Pencil2D v0.6.0

Technical Whitepaper

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Abstract: This technical whitepaper presents an overview of the features of Pencil2D v0.6.0 and its benefits to artists, web designers, graphic designers, and animators.

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About Pencil2D

Graphic drawing and animation has long required expensive software packages that devour computer memory and sometimes require a monthly or yearly subscription. Many even require installing multiple programs that work together.

Popular Adobe programs like Animate (formerly Flash Pro), After Effects, and Photoshop are complex and take time to master. It's difficult to begin using these programs without watching a series of long tutorials or taking training courses, which require more time and even more money.

Beginner and independent artists need an affordable, simple solution that puts 2D drawing and animation at their fingertips. Pencil2D is a free, open-source application that provides many features and benefits of more expensive software in a user-friendly package. This basic program provides quick and easy tools that anyone can use to create 2D drawings and animations like the pros without the long learning curve and high price tag.

Costs of Commercial Animation Software vs. Pencil2D

Application	Price
Adobe Animate, After Effects, or Photoshop	Creative Cloud subscription: $19.99 per month/$239.88 per year per application or $49.99 per month/$599.88 per year for all applications (adobe.com)
Toon Boom Harmony	Desktop Subscription: $23 to $109 per month/$180 to $876 per year (toonboom.com) Perpetual License: $375-$1,975 (toonboom.com)
TVPaint	$177.62 to $1480.13 (tvpaint.com)
Pencil2D	FREE (pencil2d.org)

Time Required to Learn the Basics of Commercial Animation Software vs. Pencil2D

Application	Estimated Learning Time for Basic Use
Adobe Animate	28-35 hours (flashkit.com)
Adobe After Effects	4-6 months (reddit.com)
Adobe Photosop	20-30 hours (sweetmonia.com)
Toon Boom Harmoney	23 hours (learn.toonboom.com)
TVPaint	1-5 days (tvpaint.com)
Pencil2D	5-10 minutes (youtube.com)

Features of Pencil2D

Draw 2D Images

Create 2D drawings with Pencil2D's bitmap and image layers, drawing tools, and pressure response feature.

- **Image Layers:** Pencil2D provides both a bitmap and graphic image layer, so you can either create a rasterized bitmap image or scalable vector image.

- **Drawing Tools:** Drawing tools include a pencil for sketches, a pen and paintbrush for thicker strokes, a paint bucket for color fills, and a smudge tool so you can smear or blur part of an image. The tools are similar to those used in other drawing and animation programs, so artists familiar with these programs will have less of a learning curve.

- **Pressure Response:** Pencil2D's drawing tools respond to pressure, which makes them ideal for using a stylus on a drawing pad or tablet. If you're not using a stylus, you can adjust the pressure manually and still take advantage of this unique feature.

Create 2D Animation

Animate your 2D drawings with Pencil2D's timeline, camera layer, onion skinning, and sound layer.

- **Timeline:** Add keys to create frames of animation on the timeline and bring your drawings to life.

- **Camera Layer:** Use the camera layer to move the canvas and add another layer of animation.

- **Onion Skinning:** Use onion skinning to follow along with your frames and create picture-perfect animation.

- **Sound Layer:** Add sound to your animation with Pencil2D's sound layer. Import audio files to add music and sound effects to your frames.

Importing

Import images, animations, and palettes to add drawings and frames of animation and edit them in Pencil2D.

Compatible File Types

- Image files (PNG, JPG, TIFF, BMP, GIF)

- Animated GIFs

- Palette files (XML)

Exporting

Export your 2D drawings and animations as images, videos, or animated GIFs.

Export File Types

- Image files (PNG, JPG, BMP)

- Video files (MP4, AVI)

- Animated GIFs

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To learn more about Pencil2D, visit www.pencil2d.org.