

T_EX Live 2012



T_EX Live (2012)
History - Installation - Usage - 日本語 - News

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Layout

- ▶ History
- ▶ Installation
- ▶ T_EX Live Manager
- ▶ Japanese support in T_EX Live
- ▶ News in T_EX Live 2012 (and before)

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History

- ▶ late 1993 Dutch T_EX Users Group, 4AllT_EX CD, TDS working group

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- ▶ 2006-09 XeT_EX addition, end of teT_EX development, T_EXworks addition, Karl Berry



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- ▶ 2010- incremental inclusion of Japanese T_EX support

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Features

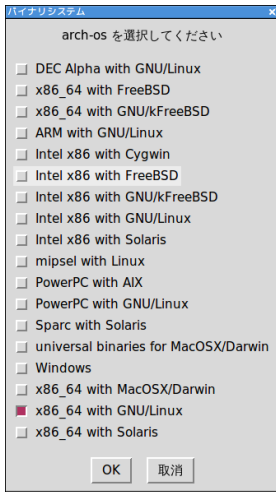
- ▶ ‘complete’ - all the free stuff from CTAN
- ▶ multi-platform, uniform across platforms
Windows == Unix (*cum grano salis*)
- ▶ practically daily updates
- ▶ DFSG free with a few exceptions
- ▶ Installation from various sources (DVD, network, mirror of CTAN, svn checkout, another installation)
- ▶ Text and GUI mode
- ▶ translation of both installer (gui modes) and T_EX Live Manager

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Installation settings

- ▶ binary systems

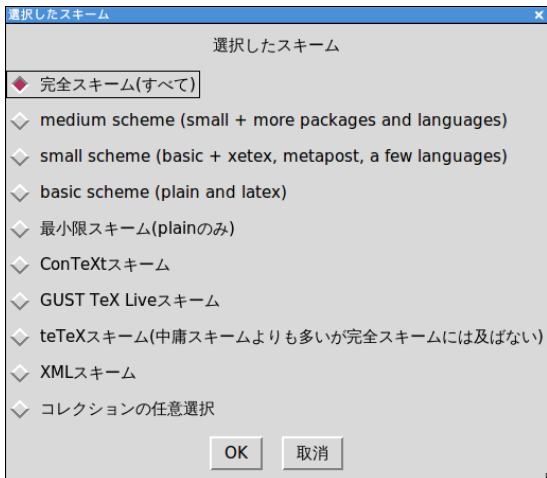


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Installation settings

- ▶ binary systems
- ▶ schemes

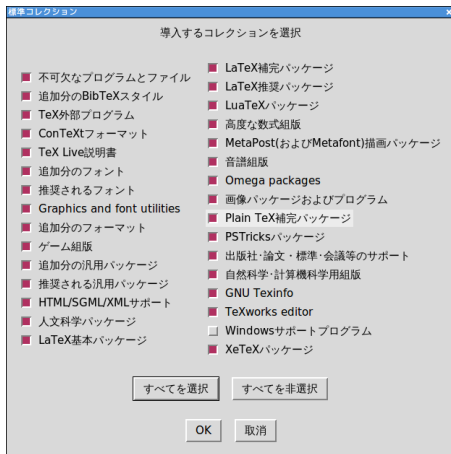


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Installation settings

- ▶ binary systems
- ▶ schemes
- ▶ collections

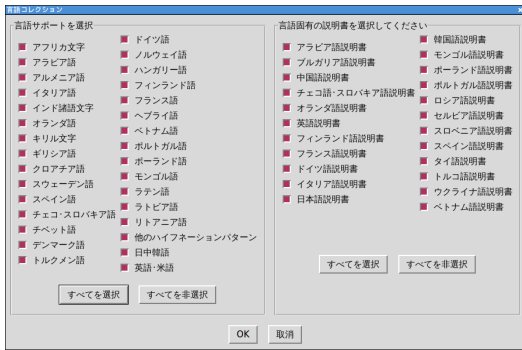


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Installation settings

- ▶ binary systems
- ▶ schemes
- ▶ collections
- ▶ language collections and docs



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Installation settings cont.

- ▶ destination folders
 - ▶ TEXDIR
 - ▶ TEXMFSYSVAR
 - ▶ TEXMFSYSCONFIG
 - ▶ TEXMFHOME

----- ディレクトリ設定 -----		
可搬設定	いいえ	入切
TEXDIR (TeX主幹ディレクトリ)	/usr/local/texlive/2012	変更
TEXMFLOCAL (サイト固有ファイル用ディレクトリ)	/usr/local/texlive/texmf-local	変更
TEXMFSYSVAR (自動生成データ用ディレクトリ)	/usr/local/texlive/2012/texmf-var	変更
TEXMFSYSCONFIG (ローカル設定用ディレクトリ)	/usr/local/texlive/2012/texmf-config	変更
TEXMFHOME (ユーザ固有ファイル用ディレクトリ)	~/texmf	変更

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----- オプション -----

既定用紙寸法	A4	入切
\write18 を用いて制限リスト中のプログラムを実行することを許可	はい	入切
フォーマットファイルをすべて生成	はい	入切
font と macro の doc ツリーを導入	はい	入切
font と macro のソースツリーを導入	はい	入切
システムディレクトリに symlink を作成する	いいえ	変更
After installation, get package updates from CTAN	はい	入切

▶ options

- ▶ papersize
- ▶ create formats
- ▶ install font/macro documentation
- ▶ install font/macro sources

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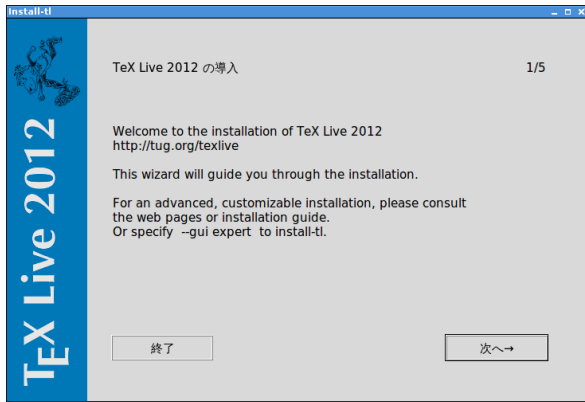
Windows specific options

- ▶ shortcuts in the start menu and on the desktop
- ▶ change file associations:
 - ▶ not at all
 - ▶ only new file associations
 - ▶ all
- ▶ installation for all users
- ▶ installation of T_EXworks front end

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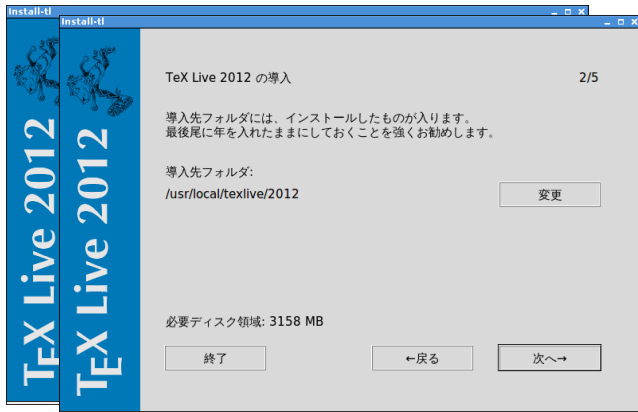
Wizard installer



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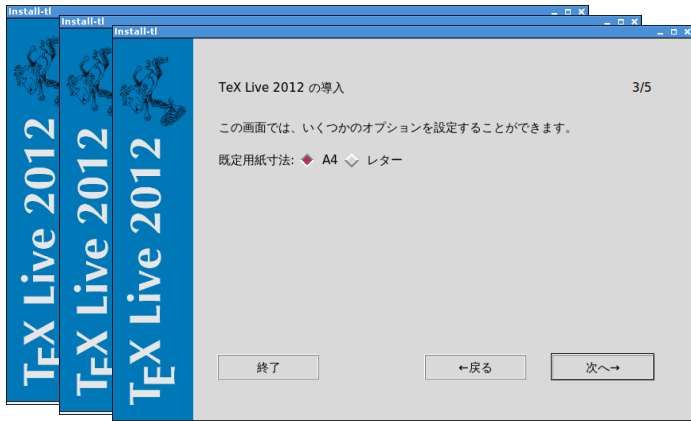
Wizard installer



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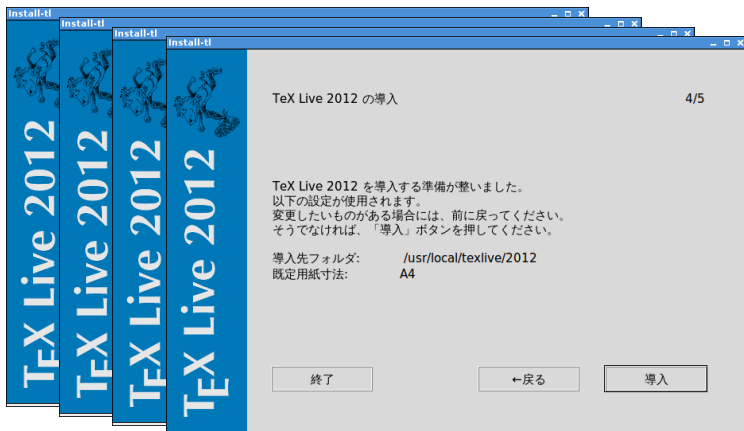
Wizard installer



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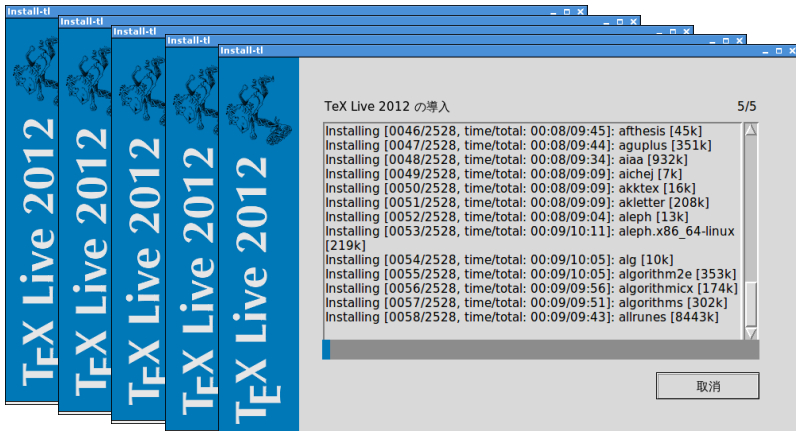
Wizard installer



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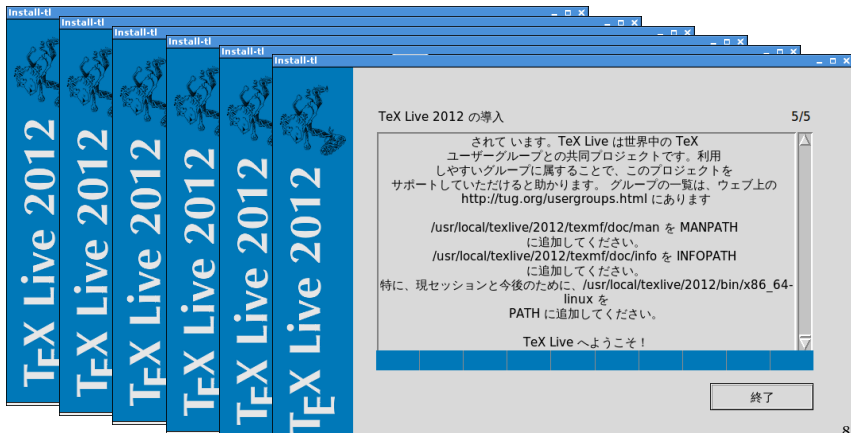
Wizard installer



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Wizard installer



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T_EX Live Manager

T_EX Live 2012



T_EX Live Manager `tlmgr`

- ▶ installation/removal of additional packages or collections
- ▶ update all packages to the newest versions available
- ▶ backups and restore
- ▶ paper configuration like `texconfig`, but also for Windows
- ▶ managing the installed platforms

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tlmgr cont.

- ▶ searching the installed and all available packages
- ▶ list and searching all schemes, collections, packages
- ▶ setting some default values like the installation repository
- ▶ regenerate fmtutil.cnf, language.dat, and updmap.cfg from the information stored in the database and local additions
- ▶ ... permanently growing

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T_EX Live Manager – Syntax

```
tlmgr [opt]... action [opt]... [arg]...
```

With first set of options:

- ▶ `-repository` installation source, see above
- ▶ `-gui` starts the GUI
- ▶ `-gui-lang` should be auto-detected, can be overridden
- ▶ standard options `-help`, `-q`, `-v`, `-version`

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T_EX Live Manager – Syntax

```
tlmgr [opt]... action [opt]... [arg]...
```

- ▶ general actions: search, info, uninstall, check, gui, version, help
- ▶ configuration actions: option, paper, generate
- ▶ package management actions: install, update, remove, backup, restore, arch



The search (and info) action

```
tlmgr [opt]... search [opt]... what
```

searches the *locally* installed packages for **what**, either

- ▶ names and descriptions
- ▶ any of the three taxonomy systems as provided by the experimental T_EX Catalogue rework by Jim Hefferon (currently only in tlcritical)

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Options to the search action

- ▶ `-global` also searches the remote database
- ▶ `-file` searches for file names
- ▶ `-word` only matches full words, not parts of words
- ▶ `-taxonomy`, `-keyword`, `-functionality`,
`-characterization`



Options to the search action

- ▶ `-global` also searches the remote database
- ▶ `-file` searches for file names
- ▶ `-word` only matches full words, not parts of words
- ▶ `-taxonomy`, `-keyword`, `-functionality`,
`-characterization`

```
tlmgr [opt]... info what
```

shows information on the given packages, including taxonomies

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Example of searching

tlmgr search

```
$ tlmgr search japan
cjk - CJK language support.
collection-documentation-japanese - Japanese documentation
collection-langcjk - Chinese, Japanese, Korean
context-ruby - Ruby annotations in ConTeXt.
ipaex - IPA and IPAex fonts from Information-technology Promotion Agency, Japan.
japanese - A substitute for a babel package for Japanese.
japanese-otf - Advanced font selection for platex and its friends.
japanese-otf-uptex - Support for Japanese OTF files in upLaTeX.
jfontmaps - Font maps for Japanese fonts.
jpsj - Document Class for Journal of the Physical Society of Japan.
jsclasses - Classes tailored for use with Japanese.
lshort-english - A (Not So) Short Introduction to LaTeX2e.
lshort-japanese - Japanese version of A Short Introduction to LaTeX2e
luatexja - Typeset Japanese with lua(la)tex.
pgf-soroban - Create images of the soroban using TikZ/PGF.
pst-soroban - Draw a Soroban using PSTricks.
ptex - A TeX system for publishing in Japanese.
suanpan - MetaPost macros for drawing Chinese and Japanese abaci.
wadalab - Wadalab (Japanese) font packages.
```

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Example listing

x_tab listing

```
$ tlmgr info japanese-otf
package:      japanese-otf
category:     Package
shortdesc:    Advanced font selection for platex and its friends.
longdesc:     The package contains pLaTeX support files and virtual fonts for supporting a
              \wide variety of fonts in LaTeX using the pTeX engine.
installed:    Yes
revision:     25939
cat-version:  v1.7b5
cat-date:     2012-04-11 09:22:31 +0200
cat-license:  other-free
collection:   collection-langcjk
```



The install action

```
tlmgr [opt]... install [opt]... what
```

installs the package what including all dependencies

Options:

- ▶ -no-depends do not install dependencies
- ▶ -no-depends-at-all do not even install architecture specific sub-packages



The update action

```
tlmgr [opt]... update [opt]... what
```

installs the package what including all dependencies

Options:

- ▶ `-list` list packages to be updated (or added) with revisions
- ▶ `-all` update everything
- ▶ `-dry-run` don't actually do it
- ▶ `-backupdir dir` saves a snapshot of the current status to the specified directory
- ▶ `-no-depends`, `-no-depends-at-all` as before

The (new) GUI of the T_EX Live Manager

TeX Live Manager 2012

tlmgr オプション 作業 ヘルプ

読み込んだレポジトリ: multiple repositories

表示設定

状態

- すべて
- 導入済
- 未導入
- 更新

区分

- パッケージ
- コレクション
- スキーム

一致

- 説明
- 分類
- ファイル名

選択

- すべて
- 選択分
- 非選択分

すべてを選択

すべて非選択

フィルタをリセット

<input type="checkbox"/>	パッケージ名	ローカル rev. (ver.)	リモート rev. (ver.)	簡単な説明
<input checked="" type="checkbox"/>	scheme-basic	25923	25923@main	basic schem
<input type="checkbox"/>	scheme-context	26699	26699@main	ConTeXt sch
<input checked="" type="checkbox"/>	scheme-full	21417	21417@main	full scheme
<input type="checkbox"/>	scheme-gust	21479	21479@main	GUST TeX L
<input checked="" type="checkbox"/>	scheme-medium	26477	26477@main	medium sch
<input type="checkbox"/>	scheme-minimal	13822	13822@main	minimal sch

導入済のものをすべて更新

更新 導入 取り除く バックアップ

前回取り除いたパッケージを再導入

main = /var/www/norbert/tlnet
tlcritical = /var/www/norbert/tlcritical
tlcontrib = http://tlcontrib.metatex.org/2012

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Japanese T_EX Support



Packaging history

- ▶ ptetex, ptexlive (奥村晴彦、土村展之、北川弘典) 2004-2011
- ▶ T_EX Live
 - 2010.3 pT_EX enters default T_EX Live development code
 - 2010.9 T_EX Live 2010 release
 - 2011.1-4 ϵ -pT_EX enters development code
 - 2011.7 T_EX Live 2011 release
 - 2011.8 upT_EX enters development code
 - 2011.10 Japanese T_EX User Meeting
 - 2011.10- inclusion of missing pieces
 - 2012.7 T_EX Live 2012 release, ptexlive and ptetex superseded (besides pxdvi and pmetapost)

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Font support

Status as before in pTeX Live:

- ▶ supported font families in T_EX Live: IPA, IPAex, Kozuka, Hiragino, Morisawa (package `jfontmaps`)



Font support

Status as before in pTeX Live:

- ▶ supported font families in T_EX Live: IPA, IPAex, Kozuka, Hiragino, Morisawa (package `jfontmaps`)
- ▶ new `updmap.cfg` file options
 - ▶ `kanjiEmbed`: `noEmbed`, `ipa`, `ipaex`, `kozuka`, `morisawa`, `hiragino`
 - ▶ `kanjiVariant`: empty or `-04`
 - ▶ `pxdviUse`: `true` or `false`

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Font support

Status as before in pTeX Live:

- ▶ supported font families in T_EX Live: IPA, IPAex, Kozuka, Hiragino, Morisawa (package `jfontmaps`)
- ▶ new `updmap.cfg` file options
 - ▶ `kanjiEmbed`: `noEmbed`, `ipa`, `ipaex`, `kozuka`, `morisawa`, `hiragino`
 - ▶ `kanjiVariant`: empty or `-04`
 - ▶ `pxdviUse`: `true` or `false`
- ▶ more details:
<http://tug.org/texlive/updmap-kanji.html>

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Future developments

Current problems

- ▶ font support
- ▶ pdf output - engine renewal

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Future developments

Current problems

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- ▶ pdf output - engine renewal

Real solution on the horizon

- ▶ LuaT_EX-ja - macro package for typesetting Japanese with LuaT_EX (LuaT_EX-ja Team 2011-)
highly influenced by pT_EX (and thus JIS X 4051 standard),
uses lua callbacks in luatex, gives pdf output, support for
otf fonts, ...

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News in T_EX Live 2012

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Overview

multi-layered updmap

- ▶ what does updmap do
- ▶ previous and new operation modes
- ▶ example
- ▶ transition and recommendations

multi repository support for T_EX Live Manager

- ▶ background
- ▶ operation mode: adding, pinning
- ▶ example

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What does updmap do?

font map definition maps a T_EX internal name to an external font with optional additional transformations

font map file a collection of font map definitions, normally one per ‘package’ collecting all fonts shipped by that package

updmap config file list of font map files (and some options)

generated files updmap generates configuration files for various output drivers (dvips, pdftex, dvipdfmx, pxdvi)

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Previous operation mode

One `updmap.cfg` file for the whole installation updated/changed with T_EX Live Manager, `updmap`, hand-editing, etc

Advantages and disadvantages

- ▶ (+) only one file, everything in one place
- ▶ (+) operation mode easy to understand
- ▶ (–) mixing of information from different trees
- ▶ (–) user–system mode interaction not good
- ▶ (–) persistent local adaptations over upgrade difficult



History of updmap

- ▶ first written by Thomas Esser in sh
- ▶ perl version written by Fabrice Popineau
- ▶ in T_EX Live till 2010: sh-version for Unix, perl-version for Windows
- ▶ TL2011: perl version extended and small fixes, used uniformly
- ▶ TL2012: rewrite based on the old perl code but heavily changed

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New operation mode

all updmap.cfg files are read in a stacked mode: later entries override former.

System mode

TEXMFSYSCONFIG	\$TEXLIVE/YYYY/texmf-config/web2c/updmap.cfg
TEXMFSYSVAR	\$TEXLIVE/YYYY/texmf-var/web2c/updmap.cfg
TEXMFLOCAL	\$TEXLIVE/texmf-local/web2c/updmap.cfg
TEXMFMAIN	\$TEXLIVE/YYYY/texmf/web2c/updmap.cfg
TEXMFDIST	\$TEXLIVE/YYYY/texmf-dist/web2c/updmap.cfg

User mode

TEXMFCONFIG	\$HOME/.texliveYYYY/texmf-config/web2c/updmap.cfg
TEXMFVAR	\$HOME/.texliveYYYY/texmf-var/web2c/updmap.cfg
TEXMFHOME	\$HOME/texmf/web2c/updmap.cfg
TEXMFSYSCONFIG	\$TEXLIVE/YYYY/texmf-config/web2c/updmap.cfg
TEXMFSYSVAR	\$TEXLIVE/YYYY/texmf-var/web2c/updmap.cfg
TEXMFLOCAL	\$TEXLIVE/texmf-local/web2c/updmap.cfg
TEXMFMAIN	\$TEXLIVE/YYYY/texmf/web2c/updmap.cfg
TEXMFDIST	\$TEXLIVE/YYYY/texmf-dist/web2c/updmap.cfg



How to disable 'earlier' maps?

- ▶ disabled maps are marked with the prefix `#!` (as it was in the original version)
 - `#! Map belleek.map`
- ▶ font map definitions from a map files that is disabled in a later (higher order) `updmap.cfg` will not be considered



Practical example: mtp_{ro} fonts

Assume you have purchased mtp_{ro}2 fonts and want to use them with your T_EX Live installation. Problem: T_EX Live ships belleek fonts/maps defining the same fonts.

- ▶ put the files in `TEXMFLOCAL`
- ▶ edit (or create) `TEXMFLOCAL/texmf/web2c/updmap.cfg`
- ▶ disable the belleek map file by adding
`#! Map belleek.map`
- ▶ enable the mtp_{ro}2 map file by adding `Map mtpro2.map`
- ▶ run `updmap-sys`



user mode versus system mode

- ▶ if a user *once* calls `updmap`, he will have local copies of the config files for the output drivers, that shadow the system wide
- ▶ after changes on the system side, the config files of that user are *not* update, so the user has to run `updmap` again
- ▶ reason: output drivers don't read stacked config files



Transition and recommendation

- ▶ former `updmap-local.cfg` file is still read, but should be converted to a proper `updmap.cfg` in `TEXMFLOCAL`.

Format has changed, disabled entries have to be adapted:

```
updmap-local.cfg  #!bel1eek.map  
updmap.cfg        #! Map bel1eek.map
```



Transition and recommendation

- ▶ former `updmap-local.cfg` file is still read, but should be converted to a proper `updmap.cfg` in `TEXMFLOCAL`.
Format has changed, disabled entries have to be adapted:
`updmap-local.cfg` `#!bel1eek.map`
`updmap.cfg` `#! Map bel1eek.map`
- ▶ recommendation for single-user installations: install as normal user, put all the additional fonts in `TEXMFLOCAL`, always run the `-sys` variants

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multi repository support for `tlmgr`

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multi repository support for tlmgr — background

- ▶ traditionally tlmgr only supports one repository, the main T_EX Live repository
- ▶ since now 2 years (at least) additional repositories are in common use:
 - tlcontrib (for testing releases and items not distributable in T_EX Live)
 - tlptexlive Japanese T_EX integration
 - tlcritical by the T_EX Live team, test release of the T_EX Live Manager
 - Korean T_EX User Group (no details)



multi repository support - implementation notes

- ▶ distinction between main and subsidiary repositories
- ▶ by default everything is **only** taken from the main repo
- ▶ to get a package from a subsidiary repo one has to **pin** it to this repo
- ▶ absolute revision numbers are **not** compared between repositories, only the pinning counts (difference to Debian)



How to add/remove repositories

New tlmgr action repository:

```
tlmgr repository list
tlmgr repository add url [tag]
tlmgr repository remove url|tag
```

Where the `tag` is a (optional) short-hand for `url`. The main repository always has the tag `main`.



How to pin a package – format of the pinning file

- ▶ the pinning is specified in
`TEXMFLOCAL/tlpkg/pinning.txt`
- ▶ format of this file: lines of the form
`repo:pkg[,pkg]`

where

repo full url or a repository tag (see later)

pkg shell-style glob for package names

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Example setup: tlmcontrib

Current status:

```
$ tlmgr repository list
List of repositories (with tags if set):
/var/www/norbert/tlnet
```



Example setup: tlcontrib

Current status:

```
$ tlmgr repository list
List of repositories (with tags if set):
/var/www/norbert/tlnet
```

Add the tlcontrib repository, and check again:

```
$ tlmgr repository add http://tlcontrib.metatex.org/2012 tlcontrib
$ tlmgr repository list
List of repositories (with tags if set):
http://tlcontrib.metatex.org/2011 (tlcontrib)
/var/www/norbert/tlnet (main)
```



Example cont.

Tell T_EX Live Manager to get `microtype` from `tlcontrib`:

```
$ tlocal='kpsewhich -var-value TEXMFLOCAL  
$ echo "tlcontrib:microtype" > $tlocal/tlpkg/pinning.txt
```

Install the package:

```
$ tlmgr install microtype  
tlmgr: using pinning file ../tlpkg/pinning.txt  
tlmgr: package repositories:  
...  
[1/1, ??:??/?:??] install: microtype @tlcontrib [39k]  
...
```



Example cont.

Check which package has been installed

```
$ tlmgr info microtype
package:      microtype
...
cat-version: 2.5 (beta-08)
...
```

which shows that we have a beta version installed, CTAN and T_EX Live currently ships version 2.4.



Restrictions and caveats

- ▶ no way to make purely number based repository selection work
- ▶ not all operation of T_EX Live Manager are supported
- ▶ use with caution!
- ▶ due to the fixed pinning, if an outdated package is **not** removed from the subsidiary repository, you will remain stuck with it even if main ships a newer version

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Closing

Any wishes and requests?

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Closing

Any wishes and requests?

Thanks

Japanese T_EX User Group, TUG, Karl Berry

Everyone for the attention