

CTAN: Relaunch of the Web portal

Gerd Neugebauer

Abstract

If you want to contribute something to the $\text{T}_{\text{E}}\text{X}$ world you will find in CTAN the first place to drop your contribution. Conversely, CTAN is a valuable source of systems, packages, and information. The Web portal of CTAN has deserved a renewal. Now the relaunch of the CTAN portal is online.

1 Introduction

The Comprehensive Archive $\text{T}_{\text{E}}\text{X}$ Network (CTAN) is the central repository for $\text{T}_{\text{E}}\text{X}$ -related material. For many users CTAN acts behind the scenes. They simply use the material from CTAN as available via the various $\text{T}_{\text{E}}\text{X}$ distributions. CTAN has had a Web site (<http://www.ctan.org>, see figure 1) for a long time. The Web site serves as a landing place if you want to place material in the public repository, or if you want to search for packages or information.

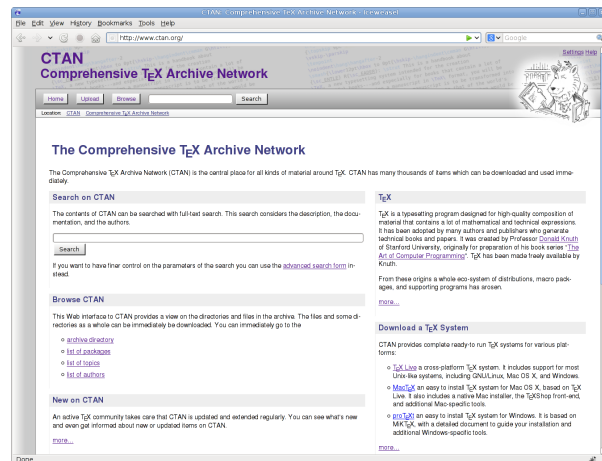


Figure 1: www.ctan.org

Mainly the CTAN portal aims at supporting you with the following functions:

- Browse the files and directories on CTAN
- Download files and directories
- Upload contributions to CTAN
- Browse the $\text{T}_{\text{E}}\text{X}$ Catalogue, which contains additional information
- Search CTAN
- Get information about mirror servers and register a new one

We will have a look at some of these functions in the following sections.

Gerd Neugebauer

2 Browsing CTAN

CTAN is the major repository of $\text{T}_{\text{E}}\text{X}$ -related material. This material can be browsed via the Web portal. Here you find the material organized in directories and files. You can navigate into the directories or download the files.

When you hit the directory associated with a package of the $\text{T}_{\text{E}}\text{X}$ Catalogue then additional information is presented (see figure 2).

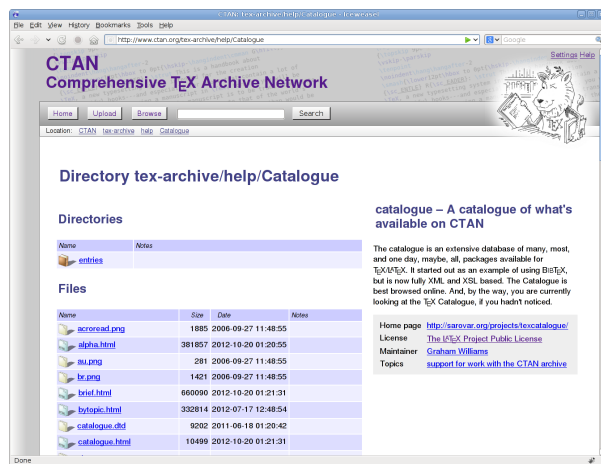


Figure 2: Browsing a directory with Catalogue information

In some of the directories the functionality is presented to download the directory with all contents in a zip archive. This makes it simpler to get your hands on the files.

For packages which are prepared for the distributions $\text{T}_{\text{E}}\text{X}$ Live or MiK $\text{T}_{\text{E}}\text{X}$ the names of the package in those distributions are shown. Thus you can install the package without downloading and installing it manually.

3 Uploading material

CTAN lives on its contributions. Those contributions can be submitted to CTAN via the Web portal (see figure 3). Here a form allows you to enter all relevant information about your contribution. Your contribution is then processed manually and usually appears on CTAN within a short period of time.

Formerly you had to manually select one of the main servers of CTAN to perform an upload. This is now performed through the portal. An appropriate server is selected and the upload forwarded to it. If one of the primary servers is not available then the other server is used automatically.

CTAN can only be as good as the $\text{T}_{\text{E}}\text{X}$ community makes it. Thus, we urge you to strongly consider uploading your useful packages to CTAN.

cite a package on CTAN. This has the advantage that the chances are good that a reader who uses this URL is directed to a server close by.

The CTAN portal provides information on the servers in the network, allows a new volunteer to register a server (see figure 6), and makes use of the distributed servers for downloading files.

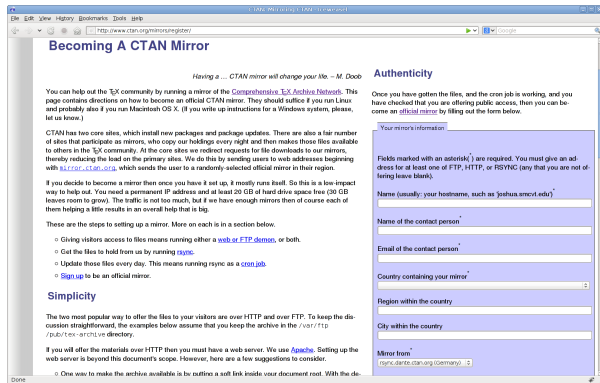


Figure 6: Registering a CTAN mirror, <http://www.ctan.org/mirroring>

7 Behind the scenes

In this section I don't want to describe all the details of the implementation. We can just have a look at a few interesting issues.

7.1 Hyphenation on the Web

The rendering of Web pages is done by the user's browser. Many parameters influence the final appearance, e.g., the font used, the size of the font, and the width of the output window. These parameters can be influenced but not strictly determined on the server side.

Let's first have a look at the width of the window. Many Web pages use a layout which uses a portion of the window with a fixed width. This results in empty space to either the left or the right. On smaller devices a horizontal scroll bar appears immediately. Neither variant is optimal for readers. Thus the CTAN portal tries to adapt the layout to the space available. Sometimes this is called responsive Web design. More on that later.

From typesetting on paper we know that long words can result in a sloppy right margin or large white holes in the text block. Thus we usually use hyphenation patterns to add appropriate places where words can be hyphenated and split across lines. Fortunately $\text{T}_{\text{E}}\text{X}$ does this for us. Unfortunately the browser is generally not so helpful.

For the CTAN portal I have used a module extracted from the $\epsilon_{\text{X}}\text{T}_{\text{E}}\text{X}$ project (www.extex.org).

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Download a $\text{T}_{\text{E}}\text{X}$ System

CTAN provides complete ready-to-run $\text{T}_{\text{E}}\text{X}$ systems for various platforms:

- **$\text{T}_{\text{E}}\text{X Live}$** a cross-platform $\text{T}_{\text{E}}\text{X}$ system. It includes support for most Unix-like systems, including GNU/Linux, Mac OS X, and Windows.
- **Mac $\text{T}_{\text{E}}\text{X}$** an easy to install $\text{T}_{\text{E}}\text{X}$ system for Mac OS X, based on $\text{T}_{\text{E}}\text{X Live}$. It also includes a native Mac installer, the $\text{T}_{\text{E}}\text{X}$ front-end, and additional Mac-specific tools.
- **pro $\text{T}_{\text{E}}\text{X}$** an easy to install $\text{T}_{\text{E}}\text{X}$ system for Windows. It is based on Mik $\text{T}_{\text{E}}\text{X}$, with a detailed document to guide your installation and additional Windows-specific tools.

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Figure 7: Same text — different widths

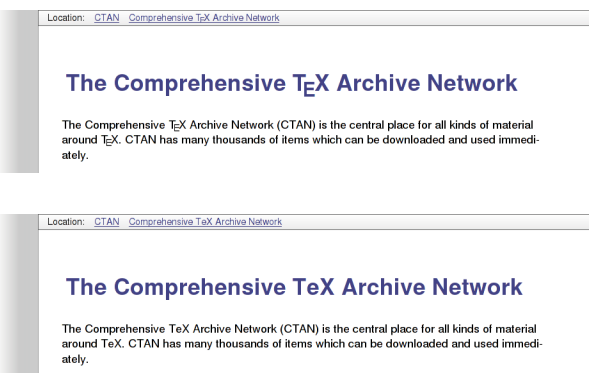


Figure 8: Rendering the $\text{T}_{\text{E}}\text{X}$ logo in different ways

This module implements Liang's algorithm (which is also used in $\text{T}_{\text{E}}\text{X}$). This module has been wrapped in a tag library and used in the general layout definition for all pages. Thus it is possible to insert hyphenation points ($\&\text{shy}$;) into the HTML source of the pages on the fly. This procedure makes direct use of the hyphenation patterns contained in `hyphen.tex` for US English. Now the browser can hyphenate words as $\text{T}_{\text{E}}\text{X}$ would do (see figure 7).

7.2 Skinning and logos

Different people have different opinions about typesetting the name ' $\text{T}_{\text{E}}\text{X}$ ' — especially on Web pages. Donald Knuth has designed the logo $\text{T}_{\text{E}}\text{X}$ as we know it. In addition he has declared that the text version "TeX" is acceptable. From this inspiration, many more logos have originated: $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$, $\text{BIB}\text{T}_{\text{E}}\text{X}$, etc.

The CTAN portal supports the drop-character variant as well as the text representation and enables you to select the preferred variant. The portal allows you to select a so-called skin. This skin determines the appearance of the portal. In figure 8 the default skin and the dual skin with text logos are shown.

The skin can be changed via the settings page; several skins are provided. Besides the multi-column skins, plain skins (in dark or light) can be selected. The plain skins omit the use of most fancy formatting

and reduce the appearance to the essentials (see figure 9). These are fine skins for purists. The plain skins also typeset the logos in text form.

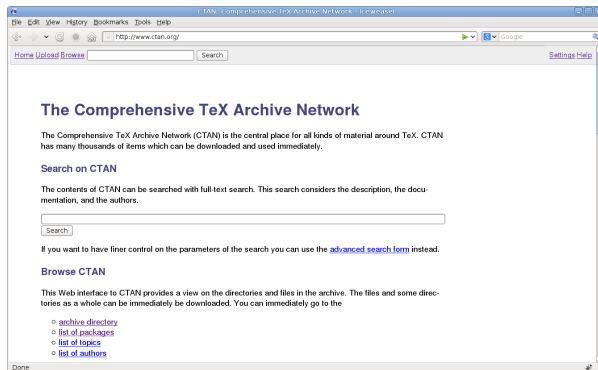


Figure 9: The plain skin

Other skins use different colors or background textures. For instance the skin “sketch” (see figure 10) provides a sketchy look which should appear as a kind of design drawing for the not completely finished layout.

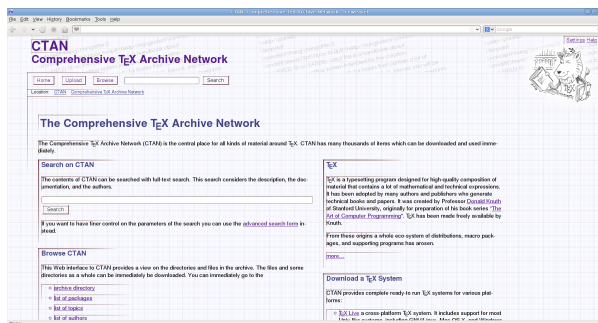


Figure 10: The sketch skin

At the time of writing, 13 skins are available. Thus it is best to try out the skins yourself. And don’t be surprised if you find some more.

7.3 Responsive Web design

The CTAN portal is based on a design principle known as responsive Web design. This means that the Web pages are tailored towards the (horizontal) space available. If the browser window is wide then the full width is used — to a certain extent. If it is narrow then the width of the page is reduced as well. This respects as much as possible the expressed or implicit expectations of the user.

For the Web, techniques similar to those already known from typesetting are applied: We do not hard-wire dimensions. Instead relative sizes are used whenever possible. For instance this means that

widths are given as a percentage of the browser width or in em or ex. These last two adapt an element to the font size chosen by the user.

We can go even further. With CSS3 it is possible to adapt the overall layout of the page. Usually a two-column layout is used if there is enough space. On small devices this reduces to a single column layout. The specification of minimal and maximal widths avoids lines which are too long or too small. Thus readability is improved.

A minor point to mention is the image — the T_EX lion — displayed in the upper right corner by default. If space is tight, this image is suppressed.

Thus we have seen that we can pass on several concepts from the typesetting world to the Web in order to improve readability. Even in this radically different technology, the long-known and well-established rules can be applied to improve the user experience.

A snapshot is shown in figures 1 and 11. You can easily see these effects live just by resizing your browser window on your desktop PC, laptop, or smart phone. Take the time and experiment a bit.

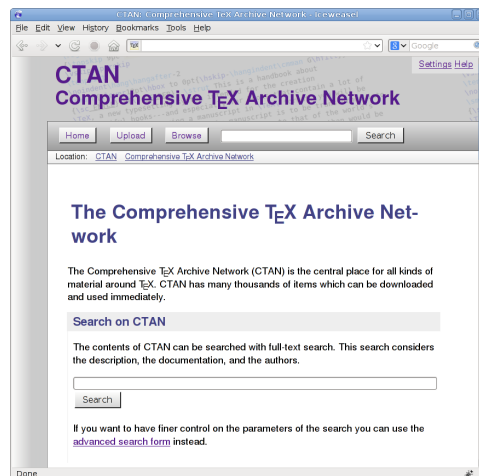


Figure 11: The landing page in a narrow window

8 Visit www.ctan.org

You have seen some of the features of the new CTAN portal. Nevertheless the best way to experience the Web is to use a browser and click your way through it. And so you are invited to try the new experience. Enjoy www.ctan.org and keep on T_EXing.

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