Installation of Univers Condensed Font Library and USGS Style Files for TEX/LATEX

November 15, 2018

William H. Asquith in the Texas Water Science Center developed the USGS Style files and instructions for install the Univers Condensed Font library. These instructions are boiled down to a barebones description. Refer to Bill's original documents for more details on the Univers Condensed Font Library (`doc/README_FontLibraryInstallation.pdf`).

Installation Location

If you installed TEX/LATEX using a standard installation of the TEXLive distribution your local TEX tree can be determined using:

```
kpsewhich -var-value TEXMFHOME
```

which will return something like the following:

```
/Users/jdhughes/Library/texmf
```

Typical locations of the local TEX tree are:

```
Windows
  $TEXROOT=C:/texlive/texmf-local

MacOSX
  $TEXROOT=/Users/userid/Library/textmf
              OR
  $TEXROOT=/sw/share/tex-local
              OR
  $TEXROOT=/usr/local/texlive/tex-local

Redhat and openSUSE Linux
  $TEXROOT=/usr/share/texmf
```

Installation Process

Unzip the `usgslatex.zip` archive file to a location of your choice. You will copy the subdirectories in the unzipped `texmf-local` directory to the directories with the same name in `$TEXROOT`. To start the process open a terminal in the unzipped `texmf-local` directory and type the following commands (use `xcopy` on Windows if you do not have access to UNIX command line tools):

```
cp -R fonts $TEXROOT/.
       OR
xcopy fonts /t /e $TEXROOT/fonts/

cp -R tex $TEXROOT/.
```

```
        OR
xcopy tex /t /e $TEXROOT/tex/
```

If the `$TEXROOT/dvips` directory exists type the following command:

```
cp -R dvips $TEXROOT/dvips/.
        OR
xcopy dvips /t /e $TEXROOT/dvips/
```

Otherwise type the following command:

```
cp -R dvips $TEXROOT/.
        OR
xcopy dvips /t /e $TEXROOT/
```

Basically, the map file is copied to some sort of `dvips` directory. The exact location is not critical since you will tell TEX how to find it. Finally, rebuild the hash tables for the file locations using the following TEXLive utilities as `ROOT/sudo` (on MacOSX and Linux).

Open another terminal in `$TEXROOT/dvips/funivers/` and type:

```
texhash
```

and then enable `dvips` to see the `funivers.map` file by typing:

```
updmap -sys --enable Map=funivers.map
```

and then type:

```
updmap-sys
```

UPDATE FOR MAC INSTALL (11/15/2018): I had issues with the previous installation instructions due to permissions problems but was able to get everything installed using the following procedure. These instructions worked with the 2018 version of Mactex.

- Install the Mactex version of LATEX using all of the default settings. I did the installation as myself, without privileged access, but during the installation I was prompted for an account and password with installation privileges. This is needed because on a mac, many of the files go into `/usr/local/texlive` and into the `Applications` directory.
- Open a terminal window in the following location: `usgslatex/installation_files/texmf-local`.
- From within `usgslatex/installation_files/texmf-local`, issue the following commands, which copy the font and LATEX files into a user folder. Obviously, you'll need to adjust the path below to use your user id.

  ```
  TEXROOT=/Users/langevin/Library/texmf
  cp -R fonts $TEXROOT/.
  cp -R tex $TEXROOT/.
  cp -R dvips $TEXROOT/.
  ```

- The next step is to change the permissions of the `usr/local/texlive` folder so that the USGS fonts installed in TEXROOT can be installed. I did this by logging into a terminal window with a privileged account and then changing directories to `/usr/local`. From there I issued the command:

```
sudo chmod -R 777 texlive
```

This gives all users full read-write access to this folder. I couldn't find any other way for the rest of the installation to proceed without doing this step.

- Finally, with your user account, open a terminal window in `$TEXROOT/dvips/funivers`. From here issues the following two commands.

```
updmap -sys --enable Map=funivers.map
kpsewhich usgsreporta.sty
```

- At this point, the USGS style files were correctly installed and the Universe font was available.

Testing

Make sure the USGS Style files are available using:

```
kpsewhich usgsreporta.sty
```

which should return something like the following:

```
/Users/jdhughes/Library/texmf/tex/latex/usgslatexdist/latex/usgslatex/usgsreporta.sty
```

If nothing is returned the USGS Style files have not been correctly installed.

The directory `test` contains `testunivers.tex` and `USGSLaTex.tex` test TEX files.

The file `testunivers.tex` is self contained in its definition of the Univers family, and does not use a separate package file. Try running `testunivers.tex` file through LATEX by typing `pdflatex testunivers.tex` in a terminal (or your preferred method of compiling TEX files). Inspect the `testunivers.pdf` file. Compare the content of the generated `pdf` file to `testuniversPROOF.pdf`. If these two `pdf` files appear different the Univers font family was not installed correctly. You might have forgotten to copy some of the file types or LATEX otherwise does not know how to file them. Confirm that you completed the installation process again. If you forgot a step, you will have to rerun `texhash` before things will work.

The file `USGSLaTex.tex` is a test of successful installation of the USGS Style files. Try running `USGSLaTex.tex` file through LATEX using your preferred method of compiling TEX files. Inspect the `USGSLaTex.pdf` file. Compare the content of the generated `pdf` file to `USGSLaTexPROOF.pdf`. If these two `pdf` files then there is a problem with your installation. Confirm that the USGS style files (in the `$TEXROOT/tex/latex/usgslatexdist`) subdirectory. The `$TEXROOT/tex/latex/usgslatexdist` subdirectory should include a `latex` and `visid_graphics` subdirectories. You will have to rerun `texhash` if you modify the location of the USGS style files.

Using the USGS Style Files

A simple example for using the LATEX USGS style files is included in `doc/README_USGSstyFILES.pdf`. Individual style files in the package are also listed and described in `doc/README_USGSstyFILES.pdf`.

Updating an existing installation

On `MacOSX`, an existing installation can be updated by:

1. Moving the existing installation (for example, `/usr/local/texlive/2014/`) to the trash.
2. Move all existing LaTeX software (for example, `TeXShop`) to the trash.
3. Empty trash
4. Install the new distribution
5. Open the TeXLive Utility and
   (a) Update the TeXLive Utility and allow any infrastructure updates
   (b) Install the `graphics-def` package if it is not installed
   (c) Update all installed packages
6. Open a terminal in `$TEXROOT/dvips/funivers/` and type the following with `ROOT/sudo` privileges to allow the new version of LaTeX to access the Univers Condensed Font library
   (a) `texhash`
   (b) `updmap -sys --enable Map=funivers.map`
   (c) `updmap-sys`