

docshots: L^AT_EX Package that Renders T_EX Samples Next to Their PDF Snapshots*

Yegor Bugayenko
yegor256@gmail.com

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NB! You must run T_EX processor with `--shell-escape` option and you must have [pdf_latex](#), [Perl](#), [Ghostscript](#), and [pdfcrop](#) installed.

1 Introduction

When you want to demonstrate to the readers of your documentation how to use certain T_EX commands, the best way would be to show exactly how the entire document will be rendered in PDF, using a subprocess that would render it (via `pdflatex`, for example). To my best knowledge, there were no packages that would allow you do exactly this. That's why I created this simple package. For example, this code:

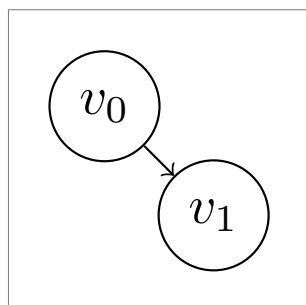
```
\begin{docshot}  
\documentclass{article}  
\usepackage{xcolor}  
\begin{document}  
\pagestyle{empty}  
Hello, {\color{orange}\LaTeX}!  
\end{document}  
\end{docshot}
```

is rendered as such:

	<pre>1 \documentclass{article} 2 \usepackage{xcolor} 3 \begin{document} 4 \pagestyle{empty} 5 Hello, {\color{orange}\LaTeX}! 6 \end{document}</pre>
---	---

Here is a more complex example:

*The sources are in GitHub at [yegor256/docshots](https://github.com/yegor256/docshots)



```

1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4 \pagestyle{empty}
5 \begin{tikzpicture}
6 \node [circle,draw] (v0) {$v_0$};
7 \node [circle,draw,
8   below right of=v0] (v1) {$v_1$};
9 \draw [->] (v0) -- (v1);
10 \end{tikzpicture}
11 \end{document}

```

The picture you see on the left side is rendered by a subprocess executing `pdflatex` with the `.tex` content taken from the source file. After a successful processing of \TeX sources, we use [pdfcrop](#) to trim the document.

We execute `pdflatex` with `-interaction=batchmode` option. This means that \TeX processing errors will be ignored as much as possible and the PDF rendered may look not like you expect it to look. Check your \TeX log to understand what may go wrong.

2 Package Options

pdflatex The default command line tool for turning `.tex` into `.pdf` is `pdflatex`. However, you can change that by using `pdflatex` package option, for example:

```

\documentclass{article}
\usepackage[pdflatex=/usr/local/bin/pdflatex]{docshot}
\begin{document}
\begin{docshot}
Hello, world!
\end{docshot}
\end{document}

```

gs The default location of Ghostscript is just `gs`. You can change that by using `gs` package option, for example:

```

\usepackage[gs=/usr/bin/ghostscript]{docshot}

```

pdfcrop The default location of `pdfcrop` is just `pdfcrop`. You can change that by using `pdfcrop` package option, for example:

```

\usepackage[pdfcrop=/bin/pdfcrop]{docshot}

```

margin When we crop the PDF rendered, we leave a margin around the content. The default value may be changed by the package option `margin`:

```

\usepackage[margin=10]{docshot}

```

hspace The horizontal distance between the image and its verbatim \TeX source may be configured via `hspace` package option:

```

\usepackage[hspace=1em]{docshot}

```

`left` The default width of the image may be changed by `left` option, while the width of
`right` the verbatim \TeX source may be modified by `right` option:

```
\usepackage[left=2in,right=.5\linewidth]{docshot}
```

`dtx` If you use this package inside `.dtx` documentation, add `dtx` package option. Thanks
to this option all comment symbols will be removed from line starts:

```
\usepackage[dtx]{docshot}
```

3 Implementation

First, we include a few packages:

```
1 \RequirePackage{iexec}
2 \RequirePackage{fancyvrb}
3 \RequirePackage{xcolor}
4 \RequirePackage{graphicx}
5 \RequirePackage{tikz}
6 \usetikzlibrary{shadows.blur}
```

Then, we process package options:

```
7 \RequirePackage{pgfopts}
8 \pgfkeys{
9   /docshots/.cd,
10  dtx/.store in=\docshots@dtx,
11  pdflatex/.store in=\docshots@pdflatex,
12  pdflatex/.default=pdflatex,
13  gs/.store in=\docshots@gs,
14  gs/.default=gs,
15  pdfcrop/.store in=\docshots@pdfcrop,
16  pdfcrop/.default=pdfcrop,
17  margin/.store in=\docshots@margin,
18  margin/.default=5,
19  hspace/.store in=\docshots@hspace,
20  hspace/.default=1.8em,
21  left/.store in=\docshots@left,
22  left/.default=.3\linewidth,
23  right/.store in=\docshots@right,
24  right/.default=.65\linewidth,
25  pdflatex,gs,pdfcrop,margin,hspace,left,right
26 }
27 \ProcessPgfOptions{/docshots}
```

Then, we print the version of `pdflatex` to \TeX log:

```
28 \iexec[log,quiet]{\docshots@pdflatex\space --version}%
```

Then, we print the version of `pdfcrop` to \TeX log:

```
29 \iexec[log,quiet]{\docshots@pdfcrop\space --version}%
```

Then, we print the version of `ghostscript` to \TeX log:

```
30 \iexec[log,quiet]{\docshots@gs\space --version}%
```

Then, we make a directory where all temporary files will be kept:

```
31 \iexec[null]{mkdir -p _docshots/\jobname}%
```

docshot Then, we define docshot environment:

```

32 \newenvironment{docshot}
33 {\VerbatimEnvironment\begin{VerbatimOut}
34   {_docshots/\jobname/verbatim.tex}}
35 {\end{VerbatimOut}}%
36 \ifdefined\docshots@dtx%
37   \iexec[null]{perl -i -0777pe "s/(\n|^)\x{25} /\n/g"
38     _docshots/\jobname/verbatim.tex}%
39 \fi%
40 \def\hash{\pdfmdfivesum file {_docshots/\jobname/verbatim.tex}}%
41 \IfFileExists{_docshots/\jobname/\hash.pdf}
42   {\message{won't render, the PDF already exists: _docshots/\jobname/\hash.pdf^^J}}
43   {\iexec[log,quiet]{cp _docshots/\jobname/verbatim.tex
44     _docshots/\jobname/\hash.tex}%
45     \iexec[log,quiet]{cd _docshots/\jobname;
46       \docshots@pdflatex\space -interaction=batchmode
47       -shell-escape \hash.tex}}%
48 \IfFileExists{_docshots/\jobname/\hash.crop.pdf}
49   {\message{won't pdfcrop, the PDF already exists: _docshots/\jobname/\hash.crop.pdf^^J}}
50   {\iexec[log,quiet]{\docshots@pdfcrop\space
51     --margins \docshots@margin\space
52     _docshots/\jobname/\hash.pdf
53     _docshots/\jobname/\hash.crop.pdf}}%
54 \fvset{frame=leftline,numbers=left,numbersep=3pt,
55   framerule=.4pt,rulecolor=\color{gray},
56   samepage=true}%
57 \par%
58 \tikz[baseline=(a.north)] \node[draw=gray] (a)
59   {\includegraphics[width=\docshots@left]
60     {_docshots/\jobname/\hash.crop.pdf}};%
61 \hspace{\docshots@hspace}%
62 \begin{minipage}[t]{\docshots@right}%
63   \vspace{0pt}%
64   \VerbatimInput{_docshots/\jobname/\hash.tex}%
65   \vspace{0pt}%
66 \end{minipage}%
67 \par%
68 }

```

Change History

v0.0.1
General: Initial version 3

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