Including TeXCad32 Pictures

Peter Furlan

21.2.2004

1 Export from TeXCad32

Assume you have TeXCad32 running on the file `work.tcs` and you want to generate a picture which shall be included in `foo.tex`.

Then you have two choices

Tec-Export generates `work.tec`. This is a file with a picture environment containing EmTeX-specials and text commands.

Tcp/Ps-Export generates the pair of files `work.tcp` and `work.ps`

> `work.tcp` is a a driver file, containing the text elements and an `\input`-command) for `work.ps` or `work.pdf`.

> If you want to use `pdflatex` you have to convert `work.ps` into `work.pdf` (e.g. using ghostscript).

2 Inclusion Commands

You should include `texcad32.sty`, which defines the command `\tcinput`.

The action of `\tcinput` depends on the option of texcad32.sty:

- `\usepackage[tec]{texcad32}` Then `\tcinput{work}` forces the input of `work.tec`.

- `\usepackage[tcp]{texcad32}` Then `\tcinput{work}` forces the input of `work.tcp`. If you run `latex foo` then `work.ps` will be used, in case of `pdflatex foo` the file `work.pdf` will be included.

 This distiction is done by `ifpdf.sty` which is read in `texcad32.sty`.

3 Generating DVI Output

This is the fastest way, because no extra conversion is needed. You see the result immediately in a dvi-viewer. The main disadvantage is that you cannot fill areas, so e.g. arrowheads are much nicer in the other methods.

The resulting dvi-file may be converted into postscript and/or pdf.

Contents of `foo.tex`:

```
\documentclass{article}
\usepackage{color}          % optional
\usepackage[tec]{texcad32} % option 'tec' for EmTeX specials
\begin{document}
{\small%                     % better size for labels and texts
\tcinput{work}}              % work.tec is read
\end{document}
```
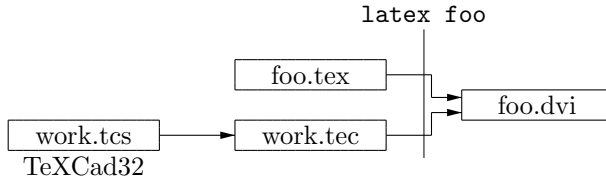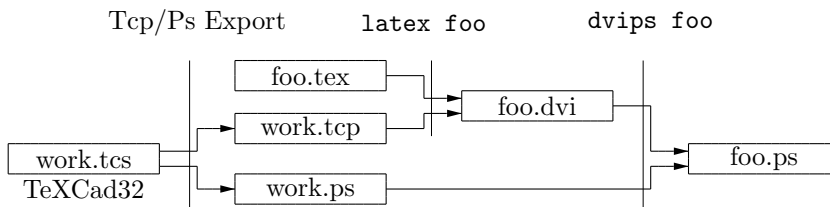

4 Generating PS Output

One method is to apply `dvips` to the `.dvi`-file generated as above, but because of better results and more facilities (e.g. the use of pstricks) this way is recommended:

Contents of `foo.tex`:

```
\documentclass{article}
\usepackage{color}          % optional
\usepackage{pstricks}       % optional for some later examples
\usepackage[tcp]{texcad32} % option 'tcp' for ps/pdf processing
\begin{document}
{\small%                     % better size for labels and texts
\tcinput{work}}              % reads the driver file work.tcp which
                             % places a \special-command to input
                             % work.ps in the dvi-file during dvips
\end{document}
```

5 Generating Pdf Output

Naturally, you can convert the `.ps`-file from above into pdf. This current document was made in this way. Depending on your document you may use extra options in the `ps2pdf`-process, here `-Ppdf` was used.

If you want to generate Pdf-output directly, then you first have to convert `work.ps` into `work.pdf`. Moreover, don't forget to include `graphicx.sty`.

Contents of `foo.tex`:

```
\documentclass{article}
\usepackage{graphicx}      % pdflatex needs this
\usepackage{color}         % optional
\usepackage{pdftricks}     % optional for some later examples
\usepackage[tcp]{texcad32} % option 'tcp' for ps/pdf processing
\begin{document}
{\small%                   % better size for labels and texts
\tcinput{work}}            % reads the driver file work.tcp which}
                           % inputs work.pdf
\end{document}
```