New TeX Live front ends

Siep Kroonenberg

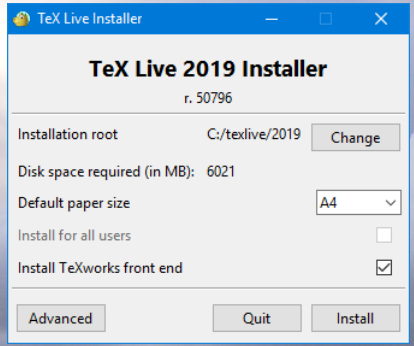
Motivation

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

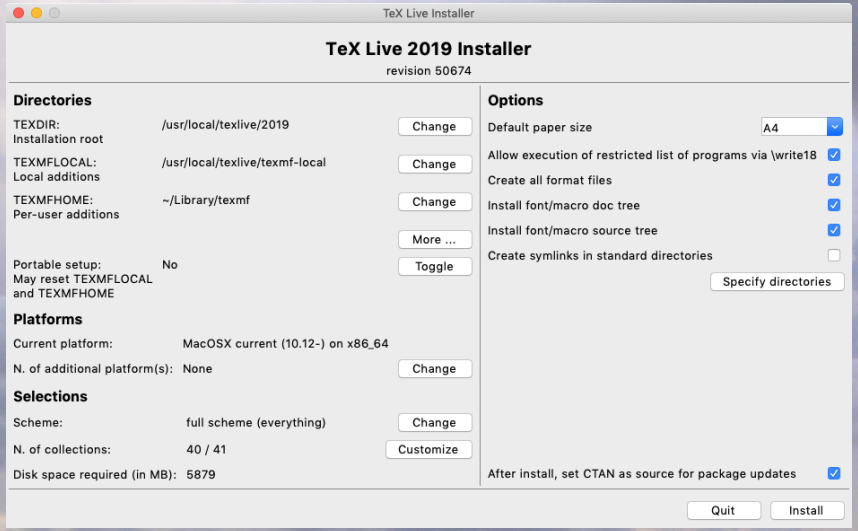
The new GUIs

- new tcl mode for installer
- tlshell for TeX Live Manager
- tlcockpit for TeX Live Manager (Norbert Preining)

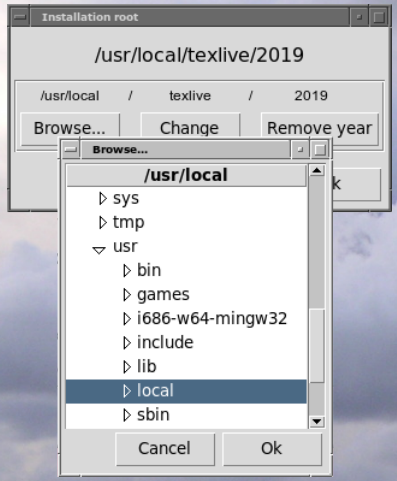
Installer: initial window



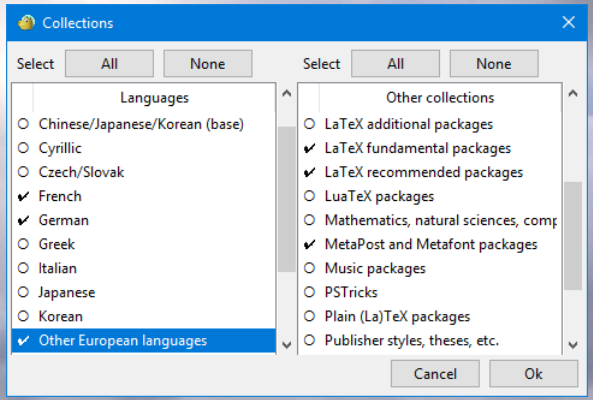
Installer: advanced window



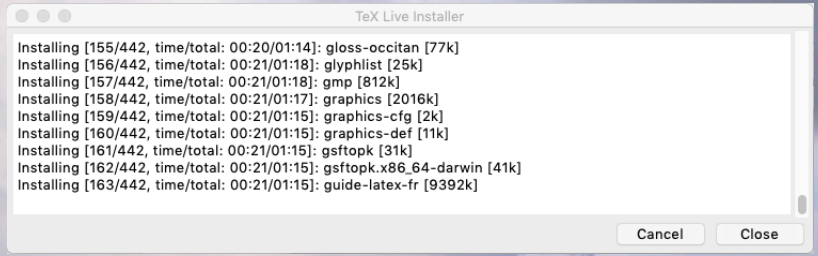
Installer: dialog for installation root

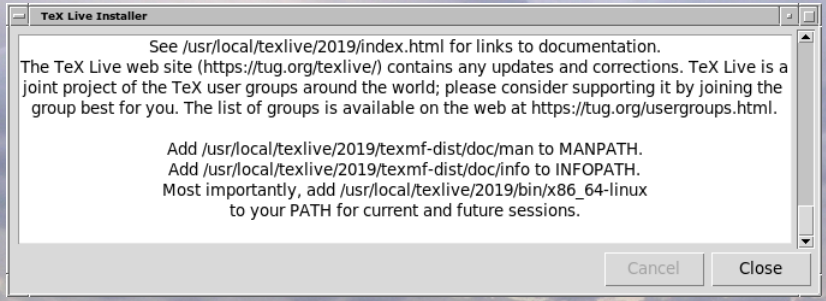


Installer: collections

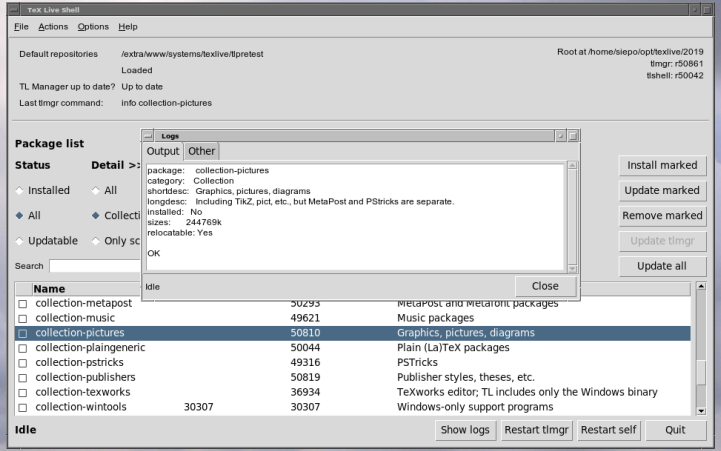


Installer: tracking the installation

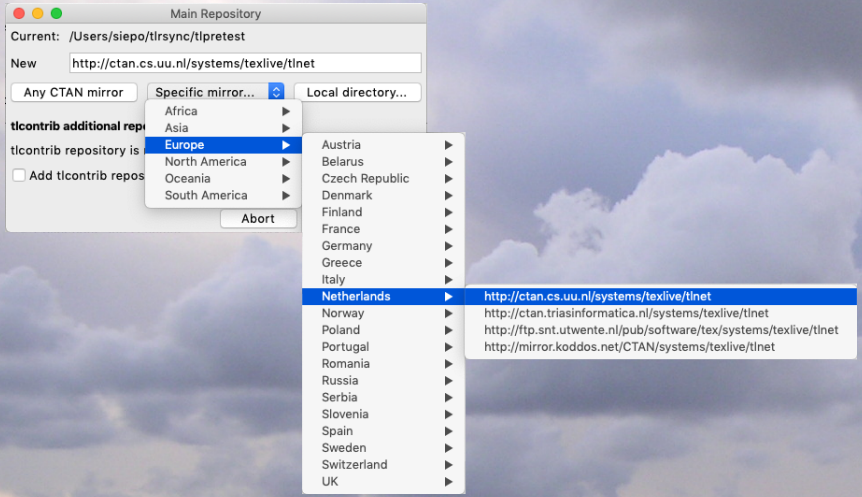




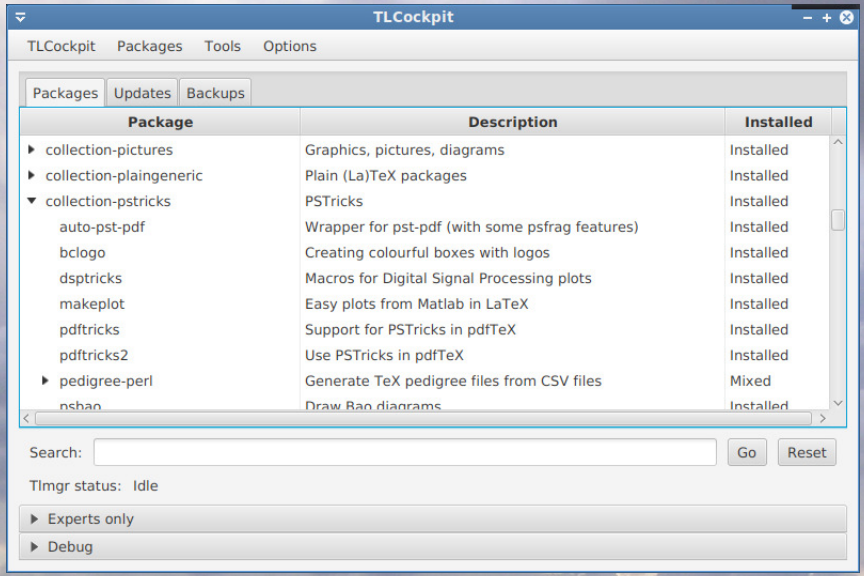
Tlshell: main window



Tlshell: repository selection



Tlcockpit


TLCockpit
TLCockpit Packages Tools Options
Packages Updates Backups
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
pshao Draw Bao diagrams Installed
Search:
Go
Reset
Tlmgr status: Idle
Experts only
Debug

TeX 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

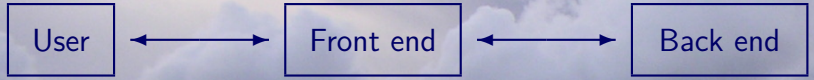
```
Enter command: D
================================================================================
Directories customization:

 <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
  - tlshell for TEX Live Manager
- Java: tlcockpit for TEX 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.