



**Silhouette 6 What's New**

## ABOUT THIS GUIDE

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July 10, 2017

### About Us

SilhouetteFX brings together the unbeatable combination of superior software designers and visual effects veterans. Add an Academy Award for Scientific and Technical Achievement, 3 Emmy Awards and experience in creating visual effects for hundreds of feature films, commercials and television shows and you have a recipe for success.

# WHAT'S NEW IN 6.1

## Features

### Auto Paint > Paint History Custom In/Out Enhancement

To provide a faster way to set custom in/out points in the Auto Paint > Paint History, arrows were added to each numeric field which enter the currently parked frame when clicked.

### Copy Alpha to RGBA Shape Preference

A Copy Alpha to RGBA shape preference was added.

### MultiFrame Range Improvement

When using MultiFrame and adjusting which keyframes were affected, there was no feedback to show if you were just tweaking the in/out point or sliding the whole range. Now, the MultiFrame range is displayed in the status bar while it is being edited.

### Nuke 9+ Shape Exporter Enhancements

There are a number of enhancements to the Nuke exporter for proper rendering of shapes, feathers and mocha perspective transformations in addition to increased accuracy. Also, Alpha values can be repeated in the RGB channels as an export option.

#### Notes:

- 1 If there are no mocha perspective transformations, the handles of feathers and open shapes will render correctly in Nuke.**
- 2 If there are mocha perspective transformations:**
  - **The output is correct but feather and open shape handles will appear to be very long. This is a Nuke user interface bug.**
  - **In Nuke, if a feather point is added using the E key, the feather point will be far away and have to be dragged back to the desired location. This is another Nuke user interface bug.**

### Read formats.xml From Outside Of Resources

A SFX\_FORMATS\_PATH environment variable was added which can be the complete path to an xml file containing the desired formats.

## Scripting

### Create And Select A New Project Via Scripting

Added a way to create a new project with a complete bundle name and then have the UI select it.

syntax:

```
project = Project(bundle_path)
activate(project)
project.save()
```

### object\_renamed hook

For when objects get renamed, added object\_renamed hook and the callback gets the object.

### Shape Import Using Python

Shapes can now be imported using Python.

## Timeline Frame Range

The Timeline now always shows the full session range with the work range displayed using a gray bar at the top of the Timeline. The work range can quickly be adjusted by:

- **Ctrl-drag the ends of the work range bar to change the start and end.**
- **Ctrl-drag the work range bar to slide it forward and back while maintaining the duration.**
- **To center the timeline on the current frame, click the top left corner of the Timeline above the object labels.**

## Timeline Markers

The Timeline context menu now has a Marker option which allows for the creation, editing or deletion of markers. Timeline Markers are a handy way of placing notes at specific points in time. Markers are displayed as light blue squares at the top of the Timeline.

When you right-click in the Timeline and select Marker > Create/Edit, a dialog box opens where you can enter, change, or clear text. When you enter text and click OK, a marker is displayed.

## Visual Warning for Paint > Clone > Grade/Filter Controls

The Paint > Clone > Grade and Filter controls are hidden in tabs so we have added a visual indicator in the tab if the controls have been modified.

## Changes

### Clone Reset Behavior

Previously, Clone Reset only reset the Transform controls. Now, all clone parameters, including Grade and Filter parameters are reset.

### Composite Resolution

Previously, the DOD (Domain of Definition) was determined by the background clip of a composite. Now, the union of the foreground and background determines the DOD.

### Point Tracker > Smooth Behavior

In the Point Tracker, the Smooth option will no longer be available if there are no visible selected trackers. Smoothing will only smooth visible trackers.

### Point Trackers Within Layers

Silhouette now allows Point Trackers to be added and tracked within layers.

## Bug Fixes

### Alpha Overlay Was Affected By OCIO Viewer Controls

Alpha and color overlay are no longer affected by the viewer OCIO controls.

### Cache Display Not Working - Windows

The Cache Display would not work on Windows in certain situations.

### Import Footage With No Project Crash

When there was no project, it was possible to double-click in the Sources window to import footage which caused a crash.

### Missing Frames - Macintosh

In some cases, frames would display as black after opening a project.

## Nuke Tracker Importer Problem

mocha tracks pasted into the Nuke tracker did not import into Silhouette.

## Panning and Beeping

Holding the Space key and panning could cause beeps to occur during auto-repeat.

## Session > New Session Crash

When there was no project, it was possible to select Session > New Session which caused a crash.

## Tablet Problems - Macintosh

Some Mac users were experiencing strange tablet behavior in the Roto node.

## Text Box Focus Behavior

If the cursor was in a text field and the cursor was moved into any major view, it would steal the focus. You know have to press the **Tab** key to leave the focus of a text field.

## Timeline Keyframe Paste Problem

Pasting keyframes from two shapes did not paste the proper keyframes into the first shape.

## Timeline Not Displaying Tracks At Startup

In some instances, the Timeline did not display tracks at startup.

## zMatte Crops Output When Deartifact Was Enabled

zMatte's Composite output was cropped to the foreground when Deartifact was enabled.

# WHAT'S NEW IN 6.0.33

## Features

### EXR Multi-View

If the EXR output extension is `sxr`, the EXR module will write out a multi-view file. Otherwise, it writes a multi-part file.

**Note:** This will only work if there are only left and right views.

### OFX

Silhouette now supports RE:Vision Effects Twixtor and ReelSmart Motion Blur OFX plug-ins.

### Roto Node > Color Comp View Mode

A Color Comp view mode has been added to the Roto node. The shortcut key is 4.

### Save Paint History With Auto-Saves

The Paint history is now saved along with the auto-saves. A rotating list of backup paint histories are stored in the respective paint data directory so you can choose the one you want.

### View Paint (Shift-0)

When View > Paint is selected in the Paint node, Shift-0 displays paint strokes over black.

## Changes

### Linux - Python 2.7

Silhouette v6 requires Python 2.7 with UCS4 support. If you are running an older distribution, we have packaged Python 2.7 as a convenience. To enable the internal Python (i.e. if you don't already have Python 2.7), uncomment the `PYTHONHOME` line in the `run.sh` script.

## Fixed Bugs

### DVE Crash

The Transform node could crash in when used in conjunction with certain nodes.

### EXR Compression Parameter Display Problem

When you added an Output node, the custom module parameters were not created until you actually selected the module from the list again.

### Paint and Match Node Crash

Silhouette would crash if a Match node was used before the Paint node.

### Pasted Nodes Did Not Get A New Label

Pasted nodes had the same name as the original. They are now incremented by 1.

### Render - Output Directory Variables

Variables were not expanded in the path portion of the output path. For example, an output path of "\$ (HOME)/output" was not properly expanded with the HOME variable replacement.

## Scripting

### Cloning a Project Returned The Wrong Type

Cloning a project via scripting returned an Image object instead of a Project object.

### Object\_Created Did Not Get Proper Type

In the object\_created hook, the created object had the base Object type but not the subclass type.

### User-Defined Properties Should Remember Their Positions

If user-defined properties were inserted between default properties, they loaded back in at the end.



## WHAT'S NEW IN 6.0.28

### Fixed Bugs

#### Nuke 10 Tracker Import

Nuke 10 trackers will now import into Silhouette. In addition, trackers with a start frame other than 1 will now import into Silhouette as long as the Silhouette start frame matches the Nuke start frame.

#### Output Multi-Part Node Missing on Windows

A recent update mistakenly removed the Output Multi-Part node on the Windows version.

#### Temporary Paint File

We create a temporary paint file called sfxpaint.dat used for undo events. The file is only deleted when Silhouette is closed and could get quite large. In addition to deleting the temporary paint file when Silhouette is closed, it is also now deleted when the project is switched.

## WHAT'S NEW IN 6.0.27

### Fixed Bugs

#### Renders 1 Frame Short

A recent update caused the last frame of a sequence to not be rendered. This also affected rendering the current frame.

# WHAT'S NEW IN 6.0.26

## Features

### Scriptable Custom Button Property

A custom button property can now be added with a script callback function.

## Changes

### Scripting -> object.properties Attribute Is Now A Normal Python dictionary

Any scripts that iterated over object properties should be updated.

## Fixed Bugs

### Holdout Composite Crash

Holdout Composite would crash if only one input was connected.

### Linux Node Crashes

A compiler error in a recent Linux update caused crashes with the following nodes: Bump Distort, Chromatic Aberration, Keystone, Lens Distortion, Morph. Roto Blend, Scatter and Turb Distort.

### Renderer Did Not Support A Specific Frame Set

The command-line renderer -range option did not work.

## Scripting

### Added Proper Indentation in Code Editor

Tab and Shift-Tab now properly indent (and un-indent) blocks of code.

### Adding An Empty Group Property To A Node Caused A Crash

When adding a custom group property with no children to a node, the property view crashed.

## **node.properties Did Not Act Like A Real Dictionary**

We originally created our own dictionary interface to the internal prop-list, but instead rewrote it to use a normal Python Dict and now it behaves as expected.

## **X-Ray Render Problem**

The X-Ray node was not rendering correctly.

## WHAT'S NEW IN 6.0.25

### Features

#### Linearize Images In Mocha Pro

If you are using rec709 8-bit images, enable the Mocha > Linearize Images In Mocha Pro preference and they will look correct in the Mocha user interface.

### Fixed Bugs

#### EXR Alpha Automatically Opaque

EXR files without an Alpha channel automatically had a an opaque Alpha channel once imported into Silhouette.

#### Render Options > Output Start Frame Not Obeyed

The Output Start Frame number was not obeyed in some cases.

## WHAT'S NEW IN 6.0.24

### Fixed Bugs

#### Roto - Nuke 9+ Export Problem With Nested Transforms

In some cases, nested transforms were not being exported correctly to Nuke.

## WHAT'S NEW IN 6.0.23

### Fixed Bugs

#### Roto > Input Alpha and Motion Blur Crash

Fixed an issue that caused sources with input alpha to crash when using Roto shapes with Motion Blur.

## WHAT'S NEW IN 6.0.22

### Features

#### mocha Pro OFX v5.2.1 Plug-In Compatibility

Silhouette is now compatible with the mocha Pro OFX v5.2.1 plug-in.

### Fixed Bugs

#### Linux Centos 7 Error

On some Linux Centos 7 systems, Silhouette would fail to start with the following error: The application failed to start because it could not find or load the qt platform plugin xcb.

#### Roto - Copy/Paste Order Of Roto Objects Not As Expected

In certain projects, the order of pasted objects did not match the original selection.

#### Roto - Input Alpha Motion Blur Problem

The input alpha was not computed properly when Motion Blur was enabled and caused corruption.



## WHAT'S NEW IN 6.0.21

### Features

#### User Interface > Trees > Connections Preference

A User > Interface > Trees > Connections preference with Curved and Straight options was added.

### Fixed Bugs

#### Output Start Frame Wrong in Render Window

A modified Output Start Frame in the Render window was off by one the next time you opened the Render window.

#### sfxcmd -info Crash

The sfxcmd -info command-line could crash when running scripts.

#### Undo Crash With Non-Keyframed Splines - Linux

Fixed a Linux compiler bug which would cause a crash when undoing a change to a non-keyframed spline.

#### Copy Node Naming Error

Copying nodes resulted in both nodes getting the same name.

## WHAT'S NEW IN 6.0.20

### Features

#### Action > Time > Shift Source Time

A source sequence can be shifted in time by inputting both the source frame and the destination session frame. This automatically calculates and sets the Source node's Time Shift parameter.

#### Render Only Alpha Parts to EXR

Silhouette now supports rendering alpha only multi-part files.

### Scripting

#### Add User-Defined Property Groups

Property groups previously could not be defined. A Property with no value is now a group. Info dictionary attributes are "expand" (True|False). To put a property into the group, prefix the property name with <group\_name> and dot. For example, group.property.

#### Order Actions

You can now control the order of Actions and Action menus. Action has a new "order" argument that can be set to an index. The default is -1, which means to use alphabetic order (the default). Actions can also be placed in the File and Edit menus by specifying the optional "root" argument with the string "File" or "Edit".

## Fixed Bugs

### EXR Render Crash - EXR Parts With Same Name

SFX crashed when trying to render multiple EXR parts with the same name.

### Mocha Floating License Not Returned Until Exit

Instead of checking in a mocha floating license when leaving the mocha tab, it was not returned until Silhouette was exited.

### Roto Node > Blur Crash

Silhouette would crash when the Roto node's blur was adjusted.

## WHAT'S NEW IN 6.0

Silhouette v6 is a fully featured, GPU accelerated compositing system. Its standout features are award winning rotoscoping and non-destructive paint as well as keying, matting, warping, morphing, and a total of 136 different nodes - all stereo enabled.

## Features

### Trees and Nodes

#### Trees

The power of Silhouette lies in the Trees window where your effects are built. A tree is a series of clips and nodes, such as color correction, image processing and composite nodes, plugged together to create the desired effect. The tree is grown by adding clips and nodes in any order. The ability to view any node while editing another allows for very complex composites that can be set up and rendered in one pass.

#### Nodes

Silhouette is now a GPU accelerated node based system with 137 different nodes used for various functions. Located in the Nodes tab at the bottom of the screen, nodes are grouped into the following categories:

#### Color

Black and White, Chromatic Aberration, Color Correct, Defringe, Develop, High Contrast, Invert, Kelvin, Low Contrast, Match, Polarizer, Printer Points, Selective Color Correct, Shadows/Highlights, Telecine, Tone Adjust, Vignette.

#### Composite

Alpha to Color, Color Paste, Composite, Copy, Drop Shadow, Edge Composite, Fade Color, Grain Composite, Holdout Composite, Light Wrap, Math Composite, Mix, Non-Additive Mix, Optical Dissolve, Premultiply, Slap Comp, Swap Channels, Switch Matte, Unpremultiply.

## Diffusion

Center Spot, Depth of Field, Diffusion, Double Fog, Fog, Halo, Net, Rack Focus, Silk, Split Field.

## Filter

Blur, Bump Shade, Deartifact, Deband, Deblock, Deflicker, Defog, Degrain, Despeckle, Detail, Displace, Edge Detect, Grain, Mosaic, Scatter, Scratch, Sharpen.

## Film Lab

Bleach Bypass, Cross Processing, Film Stocks, Grunge, Overexpose, Three Strip, Two Strip.

## Image

Checkerboard, Color, Color Bars, Depth, Fractal Noise, Grid, Linear Gradient, Merge Views, Null, Output, Output Multi-Part, Paint, Radial Gradient, Roto, Roto Blend, Split Views.

## Key

Color Suppress, Difference Matte, Matte Repair, Power Matte, Screen Smoother, zMatte.

## Light

Glow, Glow Darks, Glow Edges, Rays, Reflector, Relight, Star, Streaks.

## Silhouette

Depth, Morph, Output, Output Multi-Part, Paint, Power Matte, Roto, Roto Blend, zMatte.

## Special Effects

Cartoon, Color Infrared, Color Shadow, Day for Night, Harris Shutter, Infrared, Looks, Night Vision, Pastel, Pencil, Texture, X-Ray.

## Time

Retime, Time Blur.

## Tints

Color Gradient, Color Spot, Colorize Channel, Colorize Gradient, Dual Gradient, ND Gradient, Photographic, Radial Tint, Split Tone, Sunset, Tint.

## Transform

Camera Shake, Crop, Flip, Flop, Keystone, Resize, Tracker, Transform.

## Warp

Bump Distort, Lens Distortion, Morph, Turb Distort.

## Presets

Visual presets for most nodes.

## Featured Nodes

### Roto

#### Feathering

##### Open Shape Feathering

Opens shapes can now be feathered.

##### Per-Point Feathering

Feathering is now implemented for every point in the shape so as to be compatible with Nuke.

#### Open Shape Cap Style

A Cap Style parameter has been added for open shapes. You can choose from Flat or Round end cap styles.

#### Nuke 9+ Exporter

Silhouette will now export open/closed shapes, the shape feather, opacity, blend mode, invert, motion blur, outline color, fill color, shape blur (inner and outer blur only), and visibility. The layer's blur, visibility and motion blur are also exported in addition to the node blur. You can optionally fully bake shape and transform data, convert opacity to Nuke Lifetime, and export the Silhouette project name.

#### Render Shape Outlines

Shapes in the Roto node can now be rendered as outlines over the image.

### Paint

#### Speed

Switching frames after painting is now instantaneous, even with large images, as a result of the frames being saved in a background thread.

## Trackers

Paint can now utilize Trackers from any node that produces them. Just connect the Objects output of any node that produces Trackers into the Paint node's transform input (colored yellow) located at the top right of the node. You then select which tracked layer to use from the Paint tab's Transform pop-up menu.

## ROI Compatibility

Paint is now compatible with ROI (Region of Interest) so you can paint on a much smaller area of a larger image.

## Clone

### Blur Aspect

Allows differing amounts of blur on the X and Y axis. Blur Aspect is along the X axis, so setting the aspect to 2 would be twice as much blur horizontally than vertically.

### Filtering

The Clone filtering has been improved for all filtering methods.

### On-Screen Controls - Corner-Pin

The mouse, pen/tablet or **Arrow** keys can now all be used to move corner-pin points after first selecting them with the **Ctrl(Win)/Cmd(Mac)-1,2,3** or **4** keys corresponding to the top left, top right, bottom right and bottom left corner points. Pressing **Ctrl(Win)/Cmd(Mac)-1,2,3** or **4** a second time deactivates the mode. This is useful when Interactive mode is disabled or when you are zoomed into the image.

### Obey Matte On All Inputs

The alpha of all incoming inputs can be used as an Obey Matte source.

### Drag Brush - Alpha Behavior

The Drag brush now draws into the alpha channel identically to the RGB channels.

## Depth

The Depth node contains a dedicated tool set for creating depth channels.

## Shape Gradients

Silhouette's industry leading rotoscoping and shape tools have expanded functionality in the Depth node. New shape parameters include depth and gradient control.

## Depth Tools

Alongside the powerful rotoscoping tools, the Depth node adds a number of depth tools that make quick work of common depth map tasks. The time-saving tools include Constant, Horizon, Ramp, Hall, Tunnel and an Alpha object which converts the alpha channel hooked into the Depth node's Alpha inputs into a depth map.

## Depth Preview

The Depth Preview window in the Depth node displays a 3D view of the depth map. It is very useful for visualizing the depth and placement of objects in 3D space. Clicking and dragging will move the image around in a perspective view.

## Roto Blend

The Roto Blend node smoothly blends the opacity of shapes together. This is very useful for creating depth mattes which can then be further manipulated in the Depth node.

## Tracker

Previously, the Tracker tool was only available in certain nodes. Now, a new Tracker node can be plugged into other nodes that contain trackable items so that they can directly make use of transformed layers.

## OFX

OFX plug-ins are now supported. At the current time, Genarts Sapphire has been qualified to run in Silhouette.

## Region of Interest

The ROI (Region of Interest) tool crops the image in the Viewer to a user defined size and can be animated. This is especially useful when you only need to work within a smaller region of a larger image as it will use less memory and process faster. If expanded, the ROI will display overscan pixels which can then be manipulated.



## Resolution Independence

Although Silhouette Sessions are a fixed size, sources of different resolutions can be used. Overscan areas of sources larger than the Session are never clipped and are accessible with either a Transform node or expanding the ROI (Region of Interest).

## Actions

### Batch > Rename

Renames selected objects to match the first selected object.

### Keyframes

#### Select All

Selects all keyframes.

#### Select Layer

Selects all layer keyframes.

#### Select Shape

Selects all shape keyframes.

#### Select Tracker

Selects all tracker keyframes.

### Select > Single Point Shapes

Selects single point shapes.

## Preload Frames

Source frames are automatically cached in a background thread. The amount of frames preloaded is controlled by a Cache > Preload Frames preference.

## EXR Enhancements

- EXR multi-part files can be rendered using the Output Multi-Part node.
- The EXR data window is fully supported and the ROI (Region of Interest) is saved as an output EXR data window.
- When creating a new session based on an EXR file, the session size will use the display window but the data window will appear in the proper place, and overscan is available.
- The metadata contained in EXR files is now passed through to the rendered file.

## Scripting

There are a number of scripting changes in v6. See the [Scripting Guide](#) for what's new.

## User Interface

### Curve Editor

The Curve Editor is a view mode in the Timeline that allows you to work with keyframe animations expressed as curves on a graph. It lets you visualize the interpolation of the animation.

### Preferences

#### Cache > Preload Frames

Controls how many source frames are preloaded into the cache.

#### Paint > Default Source

Sets the clone source default.

#### Shape > Hide Outlines During Edit

When activated, the shape outline is hidden when editing.

#### User Interface > Colored Timeline Tracks

Colors the timeline tracks the same as the Roto node's shape colors.

### Retina Support

The Silhouette user interface has been upgraded with Retina display support for Macintosh systems.

### Snapshot

Captures the image in the Viewer so that it can be compared with other nodes or Viewer modes using Toggle Snapshot, Vertical Split, and Horizontal Split snapshot modes.

### Timeline > Select All Keys

When hovering over a track, Select All Keys will select all keyframes for that track. If not over a track (empty area), it will select all keyframes in the timeline.

## Workspaces

Custom workspaces can be saved/deleted through the new Window > Workspace menu.

## Changes

### Composite > Background Color Preference Removed

The Composite > Background Color preference has been removed. Now, if you use only one input of a multi-input composite node and select View > Composite, the background color will default to black.

### Crop Node Now ROI

The Crop node has been converted to a ROI (Region of Interest) Viewer tool.

### Disk Cache Removed

As Silhouette has evolved to a more complex node based system, disk caching has been removed and replaced with a Cache > Preload Frames feature. See the features section for more information.

### Feather Tool Removed

The Silhouette v1-v5 Feather tool is no longer visible in the Toolbar as feathering now takes place in the Reshape tool. Projects with Silhouette v1-v5 feathering can be loaded and the old Feather tool will appear.

The feathering method used in Silhouette v1-v5 can still be used by enabling the Shape > Enable Legacy Feathering preference. This will force the feather tool to appear in the Toolbar. However, you will not be able to export the feathering data to Nuke as it is not compatible.

### Multiple Shape Selection & Bounding Boxes

Previously, the bounding boxes of all shapes in a multi-shape selection were displayed in Transform mode and was distracting. Now, only the combined bounding box is displayed.

### Node Inputs

The Inputs menu in the Viewer has been removed since node inputs are now hooked up within the Trees window.

## Node Outputs

Some nodes have multiple outputs. For instance, the Roto node has Output, Composite, and Channels outputs and the Paint node has Output and Paint Only outputs.

## Nuke Tracker Import

Silhouette now imports Nuke 8 and above trackers.

## Project Folder and Filename

The project folder and filename can now be named identically by setting the following environment variable: `SFX_PROJECT_IS_BUNDLE=1`

## Quicktime

Quicktime is no longer supported.

## Render Options Window / Output Node

The Output node is where you now specify the file name, file type, and channels to render. The Render Options window only deals with which nodes to render, frame range, resolution, field handling and whether to apply a region of interest.

## Render Shapes to Channels

The Render Shapes to Channels action has been removed as it can be achieved by using the Roto node's Channels output.

## Session Creation

- **The New Session dialog no longer has the ability to choose which nodes to add. The Nodes window is where you select the nodes you will be working with.**
- **There is a Session > Default Type preference that lets you choose from Composite, Roto and Paint session types. When set to Roto or Paint, a Roto or Paint node is automatically added when creating a session. With Composite selected, no nodes are added by default. The session is ready for you to add whatever nodes you like.**
- **Whichever type of new Session is created, an Output node is always automatically added and it determines the file format, file name, disk storage location, and channels to be rendered.**

## Source Settings

Source settings such as field handling are now edited in the Object window. Click on a clip in the Sources window to display its parameters.

## Sources Window

The Project window has been replaced with a Sources window where source media can be displayed in a thumbnail format.

## Stabilize and Shape Bounding Box Points Appearance

The shape bounding box points nested within layers with extreme transforms now appear normal when Viewer > Stabilize is enabled.

## S3D Node Removed

The S3D node has been removed and replaced with the Depth node.

