

Program `mkjobtexmf`

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1 Name

`mkjobtexmf` – Generate a `texmf` tree for a particular job

2 Version

2011-11-10 v0.8

3 Synopsis

The program `mkjobtexmf` runs a program and tries to find the used file names. Two methods are available, option `-recorder` of TeX (Web2C) or the program `strace`.

Then it generates a directory with a texmf tree. It checks the found files and tries sort them in this texmf tree.

It can be used for archiving purposes or to speed up following TeX runs.

```
mkjobtexmf [options]
```

This runs TeX that can be configured by options. Both methods for getting the used file names are available.

```
mkjobtexmf [options] -- <cmd> [args]
```

The latter form runs program *cmd* with arguments *args* instead of TeX. As method only program **strace** is available.

Options:

<code>--jobname <name></code>	Name of the job (mandatory). Usually this is the TeX file without extension
<code>--texname <file></code>	Input file for TeX. Default is the job name with extension '.tex'
<code>--texopt <option></code>	Option for TeX run
<code>--destdir <directory></code>	Destination directory, default is ` <code><jobname>.mjt</code> '
<code>--output</code>	Add also output files
<code>--strace</code>	Use strace instead of TeX's option <code>-recorder</code>
<code>--copy</code>	Copy files instead of creating symbol links
<code>--flat</code>	Junk paths, do not make directories inside the destination directory
<code>--(no)texhash</code>	Run texhash, use <code>--notexhash</code> for MiKTeX
<code>--exclude-ext <ext></code>	Exclude files with extension <code><ext></code> .
<code>--cmd-tex <cmd></code>	Command for the TeX compiler
<code>--cmd-kpsewhich <cmd></code>	Command for kpsewhich
<code>--cmd-texhash <cmd></code>	Command for texhash
<code>--cmd-strace <cmd></code>	Command for strace
<code>--verbose</code>	Verbose output
<code>--help</code>	Brief help message
<code>--man</code>	Full documentation
<code>--version</code>	Print version identification

4 Description

Running the program

First **mkjobtexmf** runs a program, usually TeX. The TeX compiler is configured by option `--cmd-tex`. Option `--texname` can be used, if the file name extension differs from *.tex*:

```
mkjobtexmf --jobname foo --texname foo.ltx
```

Even more complicate cases are possible:

```
mkjobtexmf --jobname foo --texname '\def\abc{...}\input{foo}'
```

If another program than TeX should be used (dvips, ...), then this program can be given after --:

```
mkjobtexmf --jobname foo -- dvips foo
```

File recording

Two methods are available to get the used file names:

Recorder of TeX

Some TeX distributions (e.g. Web2C) support the option **-recorder** for its TeX compilers. Then the TeX compiler generates a file with extension *.fls* that records the used input and output files.

Program strace

This program traces system calls and signals. It is used here to log the used files.

Analyze and link/copy found files

The result directory *jobname.mjt* is generated. Inside the result TEXMF tree is created. Each found file is compared against a list of paths of TEXMF trees. If a match is found, the file is linked/copied into the TEXMF tree. The list of paths is generated by program **kpsewhich**.

If the file cannot be mapped to a TEXMF tree and the file is a relative file name, then it is directly linked/copied into the result directory *jobname.mjt*. Absolute file names are not supported and neither paths with links to parent directories.

Symbolic links are created by default. The files are copied if option **--copy** is given or symbolic linking is not available.

5 Options

--jobname=<jobname>

It is the name of the job. '*<jobname>.tex*' serves as default for the TeX file and *<jobname>* is used for naming various directories and files. See section §8.

--texname=<name>

The name of the TeX input file, if it differs from *<jobname>.tex*.

--texopt=<opt>

Additional option for the TeX compiler, examples are **--ini** or **--shell-escape**. This option can be given more than once.

--destdir=<directory>

Specifies the name of the destination directory where the result is collected. As default a directory is generated in the current directory with the job name and extension '*.mjt*'.

--output

Also add output files.

--strace

Use method with program **strace**, see §4.

--copy

Files are copied instead of creating symbolic links.

--flat

Files are linked or copied without path elements. The destination directory will contain a flat list of files or links without directory.

The files 'ls-R' and 'aliases' are ignored.

--exclude-ext=<ext>

Files with extension <ext> are excluded. The option can be given several times or a comma separated list of extensions can be used. Examples:

```
--exclude-ext aux --exclude-ext log --exclude-ext toc
```

is the same as

```
--exclude-ext aux,log,toc
```

--(no)texhash

As default the file 'ls-R' is generated in the 'texmf' tree, because this is the file name database that might be used in TeX Live. Because MiKTeX uses a different mechanism, its 'texhash' does not generate the 'ls-R' files and **--notexhash** suppresses the call of 'texhash'.

--cmd-tex=<cmd>

Command for the TeX compiler. Default is pdflatex.

--cmd-kpsewhich=<cmd>

Command for kpsewhich.

--cmd-texhash=<cmd>

Command for updating the file name database of the generated texmf tree. Default is texmf.

--cmd-strace=<cmd>

Command for strace.

--verbose

Verbose messages.

--help

Display help screen.

-B(-man>

Print manual page.

--version

Print version identification and exit.

6 Examples

TeX file *test.tex* using TeX's recorder method:

```
mkjobtexmf --jobname test
```

TeX file *test.tex* using LaTeX:

```
mkjobtexmf --jobname test --cmd-tex latex
```

Format generation:

```
mkjobtexmf --jobname test --texopt -ini --texname pdflatex.ini
```

Example, how the new texmf tree (Linux/bash) can be used:

```
TEXMF=!!test.mjt/texmf pdflatex test
```

Example for generating a zip archive (Linux/bash):

```
(cd test.mjt && zip -9r ../test .)
```

Example for generating a tar archive:

```
tar cjhvf test.tar.bz2 -C test.mjt .
```

7 Unsolved issues, caveats, todos

Experimental software

Options, defaults, how the program works might change in future versions.

texmf.cnf

Currently the method with **strace** records this files. TeX's recorder does not. Useful are *texmf.cnf* files for variable settings. Because we have just one TEXMF tree, the path sections should probably be rewritten.

Settings in environment variables

They are not stored at all.

Collisions

The program uses one destination directory and at most one TEXMF tree for the result. However, the source files can come from different directories and TEXMF trees. Therefore name collisions are possible.

The program follows the strategy not to delete files in the destination directory. That allows to collect files from different runs. Thus collisions are resolved in the manner that the first entry that is made in the destination directory wins.

Configuration file

It would save the user from retyping the same options again and again.

Uncomplete recording

Bugs in TeX's file recording might result in incomplete file recording (e.g. pdfTeX 1.40.3 does not record .pfb and .pk files).

...

8 Files

<jobname>.mjt/

Directory where the resulting texmf tree and symbol links are stored. It can be changed by option `--destdir`.

<jobname>.fls

Name of TeX's recorder file.

<jobname>.strace

Log file where the result of `strace` is stored.

9 Author

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10 Copyright and license

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11 History

2007/04/16 v0.1

- First experimental version.

2007/05/09 v0.2

- Typo in option name fixed.

2007/09/03 v0.3

- New options: `--copy`, `--flat`, `--destdir`

2007/09/04 v0.4

- Bug fix in `map_files_texmf`.

2007/09/06 v0.5

- Support for ‘configure’ added. (Thanks to Norbert Preining for writing a first version of the configure stuff.)

2008/04/05 v0.6

- Tiny fix in target ‘uninstall’ in file ‘Makefile.in’. (Thanks to Karl Berry)

2008/06/28 v0.7

- Fix for unknown option ‘--cmd-strace’. (Thanks to Juho Niemelä)

2011/11/10 v0.8

- Remove colon from drive specification when making directories.
- Option `--(no)texhash` added.
- Some support for MiKTeX (thanks Ulrike Fischer).
- Various fixes in the generation of the documentation.
- Options `--exclude-ext` and `--version` added.

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