

texdef 脚本

Martin Scharrer

`martin@scharrer-online.de`

翻译: `virhuiai@qq.com`

VC: <https://sourceforge.net/projects/texdef/>
Version 1.9 – 2020/09/27

摘要

This Perl script shows the definition of \LaTeX commands in a similar way as the \TeX primitive `\show`. It is intended to allow users to quickly see the definitions of user level or internal package macros as well as the values of registers. The given commands are compiled internally with \LaTeX and the output of `\show` is formatted and shown to the user.

这个 Perl 脚本以类似于 \TeX 原始命令 `\show` 的方式显示 \LaTeX 命令的定义。它旨在允许用户快速查看用户级别或内部包宏的定义以及寄存器的值。给定的命令在内部使用 \LaTeX 进行编译，并将 `\show` 的输出格式化并显示给用户。

1 Usage

用法

The script executable is called `texdef` (or maybe `texdef.pl`). A normal installation is supposed to also install it as `latexdef` (e.g. using a symlink to `texdef`) in order to allow for quick access to the \LaTeX format. Further format shortcuts are possible as explained in the installation section.

该脚本的可执行文件名为 `texdef` (或者可能是 `texdef.pl`)。正常安装还应将其作为 `latexdef` (例如, 使用符号链接到 `texdef`) 安装, 以便快速访问 \LaTeX 格式。安装部分会解释其他格式的快捷方式。

```
texdef [<options>] <commandname> [ <commandname> ... ]  
latexdef [<options>] <commandname> [ <commandname> ... ]
```

Other program names are possible. See the `tex` option. Command names do not need to start with ‘\’.

也可以使用其他程序名。请参阅 `tex` 选项。命令名称不需要以 ‘\’ 开头。

Options

选项

可以使用以下选项：

The following options can be used:

--tex *<format>* (完整形式)

-t *<format>* (缩写形式)

Use given format of TeX: `tex`, `latex`, `context`. Variations of `tex` and `latex`, like `luatex`, `lualatex`, `xetex`, `xelatex` are supported. The postfix `-dev` for develop versions of the format is also supported (e.g. `latex-dev`). The default is given by the used program name: `texdef` -> `tex`, `latexdef` -> `latex`, etc.

使用给定的 TeX 格式：`tex`、`latex`、`context`。支持 `tex` 和 `latex` 的变体，如 `luatex`、`lualatex`、`xetex`、`xelatex`。还支持用于开发版本格式的后缀 `-dev`（例如 `latex-dev`）。默认值由使用的程序名称给出：`texdef` -> `tex`，`latexdef` -> `latex` 等。

U 2023-04-20

--tempdir *<directory>*

Use given existing directory for temporary files.

使用给定的现有目录作为临时文件目录。

```
virhuiai ~ $> xelatexdef --tempdir /Volumes/RamDisk TeX
```

--texoptions *<options>*

Call \LaTeX / \TeX with the given options.

使用给定的选项调用 \LaTeX / \TeX 。

```
virhuiai ~ $> xelatexdef --texoptions '-shell-escape' 略...
```

--source, -s

Try to show the original source code of the command definition (L).

尝试显示命令定义的原始源代码。(L)

```
virhuiai %> xelatexdef TeX
```

```
\TeX:
```

```
macro:->\protect \TeX
```

```
\TeX :
```

```
\long macro:->T\kern -.1667em\lower .5ex\hbox  
{E}\kern -.125emX\@
```

```
virhuiai %> xelatexdef -s TeX
```

```
% latex.ltx, line 6650:
```

```
\DeclareRobustCommand\TeX{T\kern -.1667em\lower  
.5ex\hbox{E}\kern -.125emX\@}
```

--find (完整形式)

-f (缩写形式)

Find file where the command sequence was defined (L).

查找命令序列定义所在的文件 (L).

--Find (完整形式)

-F (缩写形式)

Show full filepath of the file where the command sequence was defined (L).

显示命令序列定义所在文件的完整路径 (L)。

--value, -v

Show value of command instead (i.e. `\the\command`).

显示命令的值，而不是命令本身（即 `\the\command`）。

```
virhuiai %> latexdef -c '[a4paper]{book}' -v  
paperwidth
```

```
\the\paperwidth:  
597.50787pt
```

```
virhuiai %> latexdef -c '[letter]{book}' -v paperwidth
```

```
\the\paperwidth:  
614.295pt
```

```
virhuiai %> latexdef -c '[letter]{book}' -f -v  
paperwidth
```

```
\paperwidth is defined by (La)TeX.
```

```
\the\paperwidth:  
614.295pt
```

--Environment, -E

Every command name is taken as an environment name. This will show the definition of both `\foo` and `\endfoo` if `foo` is used as command name (L).

每个命令名都被视为一个环境名。如果使用 `foo` 作为命令名，这将显示 `\foo` 和 `\endfoo` 的定义 (L)。

```
virhuiai ~ $> latexdef -p tikz --env tikzpicture draw
```

--preamble, -P

Show definition of the command inside the preamble.

显示导言区内的命令定义。

--beforeclass, -B

Show definition of the command before `\documentclass`.

显示命令在 `\documentclass` 之前的定义，

--package $\langle pkg \rangle$ (完整形式)

-p $\langle pkg \rangle$ (缩写形式)

(M) Load given tex-file, package or module depending on whether ‘*tex’, ‘*latex’ or ‘context’ is used. For LaTeX the $\langle pkg \rangle$ can start with ‘ $[\langle options \rangle]$ ’ and end with $\langle pkgname \rangle$ or $\{\langle pkgname \rangle\}$.

根据使用的是 ‘*tex’, ‘*latex’ 还是 ‘context’, 加载给定的 tex 文件、包或模块。对于 LaTeX, $\langle pkg \rangle$ 可以以 ‘ $[\langle options \rangle]$ ’ 开头, 并以 $\langle pkgname \rangle$ 或 $\{\langle pkgname \rangle\}$ 结尾。

```
virhuiai ~ $> xelatexdef -p '[all]{tcolorbox}' 略..
```

--class $\langle class \rangle$ (完整形式)

-c $\langle class \rangle$ (缩写形式)

(LaTeX only) Load given class instead of default (‘article’). The $\langle class \rangle$ can start with $[\langle class options \rangle]$ and end with $\langle classname \rangle$ or $\{\langle classname \rangle\}$.

(仅限 LaTeX) 加载给定的类, 而不是默认的 (‘article’)。 $\langle class \rangle$ 可以以 $[\langle class options \rangle]$ 开头, 并以 $\langle classname \rangle$ 或 $\{\langle classname \rangle\}$ 结尾。

```
virhuiai ~ $> latexdef -c '[a4paper]{book}' -v paperwidth
virhuiai ~ $> latexdef -c '[letter]{book}' -v paperwidth
```

--environment $\langle env \rangle$ (完整形式)

--env $\langle env \rangle$ (缩写形式, 无意发现)

-e $\langle env \rangle$ (缩写形式, 原文为 p 应是笔误)

(M) Show definition inside the given environment $\langle env \rangle$.

(M) 显示在给定的环境 $\langle env \rangle$ 中的定义。

```
virhuiai ~ $> latexdef -p tikz --env tikzpicture draw
virhuiai ~ $> latexdef -p tikz -e tikzpicture draw
```

--othercode $\langle code \rangle$ (完整形式)

-o $\langle code \rangle$ (缩写形式)

(M) Add other code into the preamble before the definition is shown. This can be used to e.g. load PGF/TikZ libraries.

(M) 在显示定义之前，将其他代码添加到序言中。这可以用来例如加载 PGF/TikZ 库。

```
virhuiai ~ $> xelatexdef -o '\usepackage{xspace}' xspace
```

--before *<code>* (完整形式)

-b *<code>* (缩写形式)

(M) Place *<code>* before definition is shown. The *<code>* can be arbitray TeX code and doesn't need be be balanced.

(M) 将*<code>* 放置在定义显示之前。*<code>* 可以是任意的 TeX 代码，不需要是平衡的¹。

--after *<code>* (完整形式)

-a *<code>* (缩写形式)

(M) Place *<code>* after definition is shown. The *<code>* can be arbitray TeX code and doesn't need be be balanced.

(M) 将*<code>* 放在定义之后显示。*<code>* 可以是任意的 TeX 代码，不需要是平衡的。

```
virhuiai %> latexdef --tempdir /Volumes/RamDisk
-p '[all]tcolorbox' --texoptions '-shell-escape'
--before '\begin {tcolorbox}' --after '\end
{tcolorbox}' -s tcblower
```

\tcblower:

```
macro:->\tcb@insert@after@part \end {
    tcb@savebox}\tcb@set@color {tcbcollower}\
    unless \iftcb@sidebyside \tcbdimto \
    tcb@w@lower {\tcb@innerwidth -\kvtcb@boxsep
    *2-\kvtcb@leftlower -\kvtcb@rightlower }\
    fi \tcb@hasLowertrue \let \
    tcb@insert@after@part =\
    tcb@insert@after@lower \ifx \
```

¹译注：“balanced”可以翻译为“平衡的”，在计算机科学中通常表示某种数据结构中左右括号的数量相等，例如在括号匹配的问题中，括号序列是平衡的当且仅当左右括号的数量相等且括号的配对方式正确。

```

kvtcb@savelowerto \@empty \let \
tcb@startbox \tcb@savelowerbox \let \
endtcolorbox \tcb@endboxanddraw \else \let
\tcb@startbox \tcb@lowerverbatim \
expandafter \let \csname end\
kvtcb@savedelimiter \expandafter \endcsname
\csname tcb@endlowerverbatimanddraw\
endcsname \fi \tcb@startbox

```

`--list` (完整形式)

`-l` (缩写形式)

List user level command sequences of the given packages (L).

列出给定包的用户级别命令序列 (L)。

```

virhuiai %> latexdef --tempdir /Volumes/RamDisk -p
xspace -l

```

```

Defined by file 'xspace.sty':
\CurrentFile
\CurrentFilePath
\CurrentFilePathUsed
\CurrentFileUsed
\__hook_clist_gput:NV
\__hook_tl_gput:Nn
\__prop_map_0:wn
\__prop_map_1:wn
\__prop_pair:wn
\__prop_split_aux:w
\__seq_item:n
\__seq_map_1:w
\g__hook_file/after_labels_clist
\l__clist_internal_clist

```

```

\l__hook_cur_hook_tl
\l__hook_front_tl
\l__hook_label_0_tl
\l__hook_label_filehook-2020_seq
\l__hook_label_filehook-2020_tl
\l__hook_labels_seq
\l__hook_rear_tl
\l__hook_return_tl
\l__hook_work_prop
\protect
\xspace
\xspaceaddexceptions
\xspaceremoveexception

```

--list-defs

(完整形式)

-L

(缩写形式)

List user level command sequences and their shorten definitions of the given packages (L).

列出给定包的用户级别命令序列及其简短定义 (L)。

```

virhuiai %> latexdef --tempdir /Volumes/RamDisk -p
xspace -L

```

```

Defined by file 'xspace.sty':
\CurrentFile: macro:->xspace.sty
\CurrentFilePath: macro:->
\CurrentFilePathUsed: macro:->
\CurrentFileUsed: macro:->xspace.sty
\__hook_clist_gput:NV: \protected\long macro
:->\exp_args:NNV \clist_gput_1
\__hook_tl_gput:Nn: \protected\long macro
:#1#2->\__hook_tl_gset:Nx #1{\__k

```



```

\__prop_map_0:wn: \long macro:#1\s__prop #2->\
    msg_expandable_error:nn \ETC
\__prop_map_1:wn: \protected\long macro:#1\s__
    prop #2->\prop_map_inline:Nn
\__prop_pair:wn: \long macro:#1\s__prop #2->\
    msg_expandable_error:nn \ETC.
\__prop_split_aux:w: \long macro:#1\__prop_
    pair:wn filehook-2020\s__prop \
\__seq_item:n: \long macro:->\msg_expandable_
    error:nn {seq}\ETC.
\__seq_map_1:w: \long macro:->\msg_expandable_
    error:nn {seq}\ETC.
\g__hook_file/after_labels_clist: macro:->
    filehook-2020
\l__clist_internal_clist: macro:->filehook
    -2020
\l__hook_cur_hook_tl: macro:->file/after
\l__hook_front_tl: macro:->0
\l__hook_label_0_tl: macro:->filehook-2020
\l__hook_label_filehook-2020_seq: macro:->\s__
    seq
\l__hook_label_filehook-2020_tl: macro:->0
\l__hook_labels_seq: macro:->\s__seq \__seq_
    item:n {filehoo\ETC.
\l__hook_rear_tl: macro:->filehook-2020
\l__hook_return_tl: macro:->\
    filehook@set@CurrentFile \filehook@atend \
    ETC
\l__hook_work_prop: macro:->\s__prop \__prop_
    pair:wn fileh\ETC.
\protect: \string
\xspace: macro:->\protect \xspace

```

```
\xspaceaddexceptions: macro:->\g@addto@macro \
    @xspace@exceptions@tlp
\xspaceremoveexception: macro:#1->\def \
    reserved@a ##1#1##2##3\ETC.
```

--list-all (完整形式)

-ll (缩写形式)

List all command sequences of the given packages (L).

列出给定包的所有命令序列 (L)。

--list-defs-all (完整形式)

-LL (缩写形式)

List all command sequences and their shorten definitions of the given packages (L).

列出给定包的所有命令序列及其简短定义 (L)。

--ignore-cmds $\langle cs, cs, \dots \rangle$ (完整形式)

-i $\langle cs, cs, \dots \rangle$ (缩写形式)

Ignore the following command sequence(s) in the above lists. (M)

在上述列表中忽略以下命令序列 (M)。

--ignore-regex (完整形式)

-I (缩写形式)

Ignore all command sequences in the above lists which match the given Perl regular expression(s). (M)

在上述列表中忽略与给定 Perl 正则表达式匹配的所有命令序列 (M)。

--pgf-keys (完整形式)

-k (缩写形式)

Takes commands as pgfkeys and displays their definitions. Keys must use the full path but the common ‘.cmd’ prefix is applied.

以 pgfkeys 命令的形式显示它们的定义。键必须使用完整路径，但应用了常见的 ‘.cmd’ 前缀。

--pgf-Keys (完整形式)

-K (缩写形式)

Takes commands as `pgfkeys` and displays their definitions. Keys must use the full path.

以 `pgfkeys` 命令的形式显示它们的定义。键必须使用完整路径。

--version (完整形式)

-v (缩写形式)

If used alone prints version of this script. (L) Together with `-p` or `-c` prints version of LaTeX package(s) or class, respectively.

如果单独使用，打印此脚本的版本。(L) 与 `-p` 或 `-c` 一起使用分别打印 LaTeX 包或类的版本。

--edit

Opens the file holding the macro definition. Uses `--find` and `--source`. If the source definition can not be found the definition is printed as normal instead. (L)

打开保存宏定义的文件。使用 `--find` 和 `--source`。如果无法找到源定义，则正常打印定义。(L)

--editor *<editor>*

Can be used to set the used editor. If not used the environment variables `TEXDEF_EDITOR`, `EDITOR` and `SELECTED_EDITOR` are read in this order. If none of these are set a list of default editors are tried. The *<editor>* string can include `%f` for the filename, `%n` for the line number and `%%` for a literal `%`. If no `%` is used `+%n %f` is added to the given command.

可用于设置使用的编辑器。如果未使用，将按照此顺序读取环境变量 `TEXDEF_EDITOR`，`EDITOR` 和 `SELECTED_EDITOR`。如果这些都未设置，则尝试使用默认编辑器列表。*<editor>* 字符串可以包括 `%f` 表示文件名，`%n` 表示行号，`%%` 表示文字 `%`。如果未使用 `%`，则给定命令中添加 `+%n %f`。

--help (完整形式)

-h (缩写形式)

this help and quit.

打印此帮助并退出。

Notes:

Long option can be shorten as long the are still unique. Short options

can be combined. If the option ‘environment’, ‘before’ and ‘after’ are used together the produced code will be inserted in the given order (reversed order for ‘after’).

(M) = This option can be given multiple times.

(L) = LaTeX only. Requires the packages ‘filehook’ and ‘currfile’.

注：

如果长选项仍然是唯一的，则可以缩短长选项。短选项可以合并使用。如果选项 “environment”、“before” 和 “after” 一起使用，则生成的代码将按给定顺序插入（对于 “after” 则为相反顺序）。

(M) = 可以多次提供此选项。

(L) = 仅适用于 LaTeX。需要 “filehook” 和 “currfile” 包。