Anime Studio Pro vs. Toon Boom Studio
Feature Details List

Toon Boom Studio and Anime Studio Pro are two animation based software applications designed to get similar results but their workflows are completely different from one another. Toon Boom Studio is a software application focused on frame-by-frame animation and has some tools to make the frame-by-frame process easier. These tools include basic bone rigging and layer animation. The concept behind Toon Boom Studio is to be able to create simple “cut-out” characters made of several pieces and combine them with frame-by-frame animation.

On the other hand, Anime Studio Pro is a software focused on powerful bone rigging and point animation, with tools to complement those features including: particles, effects and frame-by-frame animation tools. Anime Studio Pro goes beyond creating simple “cut-out” animations, it allows for the creation of complex digital marionettes and puppets full of controls that are ready to animate. These features make Anime Studio Pro more comparable to 3D software applications rather than classic animation applications. And it is for these interesting features that Anime Studio Pro is unique in the 2D animation market.

Keys

<table>
<thead>
<tr>
<th>AS</th>
<th>Anime Studio feature</th>
<th>TB</th>
<th>Toon Boom Studio feature</th>
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</table>

Standout Anime Studio Pro Features

- Basic Bone Rigging
- Advanced Bone Rigging
- Frame-by-Frame animation
- Reference layers
- 3D workspace
- Bones can bend vectors and images
- Build a Skeletal Rig for a character with the following types of control: Point & Layer Binding, IK, FK, Control Bones, Bone Dynamics, Bone Strength, Quick linking, Angle Constraints, and Physics influenced Bones.
- Smart Bones reduce distortion around character joints by linking adjustment morphs to the bone.
AS  Smart Bones includes many other uses like setting up bones as control levers for other bones or parameters, think Maya Driven Keys
AS  Smart Bones can control a pre-built head turn, create a dial for eye blink control and combine with other smart bone controls
AS  Smart Bones can store any kind of layer animation, making able to control very complex animation by just rotating a single bone
AS  Physics
AS  Simulated Physics generates realistic impacts and dispersement with a large variety of parameters to dial in results.
AS  Patch layers let you blend two layers together around a joint. (Toon Boom makes you do this manually)
AS  Adjust and animate thickness of line width with more control on a per point basis using the Line Width Tool
AS  Brushes to give vector layers a natural look
AS  Magnet mode allows you to adjust and influence multiple points on a layer at once
AS  Motion Tracking allows you to track elements of imported videos
AS  Vector Point Animation provides a powerful way to animate and edit shapes quickly
AS  Optimally leverage hardware resources with 64-bit architecture
AS  Poser Scene import allows for editing parameters and pose of rigged 3D figure directly in Anime Studio

General

AS  TB  Create resolution-independent scenes combining vector and bitmap animation
AS  TB  High resolution compositing engine with 16 bit per channel bitmap rendering
AS  TB  OpenGL accelerated true space environment for accurate multi-plane camera setup and easy depth positioning
AS  TB  Contextual user interface supporting docked or floating View windows
TB  Freely dockable windows to personalize the interface
AS  TB  Several predefined Workspaces
AS  Open several files at the same time
AS  TB  Automatic updates to all View windows when changes are made to drawings
AS  TB  Supports reusable symbol elements and templates stored in library
AS  TB  Unique real-time anti-aliasing technology in working canvas
AS  Reference a layer, duplicating all it’s current and future attributes
TB  Rapid management of scene structure on large projects with Element Manager
TB  Full screen view

Digital Drawing

AS  TB  Frehand tool with Smooth options
AS  Easy to edit and animate vector strokes
AS  Option to Auto-weld, Trim start, Trim end, Auto Stroke, Auto Close, Auto fill and Merge strokes with the Freehand tool
AS  Add point tool to draw clean lines and shapes
AS  Easily modify and animate variable line widths
AS  Curve profile Tool creates additional curves that define the profile of a shape
AS  Curvature Tool adjusts smoothness of the curve on selected points
AS  Layer Selector tool lets you quickly find and edit layers by clicking to select directly in the scene
AS  Scatter Brush lets you paint from a base set of vector layers populating scenes with your art
AS  Magnet Tool moves or effects points within its region allowing for quick and easy multiple point adjustment
AS  Stroke Exposure tool allows for the stroke of a path to be exposed over time creating effects like handwriting
AS  Animate Strokes script to automatically create an auto sketching animation
AS  Follow path Tool allows you to assign any layer to follow (and optionally be bent) by a path in your scene
TB 4 layers available per drawing (Overlay, Line, Color and Underlay)
AS TB Pencil tool to draw centre line stroke
AS TB Brush tool to draw pressure sensitive contour line strokes with when using a tablet
AS TB Eraser tool available for all vector drawing
AS TB Access Text tool with multiple fonts, styles and layout options
TB Convert centreline to contour line and vice versa
AS Use different texture brushes to create other line styles such as pencil on paper, watercolour, etc
TB Eraser tool supports simultaneous bitmap texture and vector editing
AS TB Optimization possibilities when using textured lines and colour areas
AS TB Multiple drawing modes for drawing behind or painting existing strokes
AS TB User-friendly navigation in your drawing to simulate panning, zooming and rotation
AS TB Access a full range of editing tools (cut, copy, paste, scale, rotate, stretch, skew, flip)
AS TB Access a comprehensive set of tools for editing contours (contour editor, smooth)
AS TB Use the light table and multi-level onion skinning features with flexible display available such as outline or fade
AS TB Display bitmap images and/or QuickTime movies for rotoscoping
TB Slice drawings with Freehand or rectangle Cutter tools
AS TB Use the Dropper tool to quickly find a color in a palette
AS TB Use the Ellipse, Line, Polyline or Rectangle shape for rapid construction of geometric elements
AS TB Automatically fill closed shapes with solid colour, gradient or texture
AS TB Flatten vector strokes to merge and remove overlapped lines
AS TB Use Optimize to flatten vector strokes while preserving the visual aspect
AS User customized grid sizing with Square, Polar or isometric choices.
AS Add notes to the timeline
AS Colorize keyframes to identify them from other parts of the animation
AS TB Instantly reposition drawings from all cels for immediate image manipulation
AS Store brushes in the Pen Style library
AS TB Control contour line optimization for easy modification later on
AS TB Adjust brush size on-the-fly
AS Change a shape's perspective with Perspective tool
AS TB Shift and Trace your drawings when drawing
AS Create complex reusable Styles, supporting effects, line width, color, alpha, etc.

Palette and Color

AS TB Access 16 million colors
AS TB Control transparency for each color
AS TB Independent color pots for Pencil, Brush and Fill tools
AS TB Create an unlimited number of palettes
AS TB Create an unlimited number of colour pots per palette
AS TB Fill color pots with solid colors, gradients or bitmap textures
AS TB Supports Linear or Radial gradients
AS Also supports reflected and Angle Gradients
AS TB Edit Gradient/Texture tool to edit scale, rotation and hot points
AS TB Clone palettes to preserve dependency
AS TB Duplicate palettes to copy all the colours and have them independent
AS TB Tint colors palette for creating variations without recreating new palette
AS TB Multi Wheel colour picker with independent undo list
AS TB External palette support for collaborative workflow
TB Palette Tinting Mixer
TB Raster Paint features for doing Frame by Frame animation
AS Fill and Stroke Effects Shaded, Soft edge, Halo, Gradient, Image Texture, Drop Shadow, Crayon, Splotchy, & Spots
AS Save Styles from a document and import them into another
Layer Settings

AS   Animated Layer Ordering
AS   Rotate to face Camera with a variety of options
AS   Layer Outline add a colored stroke to the layer perimeter
AS   Noisy vectors makes your shapes look varied and like they have been drawn by hand
AS   3D extrude vector layers with a variety of options.
AS   Layer Comps allow you to export multiple layers individually with one click or toggle between alternate sets of layers
AS   Assign colors to layers in the layers palette, helping you keep track of layers that relate to each other in some way
AS   Add animated effects to an entire layer, such as Blur, Shadow, Shading, Pixelate, Noise, etc

Libraries

AS   TB   Create a library of animated elements and animated sequences
AS   TB   Store multiple elements with their own drawings
AS   TB   Create a library of effects
AS   TB   Store movements along with their own functions and transformations
AS   TB   Preview drawings in real-time
AS   TB   Swap drawings easily to manage media assets
TB   Share stored templates with multiple users
AS   Use the same character -as Reference- in several files, updating all of them if the original character is modified

Animation

AS   FBX animation mode for videogames
AS   TB   Drawing layers have their own animation attributes
AS   TB   Easily create Additive cycles for continuos animation
AS   TB   Use Distribute to Layer tool to simultaneously distribute character parts to layers
AS   TB   Break Apart Script will distribute multiple shapes on one layer to multiple layers
AS   TB   Physics Engine to automatically create complex physics animation
AS   TB   Bone Dynamics engine to automatically animate secondary action
AS   TB   Use Multi-Keyframes Easing to easily adjust the velocity on multiple character parts
AS   TB   Use Transform tool to perform most animating editing features (move, rotation, scale, ...) with a single tool
AS   TB   Animate mode to create keyframes automatically when modifying attributes
AS   TB   Define interpolation methods (linear or stop motion) per attribute
AS   TB   Create your in-betweening using the morphing tools
AS   TB   Create natural-looking animation with Inverse Kinematics (IK) tools
AS   TB   Automatically generate lip charts and save time lip-synching characters to voice tracks
AS   TB   Position all drawing layers interactively
AS   TB   Create 3D trajectories for elements and camera
AS   TB   Auto-calculate layers’ perspective relative to camera position
AS   TB   Create complex movements with a hierarchy of elements and cameras
AS   Extend layers in 3d maintaining its visual size for easy parallax
AS   TB   Preview layers and camera moves in real-time
AS   TB   View multi-plane perspective in real-time
AS   TB   Click and drag positioning of layers and cameras
AS   TB   Animate layer and shape order
AS   TB   Work simultaneously with multiple aspect ratios
TB Pan and Scan in real-time using multiple aspect ratios
AS TB Rotate, scale, translate and skew multiple drawing layers at the same time
AS TB Use Drawing substitution to swap cells easily on-the-fly
AS TB Rotate layers or cameras in all three axes

Timeline

AS TB Display Drawings, Pegs, Effects, Camera and Soundtrack
AS TB Modify all keyframable layers’ values directly in the timeline
AS TB Control layer attributes such as onion skin, visibility, colour and name
AS TB Perform cel swapping or editing
AS TB Organize layers by hierarchy
AS TB Use sound scrubbing on a frame-by-frame basis
AS TB Effortlessly create new motion paths and animated drawings
AS TB Drag and drop keyframes, layers, motion paths and layer transformations
AS TB Display effects and their keyframes
AS TB Display Audio waveforms
AS TB Copy keyframes and paste them relatively to the same layer or any else
TB Xsheet Features that emulates a traditional exposure sheet
AS TB Define custom colours for easy identification of layers
AS Editable Motion Graphs provide maximum control of your animations
AS Edit motion curves with Bezier handles directly instead of relying on automatic ease-in and ease-out
AS Cycle animation between a set of keyframes easily
AS Assign colors to keyframes in the timeline, to help keep track of animation sequences that relate to each other
AS Manipulate keyframes in several powerful ways (Easily cut & paste, drag, region select, change interpolation, Color code, compress and extend selected keyframes) making the timeline work for you
AS Key Frame Hold Duration allows you to hold the duration of a particular key frame as long as you want
AS Insert Actions or Action references into the main timeline
AS Adjust your Intervals for new Keyframes, allowing to animate in 1s, 2s, 3s or in any other interval
AS Quickly change default interpolation for new keyframes or right click to change existing keyframe interpolation
AS Add special attributes to keyframes, such as Stagger, to easily create shivering heavy movements
AS Special keyframe interpolations, such as Bounce and Elastic

Effects

AS TB Use the Effect Blending modes to create ambiance: Normal, Multiply, Screen, Lighten, Darken, Difference, Add, Subtract, Invert, Overlay, Blur, Directional Blur, and Motion Blur
TB Deformation Effects: Glue, Refract, Scale, Line Art, Colour Art, Matte Resize
AS TB Pixelate and grain effect
AS TB Preview the Transparency, Colour Scale, Colour Override effects in OpenGL view
AS Expandable via lua Scripting
AS Additional script based effects for Layers, particles, camera and warping

Scripting

AS Use ready-made scripts to automate tedious workflow issues or create your own scripts
AS Run scripts from within the interface
AS User Interface, Effects Scripts and Tools are built in Lua scripting language and can be adjusted, as well as new effects written and added.
AS Modify the tools to adapt them to your workflow or create new ones via Lua scripting
Compositing

AS  TB  Change output resolution without rescanning or repainting
AS  TB  Scale vector artwork infinitely without pixelation
AS  TB  Use any output resolution and aspect ratio
AS  TB  Enjoy efficient compositing with HD images
    TB  Use the external node to perform additional effects with external programs
AS    Realtime Media Linking allows you to update media elsewhere, save it and it
        automatically updates in Anime Studio
    AS  TB  Control line thickness when zooming-in to work on Pencil lines
    AS  TB  Create mattes directly in the Frame View
    AS    Easily create group layers for quick masking of layer sets
    TB    Storyline option to edit a video made of several scenes
    TB    Add transition effects between scenes

Import

AS  TB  Import Bitmap TGA, PSD, PNG, JPEG, BMP
    TB  Import YUV, PAL, SGI
AS  TB  Import PSD and maintain independent layers
AS    Changes made in Photoshop are automatically updated in the imported file in Anime Studio
AS  TB  Import Image Sequence
AS    Import QuickTime Movie
    TB  Vector TVG, SWF, PDF, AI
AS  TB  Import Vector SVG, AI8, EPS
AS  TB  Audio MP3, WAV, AIFF
    TB  Register peg holes automatically
    TB  Scan your drawings in black and white or greyscale
    TB  Auto-assemble your drawings for paint
    TB  Color scan pre-coloured drawings and backgrounds
    TB  Auto-splice pan cels (characters and backgrounds)
    TB  Capture nuances of hand-drawn lines (using true-line vectorization and line texture)
AS  TB  Preserve original line textures such as pencil, crayon or chalk
AS    Automatic trace to transform images to vector
    TB  Use advanced cleaning tools to remove dirt and hair easily
AS  TB  Import OBJ 3D models and apply a variety of parameters to create specific styles
AS  TB  Import Poser Scene (3D Scene with animation intact)

Render and Export

AS    Export characters and props to Unity and other game Engines
AS    Export to 3D formats, such as OBJ and FBX
AS  TB  Render to any resolution and aspect ratio such as NTSC, PAL, HDTV (Multi Threading and Image
        management)
AS  TB  Supports Field rendering for interlaced format
AS  TB  Export video to QuickTime Movie
AS  TB  Export vector animation to SWF with effects
AS  TB  Export image sequence TGA, PSD, PNG, JPG
    TB  Export image sequence SGI, IFF Render multiple format and elements at the same time
AS    Export as animated GIF, with several options for palette, dithering, etc.
AS    Export as Stereoscopic 3D Movie or image sequence (Red/bBlue, Side by Side( for YouTube) and Cross
        Eyed )
AS  Batch Export Animations in above formats as well as using layer comps for compositing scene elements elsewhere
AS  Render with a set of global render settings