

Using LaTeX to Create CSPs

An Installation and Instruction Manual

Robert Kutter (robert.kutter@asu.edu)

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1 Introduction

This document describes how to produce glossy Category Sustainability Profiles (CSPs) using a LaTeX template. The good news is that *researchers at TSC do not need to learn anything about LaTeX in order to use this template and produce new CSPs*. To make CSPs using this template, you need the following software on your computer:

- LaTeX typesetting system¹,
 - For Windows: TeX Live 2012 (see § 2.1 on page 4)
 - For Mac OS X: MacTeX 2012 (see § 2.2 on page 5)
- TeX editor,
 - For Windows: TeXworks is included with TeX Live 2012
 - For Mac: TeXworks is included with MacTeX 2012
- Software to edit CSV files such as Microsoft Excel.

You also need the files from ZIP archives posted on Workspace (see step 1 in § 3.1 on page 8 and steps 1 and 2 in § 4.2 on page 15).

Please contact me (robert.kutter@asu.edu) if you have any questions or difficulties with any part of this process. The rest of this section provides some background about LaTeX and the process detailed in this document. Readers who want to start producing CSPs right away should skip to § 2 on page 4. Readers who are already familiar with that section and want to know how to create CSPs from perl-generated files should skip to § 4 on page 14.

△ New instructions on creating CSPs from files generated automatically from a perl script.

1.1 What is LaTeX?

LaTeX is a document markup language. (LaTeX is pronounced *LAY · tek* in English.) LaTeX is analogous to HTML. HTML is a markup language that tells a web browser (e.g., Internet Explorer, Firefox, Google Chrome or Safari) how to display the content in a web page. Just as web browsers interpret HTML to format content in web pages, LaTeX typesetting programs use LaTeX to format content and create PDFs. There are many software programs that simplify writing and editing HTML. Some examples are Adobe® Dreamweaver®, Mozilla's SeaMonkey Composer and Microsoft Publisher. Likewise, some TeX editors are TeXworks, Texmaker, and LyX, which I have used to create this document.

There might be some confusion at this point about the difference between LaTeX, TeX and a TEX file. LaTeX is essentially a collection of more succinct commands that employ TeX. That

¹When I prepared this document TeX Live 2012 and MacTeX 2012 were not released, so the screenshots throughout this document show the year 2011. Fortunately, this change makes no practical difference.

is, LaTeX and TeX are both markup languages for formatting PDFs, but TeX is an earlier, less user-friendly version. A TEX file contains formatting instructions in LaTeX or TeX and the content itself. A TeX editor, like TeXworks, can be used to create and edit a TEX file. Then, the TEX file is processed with a TeX engine, such as pdfLaTeX or XeLaTeX, which typesets TEX files to create PDFs. The TeX typesetting system, e.g. MacTeX or TeX Live, provides several TeX engines. A TEX file might contain the following LaTeX instruction:

```
\textbf{Bold text appears here.}
```

When a TeX engine like XeLaTeX typesets this instruction, the result is:

Bold text appears here.

The TeX engine processes a set of these instructions in a TEX file to create a PDF.

1.2 Why use LaTeX?

Using LaTeX to create CSPs will help TSC generate CSPs more efficiently and reduce busywork for the marketing department. LaTeX runs on all operating systems (Mac OS X, Microsoft Windows and the various Linux operating systems), so all researchers at TSC can use it. Also, TeX typesetting systems and TeX editors are free, so every TSC researcher can produce his or her own CSPs with no additional cost to TSC. Formerly, TSC's marketing department created and edited CSPs because it has the necessary software (Adobe® InDesign®). Replacing InDesign® with a free, cross-platform solution removes the workflow bottleneck in the marketing department. Just as important, the marketing department will have less busywork and be able to spend more time on tasks that demand their specialized skills.

1.3 How does this process work?

The LaTeX template describes how to format all the content in the CSP. It describes the fonts, colors, table formatting, image positioning and other formatting elements in the glossy version of the CSP. The LaTeX template also contains content that is common to all the glossy CSPs, such as the page headers, page footers, the disclaimer, table headers and so on.

The LaTeX template also pulls information from spreadsheets that contain the variable content for a glossy CSP. When typesetting the LaTeX template, the TeX engine uses the formatting instructions in the template to format the content in the template itself and the content that it pulls from the associated spreadsheets into a PDF (figure 1). Although it's less important for understanding how the process works, the LaTeX template also tells the TeX engine to pull in figures and icons from a subfolder called figures and inserts them into the PDF.

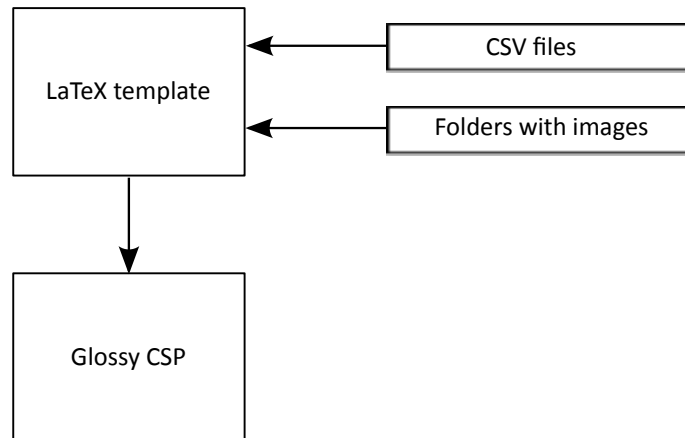


Figure 1: Process overview

2 Installation instructions

First, you need a LaTeX typesetting system on your computer. Fortunately, the necessary software is available online for free. The following sections give instructions for installing the software on Microsoft Windows and Mac OS X. If you're using Linux, you're probably savvy enough to figure out installing the software on your own, but please contact me if you run into problems.

2.1 Installing on Microsoft Windows

Use the following instructions for a Windows PC:

1. Go to <http://www.tug.org/texlive/acquire-netinstall.html> and download the ZIP file for Windows (figure 2).

Installing TeX Live over the Internet

For typical needs, we recommend starting the TeX Live installation by downloading [install-tl.zip](#) for Windows (24mb), or [install-tl-unx.tar.gz](#) (2.5mb) for everything else. (Although the .zip archive does work fine on all platforms, the .tar.gz is much smaller, since it omits installation support programs needed only on Windows. The two archives are otherwise identical.)

Figure 2: Download TeX Live for Windows

2. Unzip `install-tl.zip` and open the resulting folder (also called `install-tl`). Open the sub-folder in `install-tl`. In my case, the sub-folder is called `install-tl-20120511`, but it may be different for you depending on when you download the file. In the sub-folder, you should

see the files shown in figure 3 on the following page. Right click the file called install-tl-advanced.bat, and select "Run as administrator." If you do not have permission to run the file as an administrator, run it as a normal user.

3. After you run the installation file, your computer might ask you to turn off your virus protection software (figure 4 on the next page). You do not need to turn off your virus protection software. You can click "Continue" and proceed with the installation.
4. On the next screen, leave the default options and click the "Install TeX Live" button. (See figure 5 on page 7.) The installation may take several hours as TeX Live downloads and then installs many packages and language support files. TeX Live will also install a TeX editor called TeXworks.

2.2 Installing on Mac OS X

Use the following instructions for a Mac:

1. Go to <http://www.tug.org/mactex/2012/> and download MacTeX (figure 6).

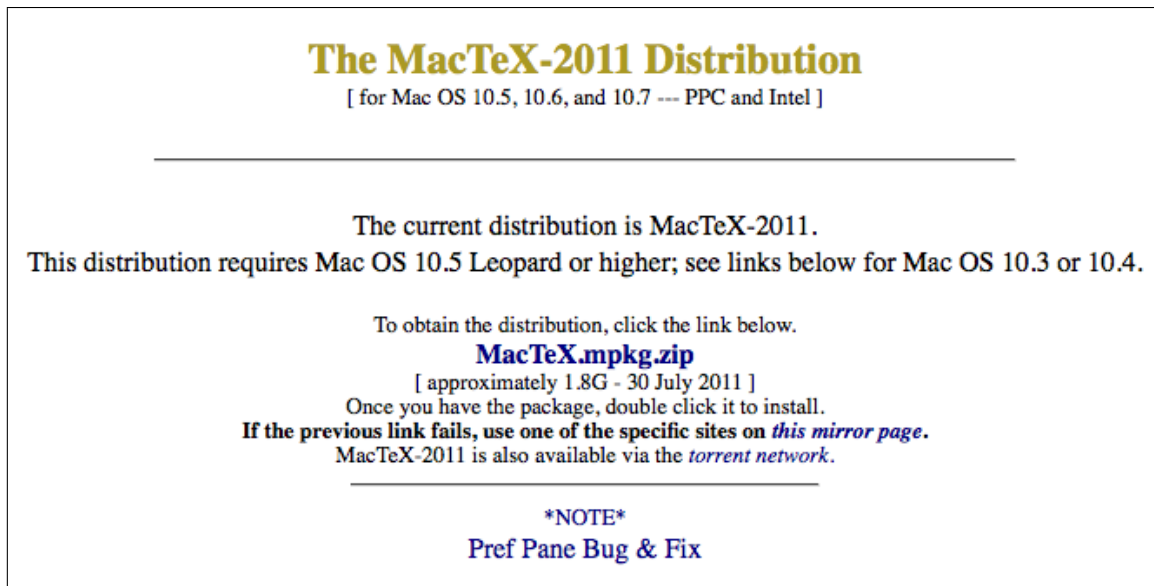


Figure 6: Download MacTeX for Mac OS X

2. Unzip the download and run the installation file. Follow the installation instructions. MacTeX will also install a TeX editor called TeXworks.

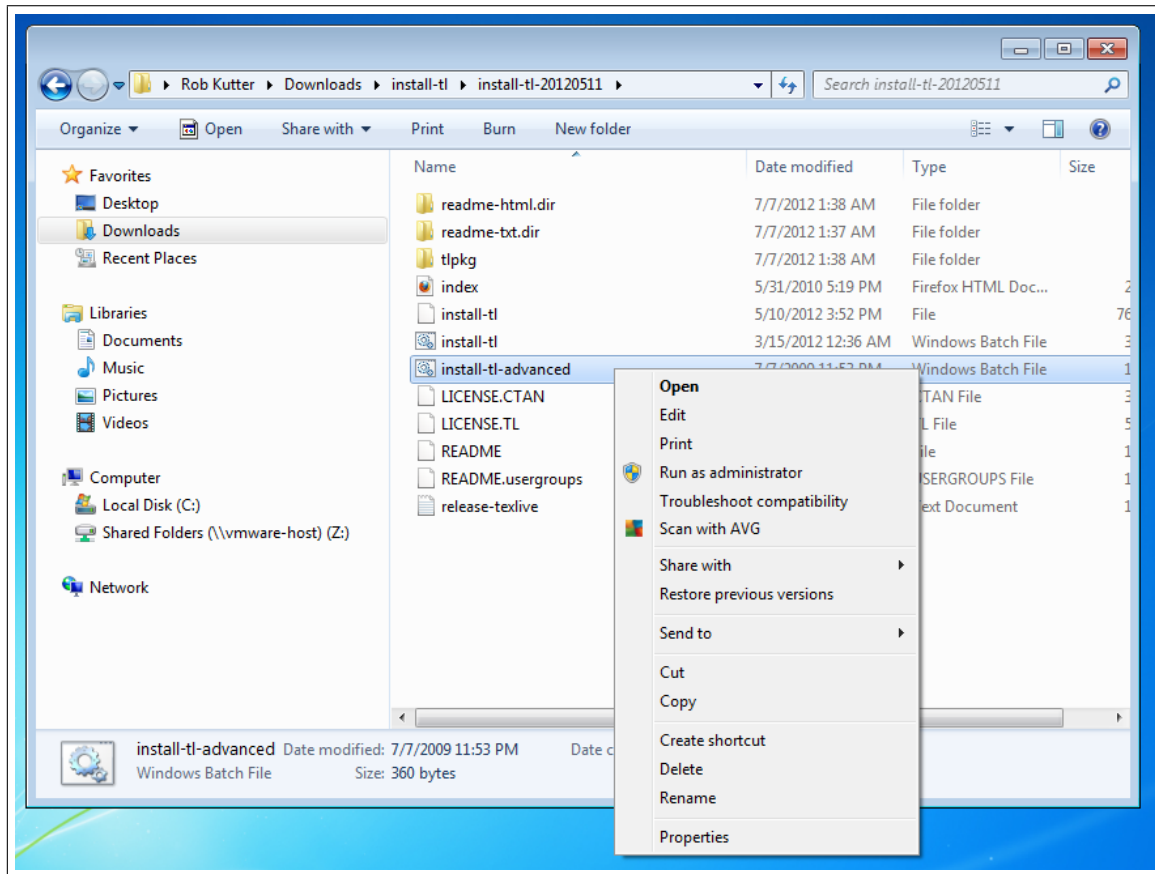


Figure 3: Run the TeX Live installation file for Windows



Figure 4: Request to turn off virus software

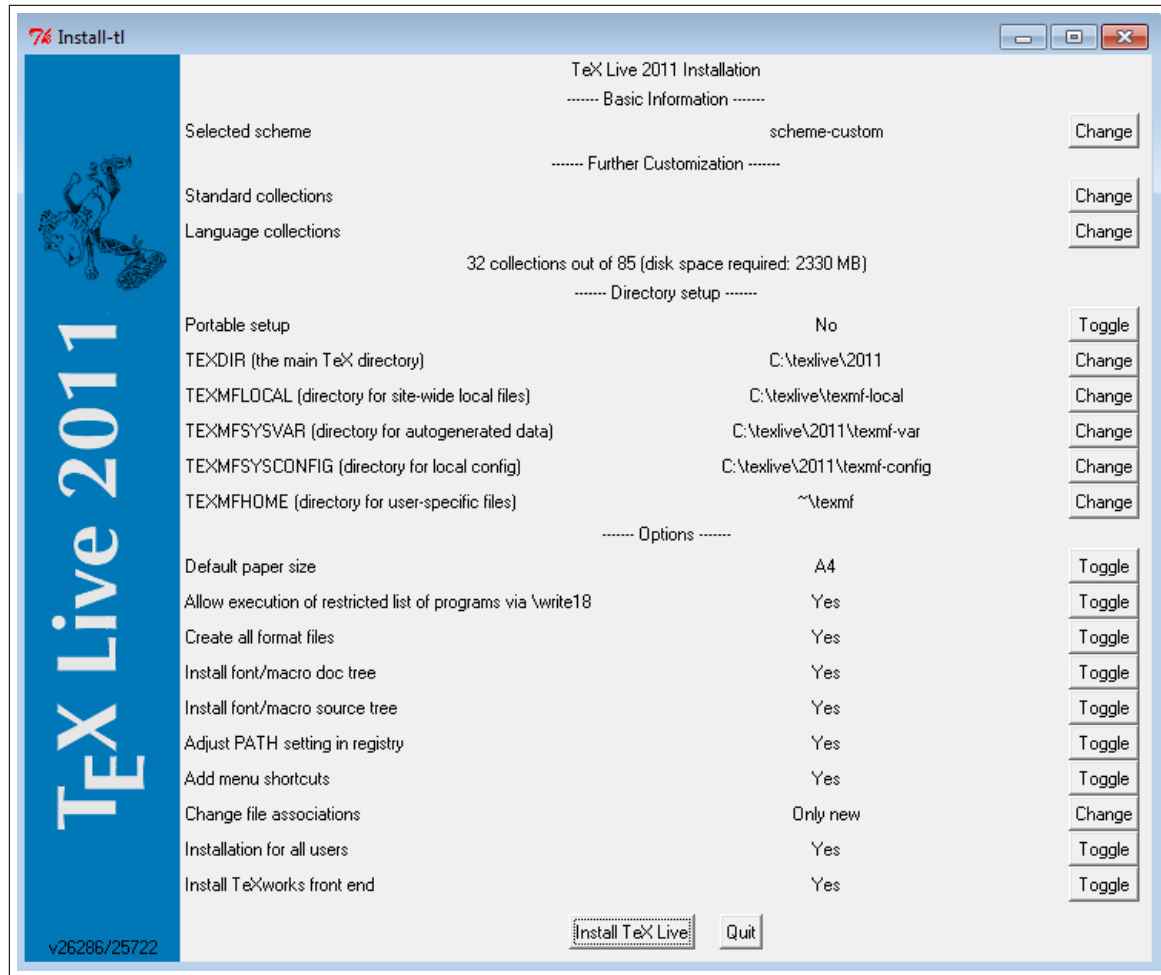


Figure 5: Install TeX Live