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The gmeometric Package^{*}

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for the details of that license.

LPPL status: "author-maintained".

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{gmeometric}
3 [2007/11/17 v0.72 to allow the 'geometry' macro in the document
   (GM)]
```

Introduction, usage

This package allows you to use the `\geometry` macro, provided by the `geometry` v3.2 by Hideo Umeki, anywhere in a document: originally it's claused `\@onlypreamble` and the main work of `gmeometric` is to change that.

Note it's rather queer to change the page layout *inside* a document and it should be considered as drugs or alcohol: it's O.K. only if you *really* know what you're doing.

In order to work properly, the macro should launch the `\clearpage` or the `\cleardoublepage` to 'commit' the changes. So, the unstarred version triggers the first while the starred the latter. If that doesn't work quite as expected, try to precede or succede it with `\onecolumn` or `\twocolumn`.

It's important that `\clear(double)page` launched by `\geometry` not to be a no-op, i.e., `\clear(double)page` immediately preceding `\geometry` (nothing is printed in between) discards the 'commitment'.

You may use `gmeometric` just like `geometry` i.e., to specify the layout as the package options: they shall be passed to `geometry`.

This package also checks if the engine is X_YL^AT_EX and sets the proper driver if so. Probably it's redundant since decent X_YL^AT_EX packages provide their `geometry.cfg` file that does that.

Installation

Unpack the `gmeometric.tds.zip` archive in a `texmf` directory or put the `gmeometric.sty` somewhere in the `texmf/tex/latex` branch on your own. Creating a `texmf/tex/latex/gm` directory may be advisable if you consider using other packages written by me.

Then you should refresh your T_EX distribution's files' database most probably.

^{*} This file has version number v0.72 dated 2007/11/17.

Contents of the gmeometric.zip archive

The distribution of the gmeometric package consists of the following four files.

```
gmeometric.sty
README
gmeometricDoc.tex
gmeometricDoc.pdf
gmeometric.tds.zip
```

Compiling of the Documentation

The last of the above files (the .pdf, i.e., *this file*) is a documentation compiled from the .sty file by running L^AT_EX (twice) on the gmeometricDoc.tex file. Compiling of the documentation requires the packages: gmdoc (gmdoc.sty and gmdocc.cls), gmverb.sty, gmutils.sty, gmiflink.sty and also some standard packages: hyperref.sty, color.sty, geometry.sty, multicols.sty, lmodern.sty, fontenc.sty that should be installed on your computer by default.

If you have not installed the mwart.cls class (available on CTAN in mwcls package), the result of your compilation may differ a bit from the .pdf provided in this .zip archive in formatings: If you have not installed mwart.cls, the standard article.cls class will be used.

Usage

The main use of this package is to allow the \geometry command also inside the document (originally it's \onlypreamble). To make \geometry work properly is quite a different business. It may be advisable to 'commit' the layout changes with \newpage, \clearpage, or \cleardoublepage and maybe \one/twocolumn.

Some layout commands should be put before \one/twocolumn and other after it. An example:

```
\thispagestyle{empty}
\advance\textheight 3.4cm\relax
\onecolumn
\newpage
\advance\footskip-1.7cm
\geometry{hmargin=1.2cm,vmargin=1cm}
\clearpage
```

And another:

```
\newpage
\geometry{bottom=3.6cm}
```

In some cases it doesn't work perfectly anyway. Well, the (LPPL) license warns about it.

The Code

```
4 \RequirePackage{gmutils}[2007/04/23]% this package defines the storing and restoring commands.
```

redefine \onlypreamble, add storing to BeginDocument.

```
\gme@tobestored 5 \newcommand*\gme@tobestored{ {%
6 \Gm@cnth \Gm@cntv \c@Gm@tempcnt \Gm@bindingoffset \Gm@wd@mp
```

```

7      \Gm@odd@mp \Gm@even@mp \Gm@orgw \Gm@orgh \Gm@dimlist}}
8 \xa\AtBeginDocument\@xa{\xa\StoreMacros\gme@tobestored}
9 \StoreMacro\@onlypreamble
10 \let\@onlypreamble\@gobble

```

To make it work properly in Xe_{La}TeX:

```

11 \ifXeTeX{%
12   \ifundefined{pdfoutput}{\newcount\pdfoutput}{}%
13   \PassOptionsToPackage{dvipdfm}{geometry}%
14 }{}

```

```

15 \RequirePackageWithOptions{geometry}

```

Restore \@onlypreamble:

```

16 \RestoreMacro\@onlypreamble

```

Hypothesis: \ifx...\@undefined fails in the document because something made \csname Gm@lines\endcsname. So we change the test to decent. And i think I've found the guilty: \@ifundefined in \Gm@showparams. So I change it to the more elegant \ifx%\@undefined.

```

\Gm@showparams 17 \def\Gm@showparams{%
18   ----- Geometry parameters^^J%
19   \ifGm@pass
20     'pass' is specified!! (disables the geometry layouter)^^J%
21   \else
22     paper: \ifx\Gm@paper\@undefined class default\else\Gm@paper\fi^^J%
23     \Gm@checkbool{landscape}%
24     twocolumn: \if@twocolumn\Gm@true\else--\fi^^J%
25     twoside: \if@twoside\Gm@true\else--\fi^^J%
26     asymmetric: \if@mparswitch --\else\if@twoside\Gm@true\else --\fi%
27                   \fi^^J%
28     h-parts: \Gm@lmargin, \Gm@width, \Gm@rmargin%
29     \ifnum\Gm@cnth=\z@\space(default)\fi^^J%
30     v-parts: \Gm@tmargin, \Gm@height, \Gm@bmargin%
31     \ifnum\Gm@cntv=\z@\space(default)\fi^^J%
32     hmarginratio: \ifnum\Gm@cnth<5 \ifnum\Gm@cnth=3--\else%
33                   \Gm@hmarginratio\fi\else--\fi^^J%
34     vmarginratio: \ifnum\Gm@cntv<5 \ifnum\Gm@cntv=3--\else%
35                   \Gm@vmarginratio\fi\else--\fi^^J%
36     lines: \ifx\Gm@lines\@undefined--\else\Gm@lines\fi^^J% here I (natror) fix
37           the bug: it was \@ifundefined that of course was assigning \relax to
38           % \Gm@lines and that resulted in an error when \geometry was used inside
39           document.
40     \Gm@checkbool{heightrounded}%
41     bindingoffset: \the\Gm@bindingoffset^^J%
42     truedimen: \ifx\Gm@truedimen\@empty --\else\Gm@true\fi^^J%
43     \Gm@checkbool{includehead}%
44     \Gm@checkbool{includefoot}%
45     \Gm@checkbool{includemp}%
46     driver: \Gm@driver^^J%
47   \fi
48   ----- Page layout dimensions and switches^^J%
49   \string\paperwidth\space\space\the\paperwidth^^J%

```

```

46 \string\paperheight\space\the\paperheight^^J%
47 \string\textwidth\space\space\the\textwidth^^J%
48 \string\textheight\space\the\textheight^^J%
49 \string\oddsidemargin\space\space\the\oddsidemargin^^J%
50 \string\evensidemargin\space\the\evensidemargin^^J%
51 \string\topmargin\space\space\the\topmargin^^J%
52 \string\headheight\space\the\headheight^^J%
53 \string\headsep\@spaces\the\headsep^^J%
54 \string\footskip\space\space\space\the\footskip^^J%
55 \string\marginparwidth\space\the\marginparwidth^^J%
56 \string\marginparsep\space\space\space\the\marginparsep^^J%
57 \string\columnsep\space\space\the\columnsep^^J%
58 \string\skip\string\footins\space\space\the\skip\footins^^J%
59 \string\hoffset\space\the\hoffset^^J%
60 \string\voffset\space\the\voffset^^J%
61 \string\mag\space\the\mag^^J%
62 \if@twocolumn\string\@twocolumntrue\space\fi%
63 \if@twoside\string\@twosidetrue\space\fi%
64 \if@mparswitch\string\@mparswitchtrue\space\fi%
65 \if@reversemargin\string\@reversemargintrue\space\fi^^J%
66 (1in=72.27pt, 1cm=28.45pt)^^J%
67 -----}

```

Add restore to BeginDocument:

```

68 \@xa\AtBeginDocument\@xa{\@xa\RestoreMacros\gme@tobestored}
69 \endinput

```

Change History

v0.69

General:

Checksum 40, [1](#)

v0.70

General:

Back to the v0.68 settings because
\@not@onlypreamble was far too little.
Well, in this version the redefinition
of \geometry is given up since the
‘committing’ commands depend on
the particular situation so defining
only two options doesn’t seem
advisable, [4](#)

Checksum 36, [1](#)

v0.71

General:

a rbs-compliant zip archive made, [4](#)

Checksum 41, [1](#)

v0.72

General:

Checksum 239, [1](#)

\Gm@showparams:

a bug fix: \@ifundefined{Gm@lines}
raised an error when \geometry used
inside the document, I change it to
\ifx\@undefined, [3](#)