

The ppmcheckpdf tool

Image-based regression testing for LaTeX packages

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The `l3build` system is a useful and powerful tool for regression testing. With `l3build` you normally print the contents of some boxes from `.lvt` files to corresponding `.tlg` files. Sometimes L^AT_EX kernel or some package your package depends on adds a `whatisit` or `\kern0pt`, and your test files will fail even if the PDF files look the same as before and are still correct.

This `ppmcheckpdf` tool provides an alternative way for regression testing: Instead of printing box contents in `.lvt` files, you could just convert PDF files to PNG files and compare PNG files after `l3build` finishes its job.

1 Installation

Normally your TeX distribution will copy `ppmcheckpdf` files and create a binary file `ppmcheckpdf` when you install this package.

If a manual installation is needed, you could copy `ppmcheckpdf` files to TEXMF tree as follows:

Package file	Where to install it
<code>ppmcheckpdf.1</code>	<code>TEXMF/doc/man/man1/ppmcheckpdf.1</code>
<code>README.txt</code>	<code>TEXMF/doc/support/ppmcheckpdf/README.txt</code>
<code>ppmcheckpdf.lua</code>	<code>TEXMF/scripts/ppmcheckpdf/ppmcheckpdf.lua</code>

Then create a symbolic link from `/usr/local/bin/ppmcheckpdf` to `path/to/ppmcheckpdf.lua` on Linux or MacOS, or create a batch file `ppmcheckpdf.bat` in binary folder of the TeX distribution with these lines on Windows:

```
@echo off
texlua path\to\ppmcheckpdf.lua %*
```

The `ppmcheckpdf` tool uses `pdftoppm` program for image converting. This program is installed by default on MiKTeX. For TeX Live, you can install it by running

```
tlmgr install wintools.windows
```

on Windows, or running

```
sudo apt-get install poppler-utils
```

on Ubuntu/Debian Linux.

2 Usages

You could call `check` action of `ppmcheckpdf` with the following commands

```
l3build check
ppmcheckpdf check
```

The first run of `ppmcheckpdf` will save image and md5 files to `testfiles` folder, and the subsequent runs of it will compare new md5 values with existing md5 values.

You could force `ppmcheckpdf` to save new image and md5 files of failed tests to `testfiles` folder by calling `save` option of it:

```
l3build check
ppmcheckpdf save
```

Both `check` and `save` actions accept `-c` option, which sets the config to used.

3 Customizations

The `pdftoppm` program supports several types of image files. By default the `ppmcheckpdf` tool will use `.png` file, and you could change it in `build.lua` file like this:

```
imgext = ".ppm"
```

```
imgext = ".pgm"
```

```
imgext = ".pbm"
```