An up-to-date look at free software and its makers

PROJECTS ON THE MOVE

Sweet Home 3D gives you classy interior design on most operating systems and in the real world. We'll show you how to experiment with interiors without moving the furniture.

BY CARSTEN SCHNOBER

Sometimes the computer world lags far behind real life. Most people do not see the absurdity in software that only runs on one operating system – despite the best efforts of the Wine project [1] – mainly because of widespread monoculture on the operating system market. However, even in the world of Windows, users are increasingly faced with the phenomenon of software that does not run on Windows Vista or that runs only on Vista.

Reality is far simpler – if you buy a piece of furniture, you do not need to read the fine print to find out what kind of buildings you can use it in. Just unpack the sofa, set it up in a nice place, and you're done.

Sweet Home 3D

Or is something wrong with this kind of comparison? Can you get the new piece of furniture through the door? Will your new furniture match the TV and the bookshelf?

Although you could use legacy interior design tools such as a tape measure, pencil, and paper, a more modern approach is available that relies on computers. Sweet Home 3D [2] lets you experiment with interiors without moving the furniture (Figure 1).

Emmanuel Puybaret, a developer from France, was interested in a virtual walk-through of his apartment and, with a Bachelor's degree in Computer Science and a Master's in Industrial and Product Design, he had the right qualifications to design software for this.

Puybaret's GPL-licensed program, Sweet Home 3D, illustrates its author's core competencies, combining professional tools with excellent usability. The program window comprises four panes. Users start by drawing the walls of the space they want to work on in the top right-hand side – this can be a single room, a warehouse, or an apartment with any number of nooks and crannies. The *Plan | Edit Walls* menu item supports a more granular definition, including the wall height and textures.

If you have a scanned floor plan, you can import the plan as a background image and then drag the wall tool along the contours to create visible dividing walls.

The top left-hand area of the main window lets you select furnishings and fittings, including a fireplace or other kinds of home decorations, from the *Bathroom*, *Kitchen*, *Bedroom*, and *Living room* categories, and you don't need to be an interior designer to guess what *Doors and windows* gives you.

Finally, *Miscellaneous* lets you add staircases, radiators, curtains, and other accessories.

To position furniture, drag and drop it to any location on the floor plan. Clicking one of the four corners lets you scale and change the orientation of the object in question. Any changes you make are reflected in the list of furniture at the bottom left-hand side. Double-clicking an entry pops up the dialog shown in Figure 2, in which you can set the size, the color, and other details.

The best thing about Sweet Home 3D is the three-dimensional image of your design in the bottom right-hand panel. The program immediately displays any furniture you add and reflects any changes you make in the 3D view.

The bird's eye 3D view gives you a realistic impression of what your home
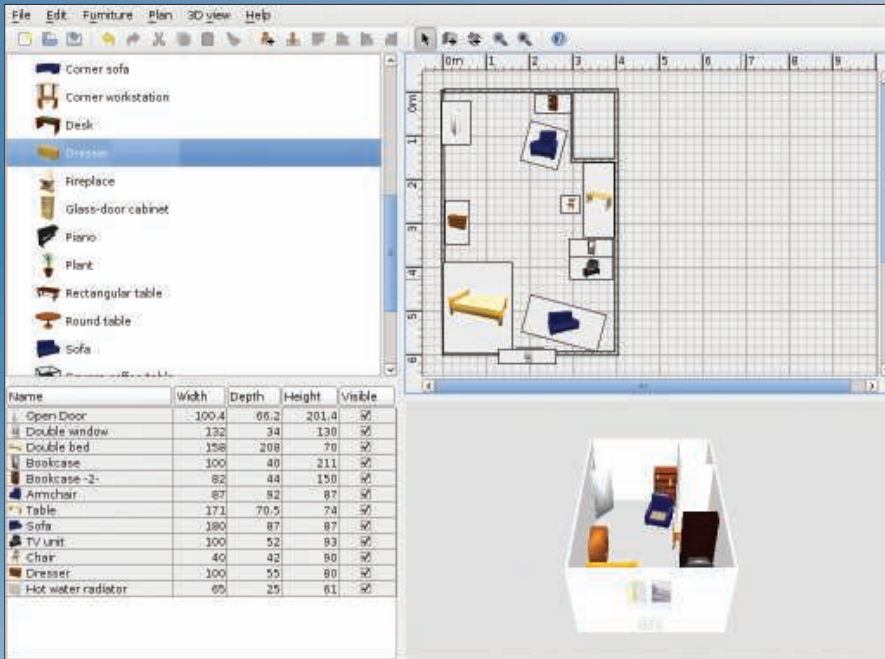
Figure 1: Sweet Home 3D shows you what your home could look like, without even touching the furniture.

could look like from a freely selectable location. Budding interior designers can get more closely involved by paying a *Virtual visit* to the *3D View* menu. This function adds a virtual human to the design and displays the human's 3D view of the room (Figure 3).

Like moving an object, you can move the virtual human through the apartment with the arrow keys or by drag and drop. And you can set the view angle by holding down the left mouse button and dragging the mouse in the 3D view to the bottom right.

The *Settings* dialog in the *3D View* menu also lets you change the viewer's height and field of view.

Sweet Home 3D includes a standard set of furniture, which is fine if you are just looking for basic everyday needs, but the community has more to offer. The program website includes a *3d models* link that takes visitors to various collections from which you can pick and choose to complete your design.

Community Library

A recently completed community library offers no fewer than 119 3D models, whereas the program package just gives you a fraction of this. New community furniture lets users put the finishing touches to their virtual homes and has a huge variety of other accessories. Ten different tables, lamps, clocks, various wall sockets, and other fittings and furnishings satisfy almost any taste. Besides the Sweet Home 3D community, other suppliers provide 3D models that you can use with the program. For example, the Spanish software vendor Scopia now has a free collection of 60 furnishings [3], and designers Andrew Kator and Jennifer Legaz [4] add another 75.

Sweet Home 3D supports three established 3D modeling formats: 3DS by Autodesk [5], OBJ by Wavefront [6] (which has since been acquired by Autodesk),

and LWS by LightWave [7]. The free Blender tool [8] also supports the first two formats, so you have no limits to your creativity.

Multiple Platforms

Sweet Home 3D is a convincing demonstration of developer Puybaret's software design skills. An analysis of the technology he uses harkens back to the difficulty I talked about previously. Sweet Home 3D relies on Java to solve platform issues – very successfully, in this case. Sweet Home 3D has been tested on Linux, Windows, and Mac OS X, but it should run on any system with Java run-time support.

Pre-built packages are available for the three above-mentioned operating systems from the Sweet Home 3D *Download* area. All packages include Java version 6. After unpacking the Linux version, which weighs in at 40MB, you do not need to install the program. If you have installed the Java run-time environment previously, a more elegant approach is available: just call a platform-independent installer via Java Web Start to download and unpack the correct version of the program.

To avert the danger of overloading version 1.3 of the program with praise, I'll spoil the fun by referring to some of the bugs that affect the Linux version. For example, the 3D view disappears from time to time, which is not a serious issue and might be attributable to the graphic card driver.

Occasional program crashes that caused some loss of data are more serious. If you design a virtual home, make sure you save your work at regular intervals to avoid losing it. ■

INFO

[1] Wine: *http://www.winehq.org*

[2] Sweet Home 3D: *http://sweethome3d.sourceforge.net*

[3] 3D models by Scopia: *http://resources.blogscopia.com/modelos_en.html*

[4] 3D models by Andrew Kator and Jennifer Legaz: *http://www.katorlegaz.com/3d_models*

[5] Autodesk: *http://usa.autodesk.com*

[6] Wavefront: *http://www.alias.com/*

[7] LightWave: *http://www.newtek.com/lightwave*

[8] Blender: *http://www.blender.org*