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 LaTeX 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
ppmcheckpdf.1	TEXMF/doc/man/man1/ppmcheckpdf.1
README.txt	TEXMF/doc/support/ppmcheckpdf/README.txt
ppmcheckpdf.lua	TEXMF/scripts/ppmcheckpdf/ppmcheckpdf.lua

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 folllowing 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"
```