Software review: TEXCAD for Windows

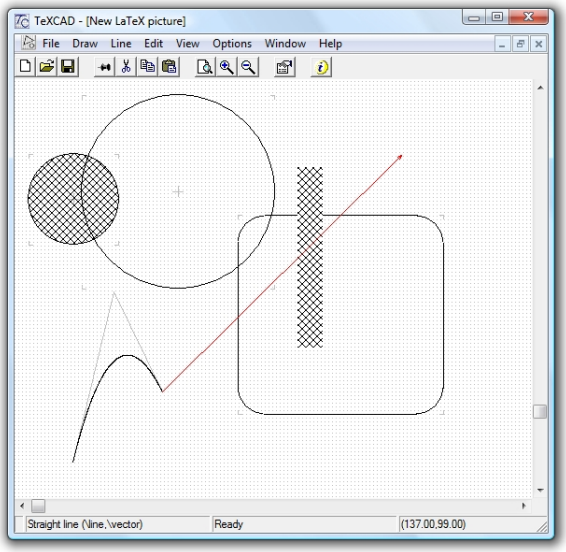
Bernd S. W. Schroeder

Overall Rating: 5.0 (highest rating possible)

1 Description

This program is a well-done adaptation of the classic DOS TEXCAD to the Windows platform. TEXCAD for Windows is a drawing program that provides a visual way to produce pictures in LATEX picture environments. It virtually eliminates the need to remember the way LATEX encodes pictures as most types of pictures can be generated quickly with TEXCAD. TEXCAD for Windows is freely available for download.

The review below considers three categories and assigns a rating in each.



2 Category: Content quality

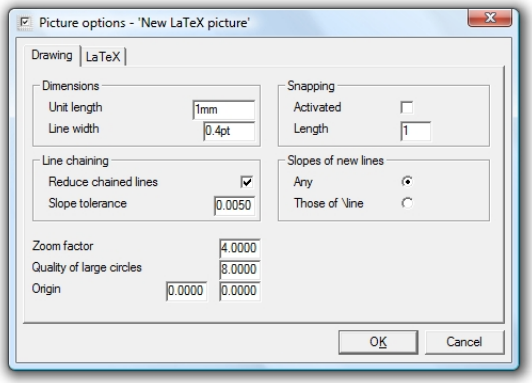
Rating: 5.0

2.1 Strength(s):

- Grid-based drawing program with a default grid in millimeters. Step length for the mouse can be adjusted under Options (Zoom Factor). A zoom factor of 10 provides steps of length 1/10 mm.
- Supports all functions that are available via the LATEX picture environment. Functions are selected via self-explanatory pull-down menus.
- Except for some text, TEXCAD for Windows shows a picture that is what LATEX will produce.
- Graphical editing features such as mirror copy and rotated copies.
- For Bezier curves the two tangent lines that determine the curve are displayed.
- Circles of any size can be drawn with TEXCAD (this feature of TEXCAD32 was not accessible in recent Windows versions because TEXCAD32 would not run).

2.2 Concern(s):

- A feature for connecting objects so that when one is dragged the others adjust would be nice. This can clash with the limited number of slopes of lines that LATEX allows though, so it is understandably not available.
- For fine tuning, it would be nice if one could move the cursor one step at a time with the cursor keys. (This was helpful in the original TEXCAD.)



3 Category: Potential effectiveness as a teaching tool

Rating: 5.0

3.1 Strength(s):

- Generation of LATEX picture environments that are sufficient for many mathematical graphics and very compact.
- Several functions (lines with any slope, bezier vectors) are geared towards eradicating some of the LATEX picture environment's limitations.
- TEXCAD for Windows interfaces with MiKTEX to allow preview of the actual LATEX picture in a very efficient edit-view-edit cycle.

3.2 Concern(s):

- The tips of Bezier vectors sometimes completely cover the end of the Bezier curve, and a little

Editor's note: This is a peer review by the MERLOT Mathematics Review Panel, published online January 16, 2004 (`www.merlot.org`). Reprinted by permission. TEXCAD is written by Gautier de Montmollin, who maintains a site at `www.mysunrise.ch/users/gdm/texcad.htm`. Adapted for *TUGboat* and screenshots provided by Steve Peter.

stub sticks out of the triangle that is the tip of the arrow. This occurs only for high curvature near the tip of the vector and going into the code for the picture environment can fix this problem easily. (*Note*: Gautier de Montmollin says this has been fixed.)

4 Category: Ease of use for both students and faculty

Rating: 5.0

4.1 Strength(s):

- Simple, matter-of-fact documentation included in English (dvi format).
- Once it is started the interface is highly intuitive. Mouse movements plus the left button (select) and the right button (escape/cancel) are all that is needed to run the whole application.
- TEXCAD is an executable that can be started through Windows Explorer, My Computer or on the command line. Shortcuts can be created.

4.2 Concern(s):

None.

5 Other issues and comments

The original TEXCAD is a program back from the days when DOS was the operating system on PCs. TEXCAD was firmly ahead of its time. The limitations of TEXCAD are mostly the limitations of the LATEX picture environment, so they cannot be held against this program. The new Windows version eradicates just about all problems that the reviewers saw in the original program.

Gautier de Montmollin is planning to further improve the program and add some of the features mentioned in this review.

◇ Bernd S. W. Schroeder
Edmondson/Crump Professor and Program Chair
Program of Mathematics and Statistics
Louisiana Tech University
Ruston, LA 71272