

New T_EX Live front ends

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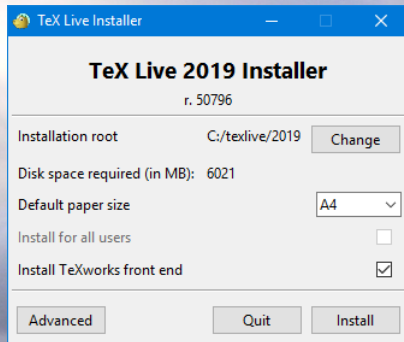
Motivation

- Perl/Tk GUI toolkit had become problematic
- T_EX Live Manager shell mode
- Accommodate Mac OS

The new GUIs

- new tcl mode for installer
- tlshell for T_EX Live Manager
- tlcocpit for T_EX Live Manager (Norbert Preining)

Installer: initial window



Installer: advanced window

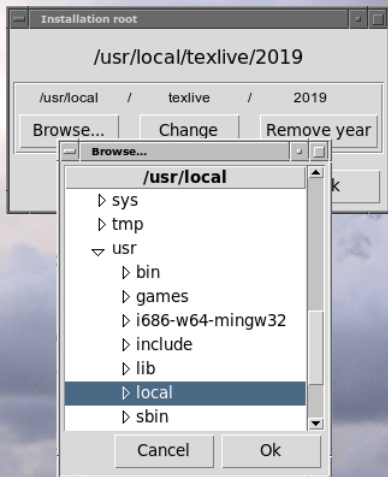
TeX Live Installer

TeX Live 2019 Installer

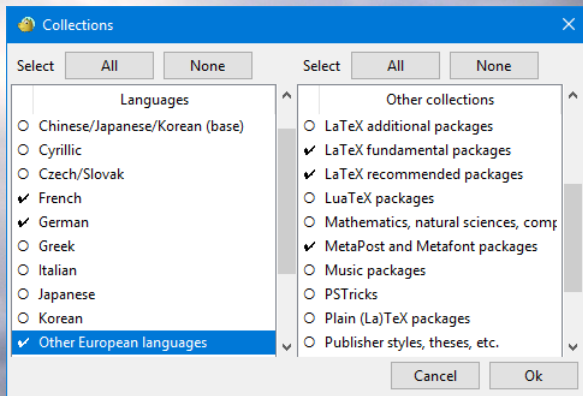
revision 50674

Directories		Options	
TEXDIR: Installation root	/usr/local/texlive/2019	Default paper size	A4 <input type="button" value="v"/>
TEXMFLOCAL: Local additions	/usr/local/texlive/texmf-local	Allow execution of restricted list of programs via \write18	<input checked="" type="checkbox"/>
TEXMFHOME: Per-user additions	~/Library/texmf	Create all format files	<input checked="" type="checkbox"/>
		Install font/macro doc tree	<input checked="" type="checkbox"/>
		Install font/macro source tree	<input checked="" type="checkbox"/>
		Create symlinks in standard directories	<input type="checkbox"/>
Portable setup: May reset TEXMFLOCAL and TEXMFHOME	No		<input type="button" value="Specify directories"/>
Platforms			
Current platform:	MacOSX current (10.12-) on x86_64		
N. of additional platform(s):	None		
Selections			
Scheme:	full scheme (everything)		
N. of collections:	40 / 41		
Disk space required (in MB):	5879	After install, set CTAN as source for package updates	<input checked="" type="checkbox"/>

Installer: dialog for installation root



Installer: collections



Installer: tracking the installation



Tlshell: main window

The screenshot shows the Tlshell main window with a menu bar (File, Actions, Options, Help) and a status bar. The main area is divided into a left sidebar and a central content area. The sidebar contains a 'Package list' section with a search field and a list of package categories: Installed, All, Collectible, Updatable, and Only sc. The central content area displays a list of packages with columns for Name, ID, and Description. A dialog box is open over the 'collection-pictures' package, showing its details and a 'Close' button. On the right side of the dialog, there are buttons for 'Install marked', 'Update marked', 'Remove marked', 'Update tlmgr', and 'Update all'. At the bottom of the dialog, there are buttons for 'Show logs', 'Restart tlmgr', 'Restart self', and 'Quit'.

Default repositories: /extra/www/systems/texlive/llpretest
Loaded
TL Manager up to date? Up to date
Last tlmgr command: info collection-pictures

Root at /home/slepo/opt/texlive/2019
tlmgr: r50861
tlshell: r50042

Package list

Status: Installed All
 All Collectible
 Updatable Only sc

Search:

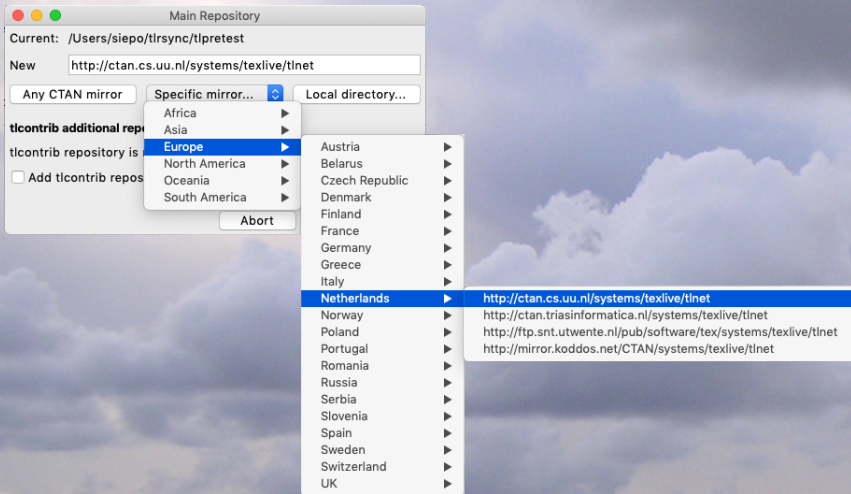
Name	ID	Description
<input type="checkbox"/> collection-metapost	50295	MetaPost and Metaront packages
<input type="checkbox"/> collection-music	49621	Music packages
<input checked="" type="checkbox"/> collection-pictures	50810	Graphics, pictures, diagrams
<input type="checkbox"/> collection-plaingeneric	50044	Plain (La)TeX packages
<input type="checkbox"/> collection-pstricks	49316	PSTricks
<input type="checkbox"/> collection-publishers	50819	Publisher styles, theses, etc.
<input type="checkbox"/> collection-texworks	36934	TeXworks editor; TL includes only the Windows binary
<input type="checkbox"/> collection-wintools	30307	Windows-only support programs

Idle

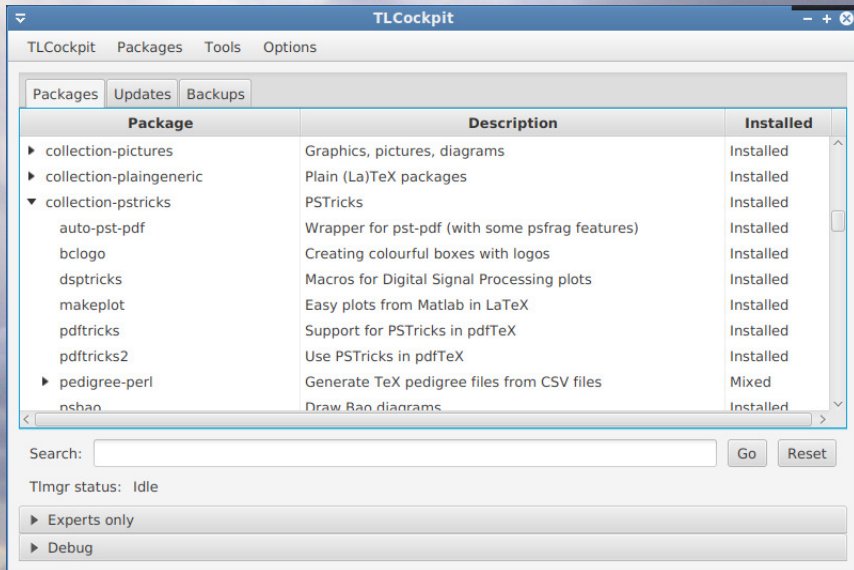
Dialog box content:
package: collection-pictures
category: Collection
shorIdesc: Graphics, pictures, diagrams
longdesc: Including TikZ, pict, etc., but MetaPost and PSTricks are separate.
installed: No
sizes: 244769k
relocatable: Yes
OK

Buttons: Install marked, Update marked, Remove marked, Update tlmgr, Update all, Show logs, Restart tlmgr, Restart self, Quit

Tlshell: repository selection



Tlcockpit



The screenshot shows the TLcockpit application window. The title bar reads "TLcockpit" and the menu bar includes "TLcockpit", "Packages", "Tools", and "Options". The "Packages" tab is active, displaying a table of installed and available packages. Below the table is a search bar with "Go" and "Reset" buttons, and a status bar showing "Tlmgr status: Idle". At the bottom, there are expandable sections for "Experts only" and "Debug".

Package	Description	Installed
▶ collection-pictures	Graphics, pictures, diagrams	Installed
▶ collection-plaingeneric	Plain (La)TeX packages	Installed
▼ collection-pstricks	PSTricks	Installed
auto-pst-pdf	Wrapper for pst-pdf (with some psfrag features)	Installed
bclogo	Creating colourful boxes with logos	Installed
dsptricks	Macros for Digital Signal Processing plots	Installed
makeplot	Easy plots from Matlab in LaTeX	Installed
pdftricks	Support for PSTricks in pdfTeX	Installed
pdftricks2	Use PSTricks in pdfTeX	Installed
▶ pedigree-perl	Generate TeX pedigree files from CSV files	Mixed
nshan	Draw Bao diagrams	Installed

Search: Go Reset

Tlmgr status: Idle

▶ Experts only

▶ Debug

T_EX Live Manager shell mode

```
$ tlmgr shell
```

Conversation starts

```
tlmgr> install lshort-english  
[1/1, ??:??/?:??] install: lshort-english [696k]  
running mktexlsr ...  
done running mktexlsr.
```

OK

```
tlmgr>
```

Conversation continues

Text installer

```
$ <path>/install-tl -gui text
```

Conversation starts

```
=====> TeX Live installation procedure <=====
```

```
=====> Letters/digits in <angle brackets> indicate <=====
```

```
=====> menu items for actions or customizations <=====
```

```
...
```

```
<S> set installation scheme: scheme-full
```

```
...
```

```
<D> set directories:
```

```
  TEXDIR (the main TeX directory):
```

```
    /usr/local/texlive/2019
```

```
  TEXMFLOCAL (directory for site-wide local files):
```

```
...
```

```
Actions:
```

```
<I> start installation to hard disk
```

```
<P> save installation profile to 'texlive.profile' and exit
```

```
<H> help
```

```
<Q> quit
```

```
Enter command:
```


Text installer (cont.)

Conversation continues

Enter command: D

=====

Directories customization:

```
<1> TEXDIR:          /usr/local/texlive/2019
    main tree:       /usr/local/texlive/2019/texmf-dist
```

```
<2> TEXMFLOCAL:     /usr/local/texlive/texmf-local
```

```
...
```

```
...
```

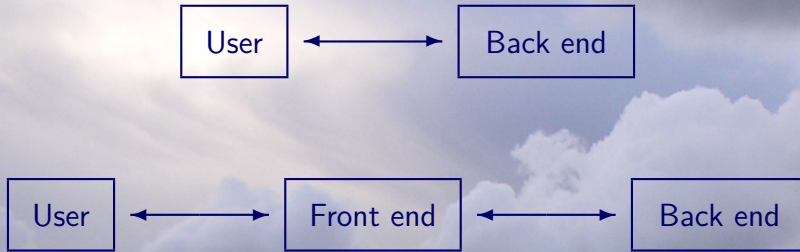
Actions:

```
<R> return to main menu
```

```
<Q> quit
```

Enter command:

Divert interaction through a GUI



Implementation

- New front ends are separate programs
- No third-party language bindings: one dependency less
- Data exchange between front end and back end
- Tcl/Tk:
 - tcl mode for installer
 - tclshell for T_EX Live Manager
- Java: tlcockpit for T_EX Live Manager (Norbert Preining)

Tcl/Tk

- Same Tk as in Perl/Tk, but several versions ahead
- Light-weight, easy to work with
- Cross-platform and part of Mac OS
- 6.3MB runtime for Windows

Localization

- Built-in `msgcat` provides default locale
- Home-made translation function uses `gettext` `.po` files directly.