

Tutorials

CTAN for Starters

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Newcomers to \TeX can have trouble finding their way around. As with other community-supported projects, beginners can feel that only insiders or old-timers can get the tool to do its magic.

One of the secrets to \TeX success is to know where on the Internet there are resources that you can use. A key \TeX community resource is our archive. This article takes you through how to find and use this site.

1 On your mark ...

All \TeX users should know: *if you need something, then the right place to look is the Comprehensive \TeX Archive Network.*

CTAN is authoritative: if you need something \TeX related that is out there, then chances are that you can get it in here. And, most of CTAN's holdings are freely available, so you can just pick them up and use them.

This article will take you around the site a bit, so that you can get an idea of what is here. Start by browsing to the top page: <http://www.ctan.org>.

2 Get ready ...

From the home page, click on the “Look through” link to get to <http://www.ctan.org/tex-archive>. There you see the CTAN's top-level organization, with a brief description of each branch. If you click around, you will get some sense of the great amount of material, and of the wide variety of material, that is available to you.

As a beginner, the first thing to get is a distribution—a collection of packages and programs, suitable for your computer platform, with what you need to start working. We have all of the major free and shareware distributions: \TeX Live for Windows, Macintosh, and Unix, \MiKTeX for Windows, \gwTeX with i-Installer for Macintosh OS X, and \teTeX for Unix and Mac OS X.

Go back to the “Look through” page and click on “systems” to go to where system-specific software lives. Click on the type of system that you have. For instance, if you work under Windows then you can follow the `win32` link (or the `texlive` link). One of the options there is `miktex`, and the material on that

page tells you to install by reading what is in the `setup` directory. By following those directions you will get a complete \TeX system on your computer.

3 Get set ...

After you've installed a distribution, you next need a tutorial. There is no substitute for a good book, but CTAN can still help you here, too. Go back to the top page and again follow the “Look through” link (<http://www.ctan.org/tex-archive>) to the top of the file structure.

Click on the “info” link to go to <http://www.ctan.org/tex-archive/info>. Here are many tutorials, and a great deal of other documentation.

Most people do their \TeX work via the \LaTeX macro package, and one of the choices now on your screen is “lshort”. Click on it to get to <http://www.ctan.org/tex-archive/info/lshort>, which contains the widely-recommended *The (Not So) Short Guide to $\text{\LaTeX} 2_{\epsilon}$* (the current version of \LaTeX is called $\text{\LaTeX} 2_{\epsilon}$). There are many translations there; select one and save or print it.

4 Go!

With that, you now have a full \TeX system and enough documentation to do tremendous things.

5 Through the back straightaway ...

CTAN is not just for getting up to speed, it can also help you move ahead in your \TeX work.

Imagine that you've used \LaTeX a bit and have gotten comfortable with the tutorial. A colleague sends you a file to use, but running it gives you an error message that your system cannot find `SIunits`. This package might not have come with your distribution (the distribution's builders try to balance completeness and size). However, CTAN has it.

From the top page <http://www.ctan.org>, take the “search” link to <http://www.ctan.org/search>.

In the first text box, type `SIunits` and hit Enter. You get a list of links, including a directory called `macros/latex/contrib/SIunits`. Click on the directory name to see what's there. You get a page listing the files.

Also on that directory page is a link to get the contents of the “entire directory”. Click on it, and you will be offered the files from the directory, bundled up as `SIunits.zip` or `SIunits.tar.gz`. That's the right way to get the materials, so that you will not miss any.

Click on one of the links to get it to your machine (if you don't know which to use, get the `.zip`). You may get a page that asks you to select a mirror from a list. Many sites around the world generously

help out by offering the contents of CTAN to the public; you are seeing a list of these. Choose one from the list that says it offers the kind of archive that you want, `.zip` or `.tar.gz`, and you will be sent a cookie so that your browser can remember your preference in the future.

With that, you have the bundle on your computer containing the files that you want. What you need next is directions to install the material. CTAN can help you here, also. Back at the search page <http://www.ctan.org/search>, look for the “Frequently Referenced Links”. One of these is to Robin Fairbairns’s English language FAQ, <http://www.tex.ac.uk/faq>. One of the answers on that list, “Installing a new package”, tells you just what you need to know.

You may want to bookmark the search page <http://www.ctan.org/search>; it’s one of the most convenient ways to get at the information on CTAN.

6 Out of the final turn . . .

Now you know how to get publicly available materials, if you know exactly what files you want. What if you instead need some particular feature, but don’t know a specific name? As with the documentation, there is no substitute for a good book, but the search page can help.

Suppose that you need to work with your page footers. Go to <http://www.ctan.org/search> and use the “Search the Catalogue” box (the *Catalogue* is a large collection of T_EX package descriptions). Enter `footer`. You get a page of links, one of which is `fancyhdr`, with the abstract “Extensive control of page headers and footers in L^AT_EX 2_ε”. Also there is a link to the directory, so you can look through the documentation file.

Your distribution already has this package, so there is no need to download it. Nonetheless, the lesson here is that CTAN is useful for things other than getting materials; it is also a source of information on those materials.

7 Across the line

One thing that places an experienced person ahead of a beginner is an awareness of what resources to use to solve problems. For T_EX users, CTAN is one of the most important resources.

8 In the circle with the leaders

As your T_EX sophistication grows, you may well develop some software or documentation of your own. For instance, perhaps you are writing a thesis in T_EX, and you find that none of the available thesis styles quite suit your university. You solve the prob-

lem by combining some packages from CTAN with some programming of your own to write a style that works.

When you do that, please consider contributing your work to CTAN. A link on the top page takes you to a page with instructions on how to upload. Typically, you only need make a `.zip` file with the software and enough documentation to help people get started using your work.

Contributions like this help us to build our community!

9 A note on places

CTAN is a network because it consists of a number of cooperating sites. This article consistently uses <http://www.ctan.org> URL’s but you have other options, which may give you better network access.

The three core sites are <http://dante.ctan.org> in Germany, <http://cam.ctan.org> in England, and <http://tug.ctan.org> in the United States; this last is an alias for <http://www.ctan.org>. The three have different interfaces, but have the same holdings.

These three sites are active — they install newly uploaded material, etc. There are also many mirror sites that help out by just copying the content from a core site and then also offering the material to the public. Please use a mirror if you can; see the full list at <http://www.ctan.org/tex-archive/README.mirrors>.

The three core sites are sponsored by T_EX user groups: DANTE in Germany, UK-TUG in England, and TUG in the US. There are many more user groups; see <http://tug.org/usergroups.html> for the complete list. If you find CTAN and T_EX useful, please consider joining or supporting the user group best for you.

10 One more note: what shows

The CTAN team is working on some changes that may affect the look of the web site. Thus, in the future, some of the web interface details described here may change. Of course, we hope that these changes make the site even more useful to the T_EX community.

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