisle from David Carlisle (1994/09/27)

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 ε -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, T_EX 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`² or `etoolbox`³ 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 %%%                               mylatexformat.ltx
4 %%%                               AAAAAAAAAAAAAAAAAA
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

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```

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\let\ltx@listfiles\listfiles
161\def\openout#1 {\g@addto@macro\MYLATEXopens{\immediate\openout#1 }}
162\def\MYLATEXopens{%
163  \let\openout\etex@primitive@openout
164  \let\etex@primitive@openout\ltx@undefined
165}% \MYLATEXopens
166%% \begin is overloaded in order to stop \dump at begin document
167%% if the macro \endofdump is not given somewhere in the preamble.
168%% Rem: it is NOT POSSIBLE to redefine \document, for the macro
169%%      \document is changed or patched by some classes or packages
170%%      (auxhook, etoolbox etc.)
171\let\MYLATEX@latex@begin\begin
172\def\begin#1{%
173  \expandafter\ifx\csname#1\endcsname\document
174    \expandafter\expandafter\expandafter\endofdump\expandafter\@gobble
175  \else\expandafter\MYLATEX@latex@begin
176    \fi{#1}}
177%% The version of \document to use on the initex run.
178%% Just preloads some fonts, puts back \document and \openout,
179%% sets up the banner to display the file list of files preloaded,
180%% then sets up some special catcodes so the preamble will be
181%% skipped on normal runs with the new format.
182\def\endofdump{%
183%% Force some font preloading.
184 {\setbox\z@\hbox{%
185   $$$ math (not bold, some setups don't have \boldmath)
186   \normalfont% normal
187   {\bfseries\itshape}{\itshape}\ttfamily\sffamily
188   \ifdefined\large\large\fi
189   \ifdefined\Large\Large\fi
190   \ifdefined\LARGE\LARGE\fi
191   \ifdefined\Huge\Huge\fi
192   \ifdefined\small\small\fi
193   \ifdefined\footnotesize\footnotesize\fi
194   \ifdefined\tiny\tiny\fi
195 }}%
196 \let\openout\etex@primitive@openout% just in case - normally not necessary
197 \let\begin\MYLATEX@latex@begin

```

```

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

```



```

260           /MYLATEX}%
261           /MYLATEX}%
262       ^^M}%
263}% Leaving simple groupe (level 1) => start reading document

```

`\AtEndOfDump` is just a hook to be executed when `\endofdump` is encountered, (or `\begin{document}`). Therefore, the code having been set `\AtEndOfDump` is included in the format:

```

264 \newtoks\MYLATEX@hook
265 \def\AtEndOfDump{\addto@hook\MYLATEX@hook}
266 \AtEndOfDump{\let\AtEndOfDump\@undefined}

267%% Trick lookahead to allow mylatex.ltx and the document filename to be
268%% given on the same command line. (initex &latex mylatex.ltx {abc.tex})
269 \expandafter\input\endinput%
270 \</package>

```

5 History

[2010/06/20 v2]

- Added: `\AtEndOfDump` macro to include some code in the format, just before `\dump`.
- Added: `\listfiles` is now available in the preamble, after `\endofdump`, when the document is compiled with its format.

[2010/05/20 v1.2]

- Fixed a bug in `\MYLATEXopens`
(There was problems when including an index in the format for example...)

[2010/04/30 v1.0]

- First version.

6 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.

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