

Read Me First

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1 TeXShop and TeXworks

T_EX is a typesetting program, originally designed for mathematical and scientific documents, but increasingly used in other fields as well. The MacT_EX distribution contains the T_EX program and a large number of support files: fonts, style files, and so forth.

Most of these files remain hidden from the user, who interacts with T_EX via a front end. This front end contains an editor used to enter source text, and a preview window showing the typeset output. After installation of MacT_EX, your /Applications/TeX folder will contain two front ends to T_EX — TeXShop and TeXworks. TeXShop has been available for OS X since the introduction of the operating system; TeXworks is a front end modeled on TeXShop but available for many computer platforms.

2 First Steps with T_EX

If you are new to T_EX, the following steps will get you started. Go to /Applications/TeX and find TeXShop. Drag its icon to your dock. Run the program. You will be presented with a blank window; at the top right of this window you'll find a pull down menu named "Templates". From this menu choose "LaTeX Template". The blank window will fill with some standard boilerplate required in each T_EX source file. The red lines are comments which T_EX ignores.

New material goes between the lines

```
\begin{document}
```

and

```
\end{document}
```

Type some sentences there now. T_EX will ignore most carriage returns because it knows how to format text, so insert them randomly if you wish. Use a blank line to indicate the start of a new paragraph.

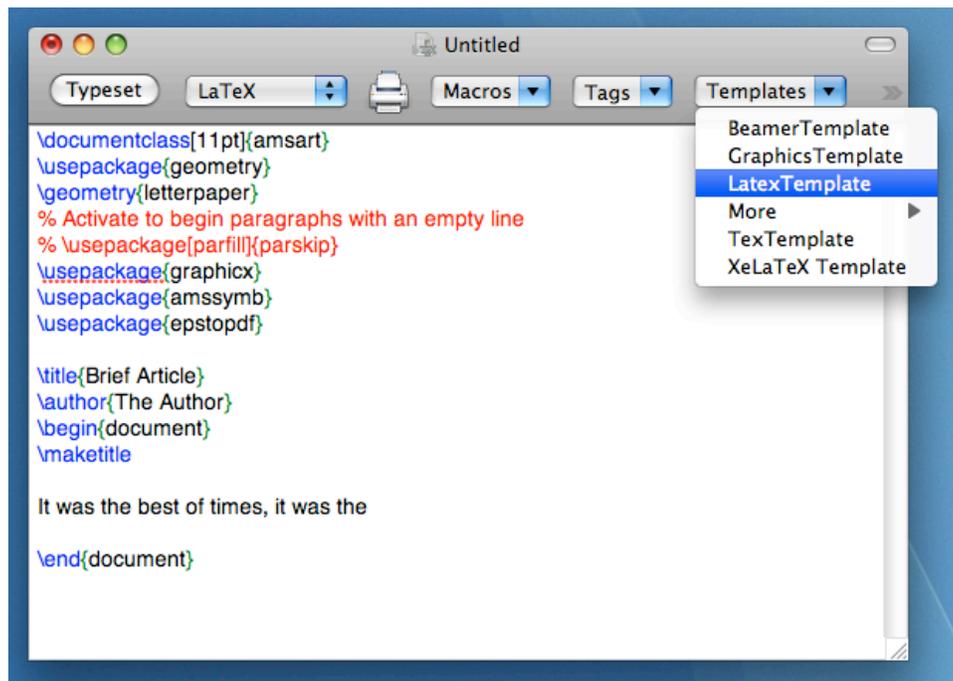


Figure 1: Edit Window

Uncomment the source line with the words “`usepackage[parfill]parskip`” if you prefer to separate paragraphs with an empty line instead of an indent.

When you have some material, hit the “Typeset” button at the top left of the window. A dialog will appear asking you to save the document. When \TeX typesets, it creates three or four additional files, so it is not a good idea to save directly to a location with many other files. Instead, put your source in a folder within such a location. To do that, navigate to a reasonable location, say `~/Documents`, and then hit the “New Folder” button at the bottom of the dialog. Accept the default name or choose another and create the folder. Then name the document and save it. The default “Untitled” name will do.

As soon as you save, \TeX will typeset the document and open a second window showing the result.

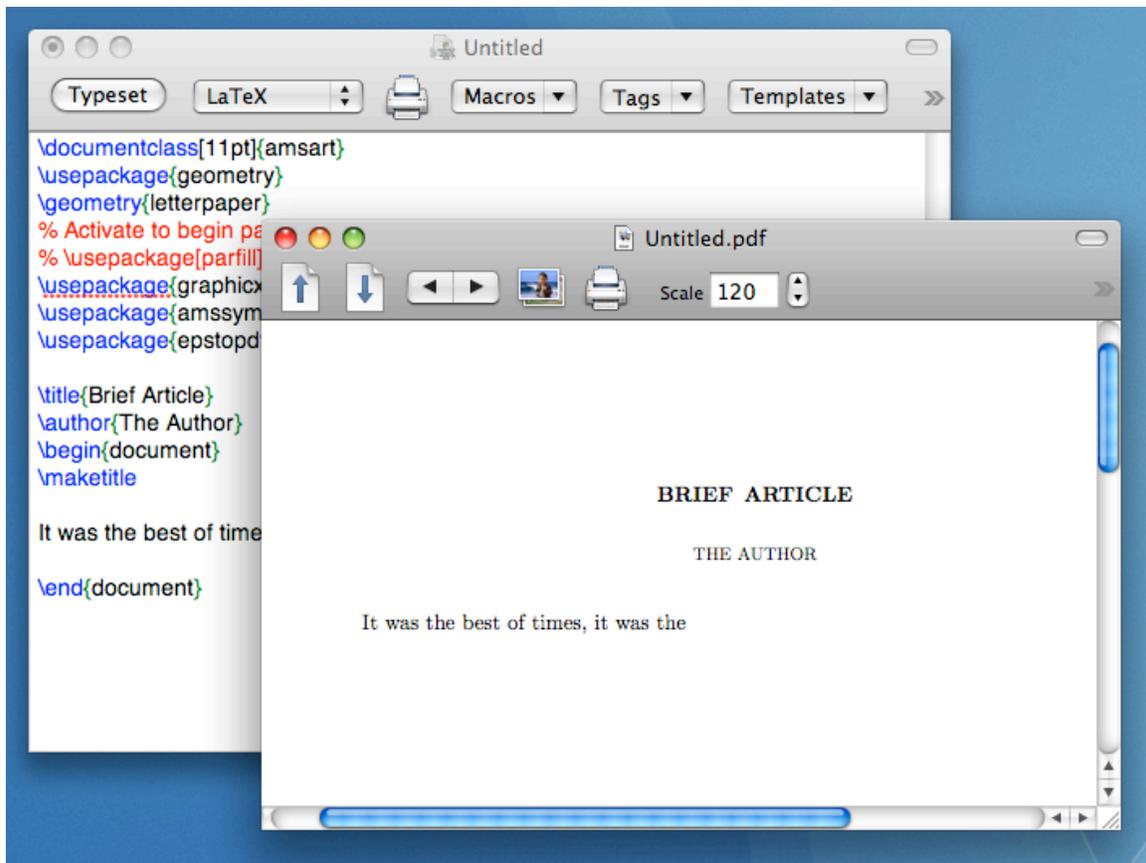


Figure 2: Typeset Window

Go back to the original window and add some additional text. Hit “Typeset” again. This time \TeX immediately typesets the new material and updates the output window.

Now quit the program.

It is possible to reopen the project by double clicking on the Untitled file or by starting TeXShop and navigating to Untitled in the Open dialog, but there is a much easier way. Start TeXShop and under the File menu choose the item “Open Recent...” In the resulting list, choose “Untitled” and you will immediately return to the document.

Those are the basics. You will find further information in the TeXShop Help menu. The first short item, “First Steps With TeXShop”, should tell you everything you need to know to get started. Go to the Help menu now and select the submenu “TeXShop Demos” and then the item “Getting Started”. You’ll be shown a movie illustrating the steps you just performed.

You may be unhappy with TeXShop’s placement of the two crucial windows. This is easily fixed, as explained in the second movie “Initial Preferences”. Watch that movie and follow the suggestions in it to rationalize placement of the windows.

3 Second Steps with \TeX

The next crucial step is to learn \TeX . George Grätzer gave permission to put the first portion of his book *More Math Into \LaTeX* in the TeXShop Help window, so begin by reading that document.

It is also a good idea to read some of the material on the Mac \TeX web site: <http://www.tug.org/mactex>. The link “References” at the top of this page leads to a particularly useful page, <http://www.tug.org/mactex/references>, which has a lot of information about learning \TeX . In particular, several useful online tutorials are available. If you are serious about \TeX , you’ll probably want to buy some books. Visit <http://tug.org/books/> for an excellent list of classics, available at a discount with free shipping.

The following locations may prove useful:

- TeX Wiki by Gary Gray, Joseph Slater, and others:
<http://mactex-wiki.tug.org>
- Information on joining the \TeX on Mac OS X mailing list:
http://mactex-wiki.tug.org/wiki/index.php?title=Mailing_Lists

For specialized versions of $\text{T}_{\text{E}}\text{X}$ and $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ see:

- Information on $\text{X}_{\text{T}}\text{T}_{\text{E}}\text{X}$ and $\text{X}_{\text{T}}\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$:
<http://scripts.sil.org/xetex>
- Information on $\text{ConT}_{\text{E}}\text{Xt}$:
http://wiki.contextgarden.net/Main_Page and
http://wiki.contextgarden.net/ConTeXt_Minimals

$\text{MacT}_{\text{E}}\text{X}$ is brought you by the TeX user groups across the world, including the one for English speakers:

- TeX Users Group Site:
<http://www.tug.org>

Searching this site will reveal a vast reservoir of information, including

- A Short History of $\text{T}_{\text{E}}\text{X}$:
<http://www.tug.org/whatis.html>
- A free online journal focused on practical use:
<http://www.tug.org/pracjourn/>
- Archived issues of the main journal about $\text{T}_{\text{E}}\text{X}$:
<http://www.tug.org/TUGboat/>
- Information on joining TUG, to get the latest issues and much more:
<http://www.tug.org/join.html>.
See also
<http://www.tug.org/usergroups.html>
for a list of other user groups; please join the one best for you!
- The Comprehensive $\text{T}_{\text{E}}\text{X}$ Archive Network (CTAN):
<http://www.ctan.org/>

TeXShop is just one of the many available editors and previewers for $\text{T}_{\text{E}}\text{X}$ on OS X. After you are comfortable with $\text{T}_{\text{E}}\text{X}$, you'll want to investigate other possibilities. A good starting point is the Gray-Slater site listed above.

4 MacTeX for Experts

MacTeX installs TeX Live 2011 in `/usr/local/texlive/2011`. The distribution it installs is exactly the same as the distribution that would be obtained by using TeX Live's standard install script. TeX Live runs on almost all architectures: OS X, Windows, GNU/Linux, and other Unix systems. The distribution is the same on all of these platforms; nothing has been added or removed to customize it for OS X.

The MacTeX installer performs extra tasks which aren't done when you install with TeX Live's standard script. MacTeX extends `PATH` and `MANPATH` so TeX binaries and man pages for the distribution are available within Unix shells. It installs a TeX Distribution preference pane for Apple's System Preferences to manage TeX distributions on your machine. If you were using TeX Live 2010 or the TeX distribution in Fink or MacPorts, that distribution remains unchanged on your machine after installing MacTeX-2011. You can switch back and forth between TeX Live 2011 and your old distribution by pushing a radio button in the preference pane. When you push that button, `PATH` and `MANPATH` and all front ends and utilities are automatically reconfigured. A consequence of the mechanism used to make the panel work is that all of the TeX front ends and utilities provided by MacTeX are automatically configured for TeX; this applies to most current programs available over the web, not just those we supply with MacTeX.

On other Unix machines it is common to set environment variables like `TEXINPUTS`. While TeX Live recognizes these variables, it is usually not necessary or desirable to set them.

MacTeX tries to guess your paper size at installation time. If it makes a mistake, you can set the paper size by running the program TeX Live Utility in `/Applications/TeX`, and selecting the "Change Paper Size..." item in the Action menu.

Use TeX Live Utility to keep your distribution up to date. When the program starts, it lists packages in TeX for which updates are available. Push the "Update All" button to update these packages over the net.

For details about these features, read "What Is Installed" in `/Applications/TeX`.

5 TeX Live Documentation

TeX Live comes with extensive documentation. To browse through the full set, click the link <file:///usr/local/texlive/2011/index.html>. This leads to several deceptively simple

README links in various languages. If you follows links within these README files, you will soon reach extensive amounts of information, including some book length introductions to T_EX. An important link is <file:///usr/local/texlive/2011/doc.html> which has links pointing to all of the html and pdf package documentation, sorted by package name. There are so many links that it is difficult to pick favorites; here are a few samples to show the variety of available information:

- A 139 page book on L^AT_EX, *The Not So Short Introduction to L^AT_EX2_ε*, by Tobias Oetiker, Hubert Partl, Irene Hyna and Elisabeth Schlegl: <file:///usr/local/texlive/2011/texmf-dist/doc/latex/lshort-english/lshort.pdf>
- *A Survey of Free Math Fonts for T_EX and L^AT_EX* by Stephen G. Hartke: <file:///usr/local/texlive/2011/texmf-dist/doc/fonts/free-math-font-survey/survey.pdf>
- *The T_EX Live Guide* for 2011, edited by Karl Berry: <file:///usr/local/texlive/2011/texmf/doc/texlive/texlive-en/texlive-en.pdf>
- The documentation for Beamer, a L^AT_EX class to create presentations for a projector: <file:///usr/local/texlive/2011/texmf-dist/doc/latex/beamer/doc/beameruserguide.pdf>

6 Spell Checking

Apple's spell checker doesn't understand T_EX, so it marks most T_EX control words as misspelled. There are two solutions to this problem. The first is to spell check documents after they are written, using the stand alone *Excalibur* in `/Applications/TeX`. The second is to download Anton Leuski's *cocoAspell*, a plugin for Apple's system which does recognize T_EX control words. To download and install the free *cocoAspell*, go to <http://people.ict.usc.edu/~leuski/cocoaspell/>

We do not include *cocoAspell* because you would need to go to this web page anyway to select a language and dictionary; at least 74 languages are supported.