Tux Paint for Kids

Tux Paint provides mess-free creativity for your little Linux users.

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Linux is increasingly capable of meeting all your home computing needs, even the needs of your household's youngest members. As the open-source software movement grows (and the open-source software developers' families grow), the number of kid-oriented programs increases. One of these is Tux Paint, a drawing program with a wealth of features (and a dash of education) to entice and engage users not ready for the powerful but complex graphics program, The GIMP.

Tux Paint was designed to be self-contained, so your little ones can draw for hours without making a mess of your files or your kitchen table (your mouse and keyboard are another story). Tux the Penguin guides children in your choice of more than 40 languages, providing gentle prompts, positive feedback and educational tidbits. Sound effects, stamps and a variety of "magic" effects elevate an otherwise solid paint program into a kid magnet. And, like any good Linux program, it's highly configurable.

INSTALLATION

Tux Paint has been packaged for many popular Linux distributions and is also available for Mac OS X and Windows. Users of the Debian, Fedora, Red Hat or Slackware Linux distributions can download Tux Paint and use their favorite package manager to install it. Being an open-source project, the source code is also available for the more ambitious user, of course. (See http://www.newbreedsoftware.com/tuxpaint/download for details.)

Tux Paint requires a number of support libraries: the Simple DirectMedia Layer library (libSDL); some SDL-based support libraries (SDL_image, SDL_ttf and SDL_mixer); FreeType2; gettext; and libPNG. All of these should be readily available for, if not already installed on, your Linux system.

Once installed, you should be able to access Tux Paint from your Start menu's Graphics application menu. For those who are command-line savvy, simply type `tuxpaint` at a command prompt to launch the program.

CONFIGURATION

Configuration of Tux Paint is isolated from the program itself to keep curious little fingers from monkeying with your carefully selected settings. The Tux Paint Config tool requires the Fast/Light Toolkit (FLTK), which may or may not be a separate package, depending on your distribution. The configuration tool is a point-and-click interface that allows you to choose the language Tux Paint uses, set its screen size and enable or disable such options as sound, printing, full-screen mode and so on. If the configuration tool Tuxpaint-Config doesn't show up on your KDE/GNOME/whatever menu, start it from the command line (or press Alt-F2 to run a command) by typing `tuxpaint-config`.

The number of settings may seem overwhelming, but each was added (often at the request of parents and teachers) to meet the needs of a variety of users. By changing the options, Tux Paint can be made appropriate for very young users, users with learning disabilities and students in the classroom. Tux Paint Config was designed to be as easy on parents as Tux Paint is on kids, so each setting option is explained and should be fairly intuitive.

Once you've set the options you want, simply click Apply to save the changes, and restart Tux Paint. The settings apply only to the current user, so if you give each child a separate login, your fourth grader need not be limited by the same restrictions as your pre-schooler.

Like most programs you'll find on Linux, you also can specify settings when running Tux Paint from the command line. For example, typing `tuxpaint --nosound --fullscreen` runs Tux Paint with sound disabled and in full-screen mode.

It is also possible to create a system-wide configuration, but this requires root access and the skills to edit a plain-text configuration file, and is therefore somewhat beyond the scope of this article. See Tux Paint's documentation for more details.

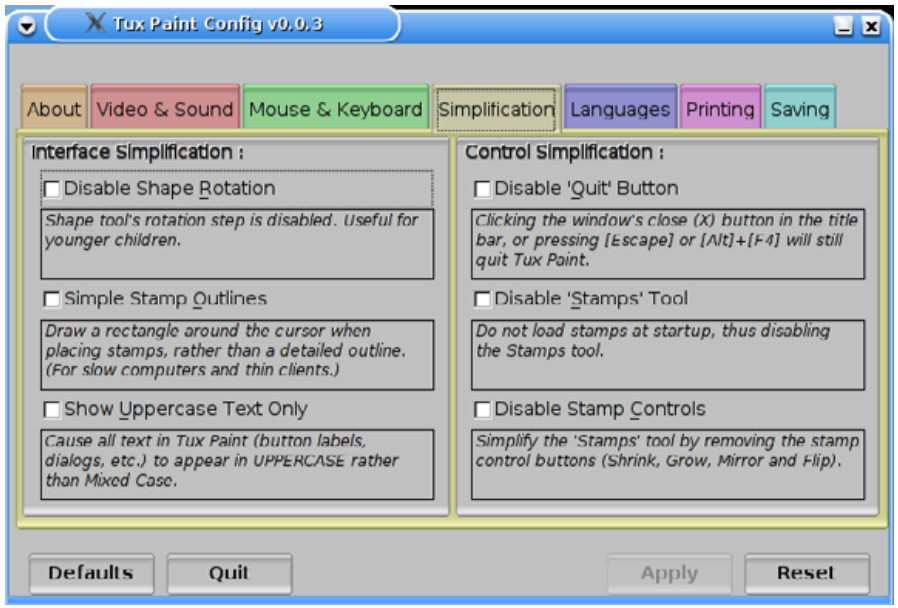

Figure 1. Tux Paint Conifg Dialog

Figure 2. Tux Paint's Shape Tool

ADVANCED FEATURES

Anyone who ever has used a paint program will feel at home with Tux Paint's fundamentals. You choose a colour and one of several tools (Line tool, Text tool, Paint tool and so forth), a brush size and shape and a colour. You can erase mistakes with the Eraser tool, and last-minute design changes are easy with the Undo and Redo buttons, or you can scrap the project entirely with the New button. You can print the finished masterpieces with a single click—unless you disable printing, of course.

There are also a number of less basic features, a few of which may not be readily obvious, even to parents.

SHAPE TOOL

For the stickler who insists on perfect polygons, the Shape tool provides outlines and filled shapes like rectangles, triangles, ellipses and circles (okay, the circles aren't perfect). As with other tools, simply choose the shape and the colour and click. Follow the directions Tux gives to resize and rotate the shape (shape rotation is one of those features that you may want to disable for younger users).

MAGIC TOOL

When you choose this tool from the menu on the left, it opens a Magic menu on the right with a variety of special effects. Some, like Blur, Chalk and Blocks, are artistic effects. Others, like Fill, Mirror and Flip, work exactly like similar tools in any other paint program—fill an area with colour, reverse the image left to right and flip the image upside-down.

Each effect is labeled clearly with the effect name and an illustrative icon. Tux the Penguin, as usual, also provides useful instructions.

Figure 3. Tux Paint's Magic Tool

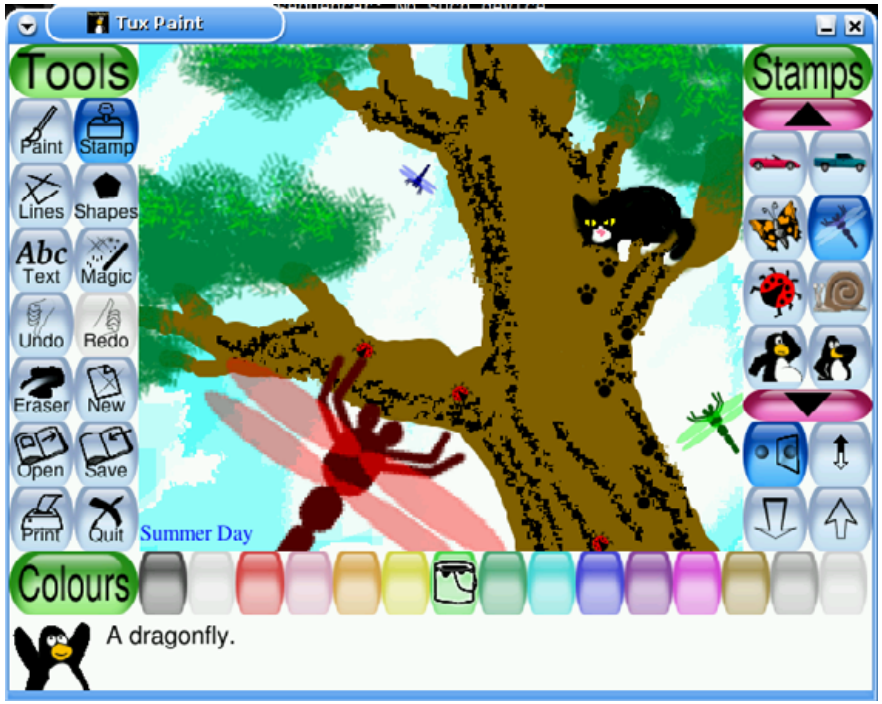

Figure 4. Tux Paint's Stamp Tool

STAMP TOOL

One of Tux Paint's best-loved features is its Stamp tool. Choosing this tool brings up the Stamps menu on the right, and a choice of more than 200 images to paste into the drawing, just like a sticker. However, Tux Paint's stamps allow greater freedom than real stickers. You can reverse stamps, flip them upside-down and make them smaller or larger. If the colour palette at the bottom of the screen becomes active, you can change the colour of the stamp too. For younger users, you can disable the resizing and the reversal/flipping functions with Tux Paint Config.

Because Tux Paint stamps rely on common formats, it is possible to edit existing stamps. Stamps are stored in the popular Portable Network Graphic (PNG) format, which can be loaded and edited in applications like The GIMP. Stamp sound effects, stored in WAV format, also can be edited. The description of the stamp and various settings (such as whether you can change the stamp's colour) are stored in plain-text files.

It is also possible to add entirely new stamps, though the technical details of this are beyond the scope of this article. The more ambitious user will find the process is covered extensively in Tux Paint's documentation.

OPENING AND SAVING FILES

Because the typical three-year-old has neither the interest in your filesystem nor the intellectual power to comprehend it, the process of saving, opening and deleting files has been simplified.

Unlike most other computer programs, there is no Save As stage, that is, Tux Paint does not ask what the file should be called or in which directory it should be saved. When you click the Save button, Tux Paint automatically

Figure 5. Open Existing Images with Tux Paint

assigns a filename to the picture and saves it in PNG format.

You can click the Open button to bring up a mini-graphical file browser within the program. All previously saved pictures are displayed as thumbnails (strictly sans filename). You can delete or load any file from this browser.

Like any other file, you can access a Tux Paint picture from other programs, so you can e-mail the latest masterpiece to grandma or splice it into a text document and send it to her the old-fashioned way. By default, Tux Paint saves to the .tuxpaint/saved folder in the user's home directory. If it is prohibitively difficult to access hidden files, the default location can be changed using Tux Paint Config.

DRAWING ON PHOTOS

It is possible to import pictures into Tux Paint, as well. However, because Tux Paint uses a fixed canvas size and stores its pictures in PNG format, images first must be converted to PNG format, scaled and cropped, and put where Tux Paint can find them. Fortunately, there's a tool that comes with Tux Paint to do this for you.

The command-line tool, tuxpaint-import, takes a list of images (which can be in almost any format) and makes copies of them inside Tux Paint, in the appropriate size and shape.

You even can do this from the file browser in Konqueror by selecting the file(s) you want to import into Tux Paint, right-clicking on it and selecting Open With→Other... in the menu that pops up. Simply type `tuxpaint-import` and click OK.

The next time you click the Open button in Tux Paint, the pictures should be available. And remember, these are copies, so your originals are safe!

THE FUTURE OF TUX PAINT AND YOU

Tux Paint's development is ongoing, so it keeps getting better and better. New features already have been created for the next release, including a number of new Magic tools, faster startup time, support for larger screen sizes, an improved colour palette and translations to six additional languages.

Tux Paint fans are encouraged to pitch in with suggestions, bug reports, code, translations, new stamps and so forth, on Tux Paint's two mailing lists—one for Tux Paint developers (technical and code-related talk) and one for parents and teachers. (See http://www.newbreedsoftware.com/tuxpaint/lists for details and to subscribe.)■

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