Drawing Buildings Under CYCAS & Linux

BY
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CYCAS is CAD for architects. It runs under the Linux operating system. Choosing this software is therefore somewhat more complex than choosing some other draughting program.

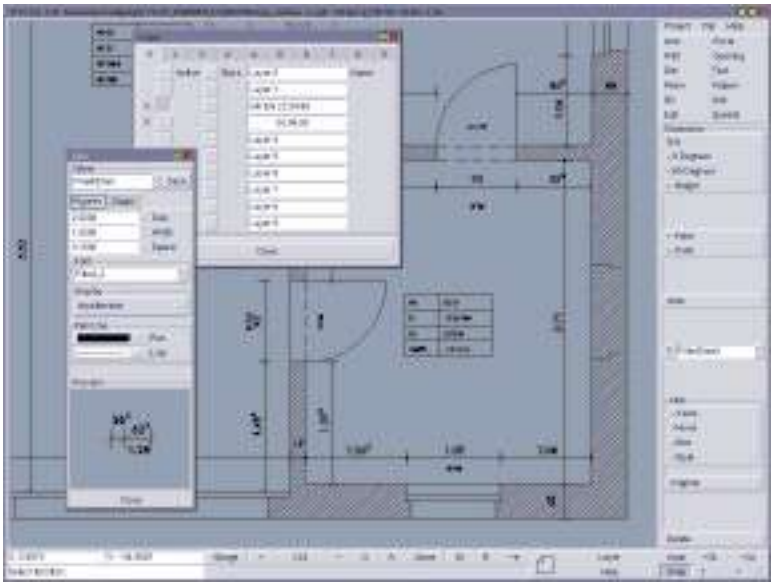
CYCAS is an interesting piece of software. The country of origin is Germany, and it appears that the programmer originally produced the software to run under Unix on the late and somewhat-to-be-lamented Amiga. The publisher seems to have started out in another business as well; she sports the title “Diplom Ingenieur”. The manual and software are supplied in a slipcased ring-binder. There is a feeling of days gone by, in short; I haven’t seen seriously commercial software with an instant-print manual in a ring-binder in a long time.

The manual is supplied in English translation (a good thing; my German has long since passed beyond being merely rusty); it still feels as if it were written in German. This is not entirely a bad thing; the manual is relatively clear and provides a reasonable beginning point for learning the software.

The software itself is supplied on CD. A puzzle: The publisher’s website (www.cycas.de) says that CYCAS for Linux runs on Red Hat and Suse versions. The installation instructions for the software don’t

seem to be that fussy. I tested the software with the Corel implementation of Debian Linux as well, and encountered no installation problems.

In fact, despite the somewhat amateurish appearance of the manual, CYCAS appears to be a very solid, very stable and elegantly written program. It runs equally well under GNOME and KDE desktop interfaces (these are the two most important user-interfaces to the X-Windows system used with Linux). The overall appearance of the working environment is remarkably clean and logical.



The CYCAS workspace is well laid out and easy on the eyes.

The right-hand control panel lists the kinds of elements available in the top button columns. Select an element, and the rest of the control panel shifts to the relevant commands controlling the creation of that element.

Along the bottom, CYCAS locates more general control functions and inputs. The zoom controls and the toggle controlling snap-to input are along here. An input window accepts measurements, or signals

expected input.

For example, to input a wall, first choose the “wall” element, set the wall’s width and toggle the [draw a] “wall” command from the list of wall-element options. Click in the drawing area to set the origin of the wall; the input area requests a length. Add the length and press enter; the machine puts up a wall. Other architectural elements are as easily inserted and connected and trimmed up.

Do the design, then do the rendering. CYCAS’s 3D capabilities show its graphics-computer (AMIGA) heritage.

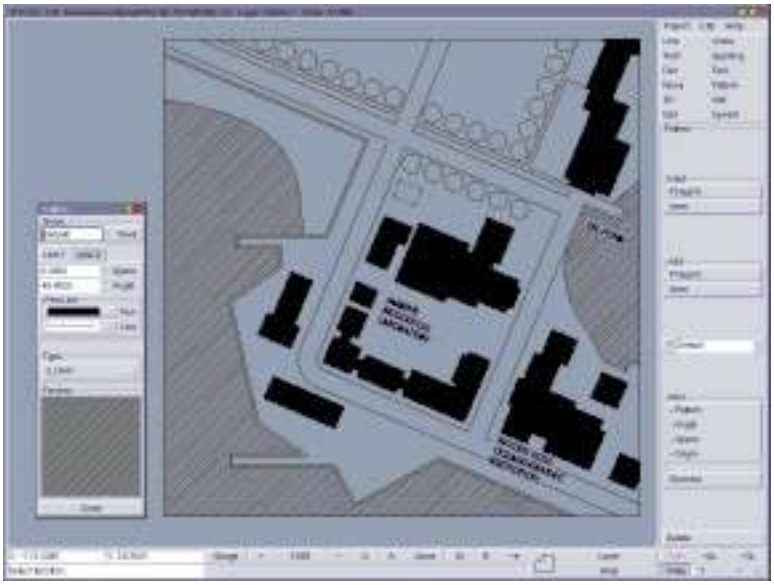
Buildings do not exist in two dimensions, and architectural software that more or less automatically understands how to display an evolving design in three dimensions is a more able tool for architects. CYCAS has very nice 3D capability. Set heights and so on as required and this information is automatically incorporated into the drawing. Lay out the design in two dimenstions; shift to 3D mode and view from several different viewpoints, perspectively or otherwise. The software can create fully-rendered images.

3D rendering uses POV-Ray, but the company says that ray-tracing

support for other rendering engines is built in as well. The software saves in a variety of standard formats (2D/3D DXF, EPS, Lightwave, Real3D); it was not immediately evident how this is done.

CYCAS comes with a generous library of predefined symbols. They are easily accessed and used, and the software fully supports new-symbol creation.

Put it shortly: CYCAS is smart, easy-to-use and well thought through software for architects. The tutorial program is an adequate beginning, from which to continue on one's own. The clear user interface (which the company says can be modified to suit a user's special needs or preferences – this was not tested, as the default seemed close to perfect) is no small part of what seems likely to be a very short learning curve for this software. Just about anything an architect wants to do, should be do-able in the CYCAS environment, from basic design, to site layouts to client presentation.



CYCAS has all the versatility wanted in good CAD software, well-tuned to the special needs of architects.

Sadly, to use CYCAS, you have to use Linux. Linux is simply too

much a specialist's working environment, as it has developed, to become anything like a mainstream working environment.

There are reasons for the general popularity of the Microsoft Windows environment; it is not *all* marketing hype. Most people do more than one thing on their desktop and other personal computers, and there are more and better ways to do that under Windows than under Linux, generally speaking. Those tools which – in many cases, for the very simple reason of best-in-class – have become standards throughout a large part of the computer-using universe are simply not available for Linux. The alternatives are not bad (e. g., StarOffice is a good alternative to Microsoft Office) – but they have not gained ubiquity, and the ability to pass files back and forth through filters is not a substitute.

Moreover, the Linux world is like the Unix world in far too many ways. Like Unix (in days gone by, anyway), Linux comes in lots of flavors, and they vary enough to be troublesome. [CYCAS, by the bye, seems to be more tolerant than some Linux applications – a very real *kudos* to its programming team.] Like Unix, "open standard" has come to mean "having so many options that there is *no* standard". Like Unix, the part of Linux users see is the many bits and pieces of software, not generally well-integrated and even more poorly documented than was ever the case for Unix. Like Unix, there are few easy ways to integrate a Linux system into a more standard-brand Windows or Mac network. [Corel Corp.'s foray into the Linux world featured a browser that did look at the larger network, and managed the integration almost seamlessly. Sadly, the implementation was seriously flawed in other ways and has, in any case, apparently been abandoned.]

In a word, Linux, like Unix before it, is user-hostile. Heaven forfend, one should wish to merely *use* the computer without having to go back to school to become an information-technology professional!

Making a buying choice in favor of CYCAS means accepting the notion of Linux as the "shop standard" – and probably employing a Linux-specialist to keep the systems up and so on. That is not a common choice.

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1248 words

Donald Jenner has been writing about computer graphics since 1986, in publications both here and abroad. The author of *Learn Desktop Graphics & Design on the* PC from Addison-Wesley, Jenner is the principal of CitiGraphics™ in New York. He also teaches in one of New York's city colleges. Reach him at *djenner@cadsystems.com*.