



# **SILHOUETTE**

## **What's New**

## ABOUT THIS GUIDE

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### About Us

Founded in 1995, Boris FX is a leading developer of VFX, compositing, titling, video editing, and workflow tools for broadcast, post-production, and film professionals. Boris FX products have grown to serve over a million artists worldwide. The company's success lies in its ability to tightly integrate and leverage technologies through strong partnerships with Adobe, Apple, Avid, Blackmagic Design, Autodesk, FilmLight, Grass Valley, Magix, SGO, and other leading developers of video editing software. In 2014, Boris FX acquired Imagineer Systems, the Academy Award-winning developer of Mocha planar tracking software. In 2016, Boris FX acquired GenArts, the developer of Sapphire, the gold standard plug-in package for high-end visual effects. In 2019, Boris FX acquired the Academy Award-winning Silhouette for advanced feature film rotoscoping, painting, and effects.

## SILHOUETTE 2023.5.4 - 1/19/24

### Features

#### Denoiser ML - New v2.1 Models

Denoiser ML includes new and improved v2.1 models.

### Bug Fixes

#### Denoiser ML - Solid Saturated Colors Noisier In v2 Models

When using the v2 models, solid saturated colors were much noisier than the v1 models. New v2.1 models are included which solve this problem.

#### Silhouette After Effects Plug-in Imported Optional Sources As Single Frames

A recent After Effects update caused the Silhouette plug-in to import the optional sources as single frames.

## Known Issues / Limitations

### GStreamer

#### ProRes

All ProRes movies are imported as 16-bpc. This is a limitation of the GStreamer ProRes decoder.

#### Rendering Interlaced Footage

Rendering interlaced footage is not supported at this time.

### ML Plug-ins

Because of the computation and memory requirements, the ML plug-ins require NVIDIA Pascal architecture cards or better for machine learning nodes.

### OpenColorIO - Particle Illusion and Flare Editor

OpenColorIO is not implemented in Particle Illusion or the Lens Flare > Flare Editor which results in the image in those interfaces not exactly matching the Silhouette viewer.

### Power Mesh

The Power Mesh node renders a slightly different result than Mocha Pro.

### Silhouette Plug-in

#### Flame

##### Upstream Node Changes Don't Update Until Silhouette Is Opened

Upstream node changes in Flame don't update when viewing the Silhouette plug-in unless Purge Cache is selected, the Render menu is toggled or Silhouette is opened.

##### Sequence Numbering

Flame is not obeying the OFX parameter that determines the start frame, so a Flame sequence starting at 1 instead starts at 0 in Silhouette.

#### Multiple Instances of Silhouette Plug-in

You can't connect two Silhouette plug-ins in a row. There can be multiple Silhouette plug-ins, just not chained together.

## Premiere Pro

### Alpha Channels With Soft Edges

By default, Premiere Pro is linearizing the alpha channels exported from the Silhouette plug-in even though they are already linear. This causes the alpha to appear smaller when using soft edges. To avoid this issue, disable Composite in Linear Color in the Premiere sequence settings.

### Misreporting The Resolution

Silhouette requires that Premiere Pro's Playback Resolution be set to Full. Otherwise, an error message is displayed when opening the Silhouette user interface. In addition, sometimes Premiere Pro misreports the correct resolution even though it is set to Full. If this happens, change to a different frame and try again. Adobe is aware of this issue.

### Trimmed Footage Loads The Entire Clip Into Silhouette

If a clip is trimmed in Premiere Pro, the entire clip is loaded into the Silhouette plug-in instead of the trimmed clip. Adobe is aware of this issue.

## Resolve > Multiple Inputs

Resolve does not allow more than one input for plug-ins that use custom user interfaces. However, additional sources can be added directly within Silhouette.

## SILHOUETTE 2023.5.3 - 12/15/23

### Features

#### Cache > Render Server Preferences

The following Cache > Render Server preferences used by the Silhouette plug-in were added:

##### **Render Server > % Physical Memory**

Sets the maximum image cache as a percentage of physical memory. The default is 10%.

##### **Render Server > IPC Buffer Size**

Sets the buffer size for both input and output between the host and the plug-in. The default is 500MB.

### Improvements

#### Sped Up ML Node Model Loading On MacOS 14

ML node model loading was drastically sped up on macOS 14.

### Bug Fixes

#### Imported Nodes Didn't Finalize

Importing .sfxnodes either through the Trees window or from scripting did not properly finalize the import, so the nodes had a bad state.

#### Silhouette Crashed With ML Nodes In Nuke (Linux)

As of Silhouette 2023.5.1, adding a ML node in Nuke on Linux caused Silhouette to crash.

#### Projects With A . In The Name Not Supported

Users wanted to have projects named Project.v2.sfx, but Silhouette didn't properly handle the .v2 in the name, especially when saving via scripting.

## Undo Issue With Dot Nodes

The Undo system got out of sync when manipulating Dot nodes.

## Sapphire's OpenColorIO Filter Caused Project To Not Load

Sapphire's OpenColorIO filter produced a malformed error when loading the project.

## SILHOUETTE 2023.5.2 - 12/1/23

### Bug Fixes

#### Magic Sharp Had No Effect

Magic Sharp had no effect.

#### Plug-in Render In Host Was Slow With Large Image Sizes

The passing of images as well as rendering from Silhouette to the host application was slow when using large images. The memory buffer size was increased to 200MB to solve this issue. This value can be overridden with the `SFX_SERVER_IPC_BUFFER_SIZE` environment variable.

#### Python bz2 Support Was Not Working On Linux

The bz2 module was not working on Linux.

### Transform

#### Corner-Pin Aliased Image

The image was aliased when using corner-pin. It was especially noticeable when reducing the size of the image and bending it in perspective. The new result is now softer, but no longer aliased.

#### On-Screen Controls Were Always Set To Session Size Boundary

The Transform on-screen controls were not set to the image size. Instead, they were set to the session size boundary. This made it awkward to adjust images that were larger image than the session.

#### Parameter Adjustment In Adaptive Update Mode Scaled Image To Upper-Left Corner

While adjusting any parameter in Adaptive update mode, the image scaled to the upper-left corner.



## SILHOUETTE 2023.5.1 - 11/20/23

### Improvements

#### Command-Line Output Selection

The command-line renderer previously chose the first Output node it found and not the selected one. Now, the selected output node is preferred over the first output node unless the -node or -all arguments are used.

#### OFX Blacklist Now Editable

The blacklist has been moved to a new resources file called config.txt that has entries for a global and per-platform OFX plug-in blacklist. They are comma-separated.

#### Plug-in Playback Speed In Hosts (Windows)

On Windows, the playback speed of Silhouette within the plug-in host was improved.

#### Stability AI

##### **New Inpaint/Outpaint Default Model**

Changed the default model for Inpaint and Outpaint to Stable Diffusion XL v0.9 since the Stable Diffusion XL v1.0 model did not produce good edges.

##### **XL Beta v2.2.2 Model Was Added**

The Stable Diffusion XL Beta v2.2.2 model was added.

### Bug Fixes

#### Added Legacy Silhouette Paint License To Plug-in Server

The Silhouette plug-in server handles rendering for the plug-in and it did not know about legacy Silhouette Paint licenses.

## Cryptomatte

### Render Required Output Multi-Part Input 1

Cryptomatte should have rendered with only an input to the data port. However, it only worked if there was also an image connected to Input 1 of Output Multi-Part.

### sfxcmd Render Only Rendered Layers (Windows)

On Windows only, rendering Cryptomatte with sfxcmd only rendered layers regardless of whether the Silhouette Output Multi-Part node was set to shapes or layers+shapes.

## GStreamer

### Anamorphic Render Not Tagged Properly

Rendering an anamorphic file using GStreamer did not get tagged as anamorphic.

### Errors In Terminal (Linux)

Errors appeared in the Linux terminal after rendering a GStreamer file.

### Interlace Render Was Corrupted (Mac)

On Macs with hardware ProRes encoding, rendering an interlaced movie resulted in a zero-byte file.

### Multiple of 16 Output Resolution Limitation

The “ProRes width must be a multiple of 16” limitation in GStreamer export has been lifted.

### Timecode Always Used 00:00:00:00

When the Force Start Timecode was set to a custom value, for instance 10:00:00:00, 00:00:00.00 was used instead in the rendered file.

## Silhouette UI Opened Behind Flame’s Window (Linux)

On Linux only, the Silhouette user interface opened behind Flame’s window.

## Tracker

### **Planar Tracker > Track Buttons Disabled When Shapes Were Selected Inside A Subtract Layer**

The Planar Tracker > Track buttons were disabled if add shapes were selected in a subtract layer.

### **Silhouette Crashed While Mocha Tracking Selected Shapes In A Subtract Layer and An Add Layer**

Silhouette crashed when Mocha tracking selected shapes in a subtract layer and an add layer.

## SILHOUETTE 2023.5 - 11/8/23

### Features

#### After Effects / Premiere Pro Plug-in - Added More Inputs

In addition to the main input and two optional inputs, six more optional inputs were added for the After Effects and Premiere Pro plug-ins to facilitate compositing in Silhouette.

#### Denoiser ML - New Models

New v2 Denoiser ML models trained with even more images results in higher denoising precision.

#### Mocha Pro, Particle Illusion and Sapphire > New Versions

##### **Mocha Pro 2023.0.4**

Mocha Pro has been updated to 2023.0.4. For a complete list of changes, see: [Release Notes](#)

##### **Particle Illusion 2023.5.3**

Sapphire has been updated to 2023.5.3. For a complete list of features, fixed bugs and changes, see: [Release Notes](#)

##### **Sapphire 2023.5.3**

Sapphire has been updated to 2023.5.3. For a complete list of features, fixed bugs and changes, see: [Release Notes](#)

#### New Project Templates

##### **Primatte**

Adds a Primatte node, uses the Composite output and for the plug-in, sets the host Render parameter to Output: Composite.

##### **Regrain**

Adds a Regrain node, uses the Regrained Composite output and for the plug-in, sets the host Render parameter to Output: Composite.

## Regrain - Automatically Choose Best Sample Area

The Scatter > Sample Box now attempts to automatically find an area of sampled grain that does not contain any image detail.

## Scripting

### **port.disconnect() Can Disconnect All Pipes With No arguments**

port.disconnect() previously required a port id. If you pass nothing, it now removes all connected pipes.

### **-script\_after\_args**

Previously, **sfxcmd -script** loaded the project, ran the script and then did other command-line processing. However, this didn't help when the script itself was tasked with rendering. With the new **-script\_after\_args** command-line flag, the script is executed after argument processing.

### **Trigger Regrain > Analyze Footage With Scripting**

The Regrain > Analyze Footage button, along with other buttons, can now be triggered with the new Property.trigger() method for Button properties.

## Stability

### **Replaced XL Beta Model With Released XL Model**

The Stability XL Beta model was replaced with the newly released XL model. The Stable Diffusion XL model is the latest AI image generation model that can generate realistic faces, legible text within the images, and better image composition, all while using shorter and simpler prompts.

### **Composite**

A Composite parameter was added for the Inpaint and Outpaint modes which composites the result using the source alpha and is useful if when blurring the alpha's edge.

## Tracking

### **Mocha - Track Multiple Layers**

Multiple, selected layers can now be tracked in the integrated version of Mocha. Previously, only the active layer was tracked.

## Track Subtracted Layers

Normally, only the white alpha areas of selected layers were tracked when using the Planar and Mocha trackers. Now, to track layers set to subtract, enable Track Subtracted Layers. This allows occlusion layers to be tracked at the same time as add mode layers.

## UpRes ML (New Node)

The UpRes ML node employs machine learning to resize images while preserving critical features. To train the upres model, thousands of images were utilized, resulting in high quality results.

## Purge Cache (OFX Plug-in)

Added a manual Purge Cache button to the OFX plug-in so users can trigger a cache purge for the current project if needed.

## GStreamer 1.22.6

Silhouette has been updated to GStreamer 1.22.6, which is a versatile media handling library for reading various movie file formats.

# Changes

## Clamp Min/Max Ranges

The Clamp Min/Max parameter ranges were changed to a smaller range: -1 to 10.

## Help > License Menu (Mac)

The Help > License menu was added to the Mac version so deactivation can occur without having to use Deactivate Silhouette License in the install folder.

## Primate Preview RGB Text Color

The Primate Preview RGB text color was changed to white to be more readable on all OS's.

## Stability Models

The Stability 1.x and 2.x models were sunsetted on 11/15/23 so the only model you will see now is the Stable Diffusion XL v1.0 model.

## Bug Fixes

### EXR's With Data Window Matching Session Did Not Center

Source Nodes now properly auto-center images with a data window that matches the session size.

### Nodes

#### Cross Processing And Curves Crash

Both Curves and Cross Processing crashed if you attempted to adjust the curve.

#### Cryptomatte Render Crashed Silhouette With 0 Opacity Shape

Silhouette crashed if it encountered a 0 opacity shape.

#### Image Generators With Transform Crash

When adding one of the image generators followed by a Transform and then adjusting one of the corner points inward, Silhouette would display an error and then crash.

### Paint

#### Auto Paint Frame Start/End Fields With 7+ Digits

When working with a sequence start time of 7 or more digits, the Auto Paint frame Start/End fields displayed a number like 1.23457e+07.

#### Clone - Shift-Right Click

If you **Shift**-right clicked when using the Clone brush, you couldn't paint or change the cursor in any way.

#### Switch Matte And Copy Did Not Pass Alpha To Transform

The Switch Matte and Copy nodes did not pass alpha to the Transform node. Instead, the Transform node added opaque alpha.

### Primatte

#### Primatte Preview Text Size On Mac

On Retina Mac's, the Primatte Preview text size was too small.

#### Console Error When Secondary Spill Was Enabled (Linux)

On Linux, a console CPU error was generated when enabling Secondary Spill.

## **Sapphire Generators Required An Input**

Sapphire generators like S\_Clouds required an input to appear in the viewer.

## **Switch Matte And Copy Did Not Pass Alpha To Transform**

The Switch Matte and Copy nodes did not pass alpha to the Transform node. Instead, the Transform node added opaque alpha.

## **Planar Tracker Tracking Mode**

The Planar Tracker tracking mode was set to Auto by default, but actually tracked using the last manually set mode.

## **Plug-in**

### **Copying The Plug-In Within The Host Caused Collisions**

Copying the plug-in within the host caused collisions between the instances. The result of each plug-in was the same regardless of whether the inputs had been changed.

### **Flame Hang On Exit After Silhouette Is Used (Linux)**

On Linux, Flame hung on exit after Silhouette was used.

### **Movie Files Don't Pass Through To Nuke (Linux)**

On Linux, movies loaded in the Silhouette interface will not pass through to Nuke.

### **Multiple Instances of OFX Plug-in Did Not Release Memory**

Memory was not releasing when using multiple instances of the Silhouette OFX plug-in.

## **Scripting**

### **Command-Line Renderer Was Not Finalizing Scripting Startup**

The command-line renderer was not completing final scripting startup, which meant some globals were never set up. The following items were not happening in the command-line renderer in Silhouette 2023:

- **nodes list added to fx module globals**
- **import startup**



- `from fx import *`
- `from math import *`

## **object\_created Hook No Longer Triggered**

A regression as part of the plug-in expression work caused `object_created` hooks to not be triggered.

## **project.save() Didn't Work**

`project.save()` didn't work if the project was already saved.

## **SFXCMD With Script And No Project Would Not Run Script**

Running the command-line renderer with just a script and no project wouldn't run the script. It only worked if it also loaded a project.

## **User Interface**

### **Data Appeared As An Entry Around Roto Layers In The Timeline**

The text *Data* appeared as an entry above and below Roto layers in the Timeline. Data should have been named Children.

### **Roto > Object List > Duplicate Copies**

Duplicate copies of a shape were generated when using Layer > Reset All. The duplicates would appear when opening up the project after saving it.

## **SILHOUETTE 2023.0.3 - 7/24/23**

### **Features**

#### **Save Project Automatically On Exit Preference**

Located in the User Interface preference group, this automatically saves the plug-in project on exit of Silhouette. This removes the need to prompt you to save when you close the window or select File > Exit.

### **Bug Fixes**

#### **Plug-In Did Not License In Host**

When using a plug-in only license, there was a watermark back in the host.

#### **Project Save Dialog Opens When Creating A New Session**

The project save dialog opened after creating a new session in a previously saved project that contained either a Paint or Stability node. This was an unnecessary prompt.

## SILHOUETTE 2023.0.2 - 7/15/23

### Features

#### Mocha Pro 2023.0.3

Mocha Pro has been updated to 2023.0.3. For a complete list of changes, see:

[Release Notes](#)

#### Project Management

##### **Silhouette Plug-in Projects Now Stored In Host Project Data**

Silhouette projects are now stored within the host application's project data. However, some nodes (Paint and Stability) store sidecar files with the project data, and using these nodes will prompt saving the project file to a folder.

To accommodate saving a plug-in project stored within the host application's project data to an external file, the plug-in features an Export Project option in the File menu.

##### **Immediately Saving A Project No Longer Required**

Silhouette now starts without requiring saving or loading a project. The requirement to save the project to a file is now based on whether any nodes have been used that require it, for instance, Paint and Stability.

#### Helper Text in Sources and Trees Windows

Informative messages in the Sources window explains how media can be imported and another message in the Trees window shows how to create a session.

## Bug Fixes

### Alpha To Color Node Displayed Color Everywhere

The Alpha To Color Node displayed color everywhere.

### Mocha Pro In Silhouette Plug-in

#### After Effects Crashed On Exit With Mocha Applied (Windows)

On Windows with Mocha Pro applied, After Effects crashed on exit. This issue was introduced in 2023.0.1.

#### Mocha Pro Not Licensed In OFX Host

When used in a Silhouette plug-in project, Mocha was not licensed in the OFX host application. To fix this, the plug-in now requires a render license.

#### Nuke Displayed Black Frames If Playback Was Stopped

With Mocha Pro applied, Nuke displayed sporadic black or corrupted frames when playback stopped in the middle of the sequence. This issue was introduced in 2023.0.1.

### Hang When Exiting SFX With A Floating Window (Linux)

On Linux, when using a floating Silhouette UI window in Nuke, Nuke hangs when exiting Silhouette.

### Open Shape End Point Adjustment With Multi-Frame

Adjusting the end points of multiple open shapes did not apply to other keyframes in multi-frame mode.

### GStreamer

#### Silhouette Crash When Loading JPEG Movie Files (Linux)

Silhouette crashed on Linux when importing JPEG MOV files.

#### GStreamer Timecode Always Uses 00:00:00:00

When the Force Start Timecode is set to a custom value, for instance 10:00:00:00, 00:00:00.00 is used instead in the rendered file.

# SILHOUETTE 2023.0.1 - 6/21/23

## Features

### Mocha Pro 2023.0.2

Mocha Pro has been updated to 2023.0.2. For a complete list of changes, see:

[Release Notes](#)

### Regrain > Grain Output

Added a Grain Only output to the Regrain node so that it could be composited separately using the Grain Composite node or within the plug-in host application.

### Stability - Added The v2.2.2-XL Beta Model

Added the v2.2.2-XL Beta model which produces more photorealistic results.

### Expressions

The following expression functions were added.

#### Noise Functions

- `noise(t)`
- `noise2D(point)`
- `noise3D(point)`

#### Point 3D Functions

- `Point3D.rotate(angle_in_degrees)`
- `Point3D.normalize()`
- `Point3D.dot(point)`
- `Point3D.cross(point)`

#### Variables

- `random()`
- `gaussRandom(min=0, max=1, seed=<current_frame>)`
- `wiggle (frequency, amplitude, octaves=1, amp_mult=0.5, lacunarity=1.0, time=<current_time>)`

## Scripting

### Specify Preference Sub-group Via Scripting

You can now set a preference sub-group in preferences created via scripting.

### User-defined Color, Point, And Buffer Properties

There was no way to create custom (user-defined) Color, Point, and Buffer properties via scripting.

- **Color defaults to RGBA but can be overridden by:**

```
prop = Property(id, Color(), info={"type", "rgb"})
```

- **Point defaults to 2D position but can be overridden by:**

```
prop = Property(id, Point3D(), info={"type", "size|scale|unit|offset|3D"})
```

## GStreamer 1.22.2 (Windows/Linux)

On Windows and Linux, Silhouette has been updated to GStreamer 1.22.2, which is a versatile media handling library for reading various movie file formats. The Mac version will be updated at a later time.

# Changes

## Denoiser ML - Switched Default Model

Switched the default model to Compression+Noise v1.0 as the Camera Noise v1 model could produce artifacts in super bright areas with some images.

## Regrain > Edge Blend

Edge Blend was revamped so that it no longer blurs grain at the edge of the scatter cell pattern.

## Stability > Default Generate Model Now Stability v1.5

Changed the default Generate model to Stability v1.5. It produces a more accurate result without using negative prompts.

## User Interface

### Colored Timeline Track Highlighting

Because of the highlighting, when User Interface > Colored Timeline Tracks was enabled, it was difficult to see what layer or object was selected. Now, there is a crosshatch pattern in the timeline added to the selected object.

### ROI Keyframes In Timebar Were Distracting

There ROI keyframes now only appear in the Timebar when The Viewer > ROI display is active as they interfered with the selected shape keyframes.

### Stability AI Server Preference Removed

The Stability AI Server preference was removed as it is not yet supported.

## Transform Filtering

### Default Changed To Catmull-Rom

The default Transform node filtering is now set to Catmull-Rom.

### Improved Filtering

The quality of the Transform filtering has been improved for all filtering types.

## Bug Fixes

### Autodesk Flare Imported Clips As A 0x0 Resolution

Autodesk Flare imported clips as a 0x0 resolution. There was a Flame-specific work-around in the code, so it was changed to also look for Flare.

### Copied Node Resets Original Node

If you copied and pasted a Transform node and then reset the copied node, the original node was also reset.

### Film Glow - Empty Group

The empty Secondary Glow > RGB Independent group was removed.

### Denoiser ML

#### Did Not Work With Proxies

The Denoiser ML node did not work with proxies and produced image artifacts.

#### First and Last Frames

The Denoiser didn't produce a good result on the first and last frames because it required 2 frames before and after the current frame.

### Command-Line Hang With Mocha Pro (Windows)

When doing a command-line render with a project containing a Mocha Pro node, sfxcmd would hang on exit.

### GStreamer (Windows/Linux)

#### Could Not Read Some 6K ProRes Files

Large dimension ProRes files failed to import.

#### Draw Issues For HEVC Clips

HEVC clips could display lines when imported into Silhouette.

#### Internal Error While Reading Video

Stepping backwards with some clips caused an "Internal Error While Reading Video" error.



## **ProRes Encoded With Adobe Tools Was Not Read Correctly**

Clips imported from Media Encoder and some other Adobe exporters would sometimes not be imported correctly.

## **Stuttering Playback For Some H.264 Codecs**

Some H.264 codecs stuttered during playback.

## **Licensing**

### **Command-line Render With Mocha Pro Unlicensed (Windows)**

On Windows, Mocha was not licensed when doing a command-line render.

### **Mocha Pro Not Licensed - Linux**

On Linux, Mocha Pro was not licensing in the Silhouette standalone when using a Silhouette only serial number.

### **port@host Entry Does Not License Embedded Mocha**

When a customer enters a port@host in the license window for a floating license, the embedded Mocha did not get a license.

### **Silhouette Didn't Use Boris FX Suite Floating License**

With both Silhouette and Boris FX Suite floating licenses, Silhouette would not use the suite license after all Silhouette licenses were used.

## **Mocha Pro Bezier Shapes Corrupt When Transferred**

Bezier shapes transferred from Mocha Pro using the node options were corrupt in Silhouette.

## **Mocha Pro / Planar Trackers > Track Forward 1 Frame**

The Track Forward 1 Frame icon did not work with some footage when using the Mocha Pro or Planar Tracker.

## **Morph > Correspondence Lines And Open Shapes**

Using two open shapes, adding a correspondence point only showed correspondence lines on half of the open shape.

## Nuke Export Error

Because of a missing component, some Nuke exports produced an error when exporting.

## OCIO Colorspace Node Crash

Silhouette crashed after clicking on the OCIO Colorspace > Config field.

## Output > Cryptomatte

The Cryptomatte group was removed from the Output node since it is only needed in the Output Multi-Part node.

## Primatte > Ctrl-Drag Selection

Ctrl-drag selection did not work in Primatte.

## Regrain

### Analysis Curves

The analysis calculations were clipping values above 1.

### Cell Pattern Not Limited To Matte Area

With the Matte enabled, the Overlay Cell Pattern was not limited to the matte area.

### Matte > Enabled: Grain Did Not Randomize

With the Matte enabled, the grain did not randomize in matte areas where the matte value was 0.

## Sapphire Filter Caused Insert To Be Repositioned

When a Sapphire filter was placed before a Transform node, the image was not in the correct location when doing a Transform > Insert.

## Roto - Adjusting Multiple Shape End Points To A Point

Adjusting multiple open shape end points to a point resulted in some points not being adjusted.

## Transform

### Blurry Sampling

When using corner-pin, the sampling could be blurry at certain settings in localized areas.

### Insert With Cropped Image

An image cropped using Crop or DOD was not in the correct location when doing an insert with the Transform node.

### Proxies

Selecting a Viewer Proxy of 2:1, 3:1 or 4:1 cropped the image at the top left of the screen.

## SILHOUETTE 2023 - 4/26/23

### Features

#### New Nodes

##### Primatte

Using a unique algorithm based on three multi-faceted polyhedrons floating in RGB colorspace to isolate color regions, Primatte keys out and replaces blue or green screens with transparency to facilitate background replacement. The 3D Preview display aids in the visualization of the keyed value.

##### Generative AI and Machine Learning

###### Stability

Stable Diffusion is a pioneering, deep learning text-to-image model. It is primarily used to generate detailed images based on text descriptions. The Stability node integrates Stable Diffusion models directly in Silhouette. Inpaint, outpaint or generate images from scratch using text prompts.

###### Denoiser ML

The Denoiser ML node employs sophisticated deep learning techniques to eliminate unwanted noise from images while preserving critical features. To train the denoising model, numerous images were utilized, resulting in a highly effective system. Additionally, the extracted noise can be seamlessly reintegrated into the image using the Grain Composite node.

##### Grain Management

Denoiser ML, Regrain and Sapphire UltraGrain make up the new grain management tools in Silhouette.

###### Regrain

Based on DasGrain by Fabian Holtz, Regrain samples the source image's grain, regenerates and randomizes it for the purpose of adding it back to a degraded composite.

###### Sapphire UltraGrain

Adds simulated digital camera grain to the image.

## Mocha Pro 2023

### Roto Improvements

Mocha Pro's Roto tools have new features that make spline adjustments easier and more efficient, such as Inner Width feather adjustment, Shrink and Grow Splines, Adjust Spline Points with Falloff, Split Contours, Snapshot Duplicate, and Double-click Shapes.

### Tracking Improvements

Mocha Pro's Tracking tools have new features like Merge Tracks, Grid Scale, Adjust Mesh Points with Falloff, and Search Area Mattes.

For a complete list of features, fixed bugs and changes, see: [Release Notes](#)

## Sapphire 2023.5

Sapphire has been updated to v2023.5. New features include UltraGrain, PrismLens and DissolveUltraGlow effects, new lens flare and UltraGlow presets, S\_Effect parameter linking, and expanded Metal support.

For a complete list of features, fixed bugs and changes, see: [Release Notes](#)

## Particle Illusion 2023

Particle Illusion has been updated to v2023. Features include new 2023 Emitter Library, performance enhancements, and numerous user interface improvements. For a complete list of features, fixed bugs and changes, see: [Release Notes](#)

## Atmospheric Glow

Atmospheric Glow is a glow style mega-filter that brings instant atmospheric looks to an otherwise flat scene. Based around a film glow, this effect includes nine independently controlled groups, including volumetric light rays, a smoke/fog generator, light flickering, chromatic aberration, optical orbs, film grain and a vignette, each of which adds a new element to the scene.

## Curves

Curves adjusts the entire tonal range of an image by changing the shape of RGB, Red, Green or Blue curves. Curve points can be adjusted throughout the range of shadows to highlights.

## Expressions

Silhouette offers both scripting and expressions as tools for customizing and automating the animation process. While scripting requires programming skills, expressions allow artists to create complex animations and link parameters, perform math functions, and use variables without having to write code. This makes expressions a more accessible option for artists who may not have programming skills, while still offering a high degree of control and flexibility.

- **Link Parameters In The Same Node**
- **Link Parameters From Different Nodes**

## Motion Blur Controller Expression Action

The Create > Motion Blur Controller action creates a Motion Blur node which controls all other node's motion blur settings using expressions. The controller includes Enable, Angle, Phase, and Samples parameters, with values defaulting to the first motion blur enabled node settings it finds. It then creates expressions for all nodes in the tree that have motion blur parameters.

## RED R3D Import

Silhouette now supports RED R3D source files.

## New Presets

The following nodes now have new presets: Beauty Studio, Camera Shake, Chromatic Aberration, Day for Night, Develop, Film Glow, Grunge, Light Leaks, Prism, Rays, Smear Blur, Sunset, Two Strip, Vignette, and X-Ray.

## Scripting

### **-args <argument\_list>**

-args <argument\_list> is a new command-line argument where argument\_list is a comma-separated list of arguments to pass as sys.argv to the script.

### **SFX\_SCRIPT\_IMPORTS Environment Variable**

The only way to add more script paths that were auto-imported was via prefs. Added the SFX\_SCRIPT\_IMPORTS environment variable that can be a delimited set of paths (using : or ; as delimiter). Paths can contain their own

environment variables. Any path found in this variable will be imported before external scripting paths set in preferences. Paths should be treated as python modules with their own `__init__.py` file.

## Improvements

### Nodes

#### Camera Shake

Added a Data input and Transform parameter to choose point trackers and tracked layers to match move the image based on the tracking data. This is good way to match the camera shake of another image.

#### Color Correct > Color Wheels Resolution and Layout

The Color Correct color wheels have improved resolution and now appear in the Timeline in a horizontal layout.

#### Cross Processing / Film Stocks

A curves interface was added to Cross Processing and Film Stocks.

#### Film Glow

A set of secondary glow parameters was added to create chained glows.

#### Grunge

An Auto Scale option was added to the Gate Weave section

### User Interface

#### Open Logs Location

Opens the folder containing the Silhouette diagnostic logs.

#### Parameter Options

Parameters now have an Options menu icon ... to the right of the parameter that includes Reset, Insert Key, Delete Key and Copy Expression Reference options.

## Point Control > Transform Pop-Up Menu

The point control transform pop-up menus used to select the transform source now only appear when the node's data input is connected and there is a point tracker or transformed layer present.

## Preset Thumbnail Text Size

The preset thumbnail text now wraps to two lines to accommodate longer preset names.

## Sources Window Thumbnail Size

The Sources window thumbnail size was increased.

## Viewer > Apply Gain/Gamma When Viewing Alpha Preference

When enabled, the Viewer Gain and Gamma affect the alpha.

## Bug Fixes

### Channel Blur Missing

The Channel Blur node was missing.

### Depth Node Objects Could Not Be Added

Non-shape depth objects couldn't be added to the Object List.

### Lens Flare > Flare Editor Black On Linux

On Linux, the Lens Flare > Flare Editor displayed a black viewer.

### Morph Crash

The Morph node crashed with inputs that had an infinite DOD like Color.

### Paint > Clone > Vertical Split Issues

#### Crash With Grade/Filter Blur And Sharpen

Using a DOD set smaller than the Session size before the Paint node, Silhouette crashed when Clone > Grade/Filter > Blur and Sharpen were adjusted in conjunction with the Vertical Split.



## Black Viewer With Grade/Filter Blur And Sharpen

Using a ROI set smaller than the Session size, the Viewer displayed black when Clone > Grade/Filter > Blur and Sharpen were adjusted in conjunction with the Vertical Split.

## Power Mesh Hang With Mocha Pro Insert Enabled

When the output of the Mocha Pro node with Insert enabled was plugged into a PowerMesh node, Silhouette hung and then crashed.

## Roto > Outline Size / Fill Opacity Couldn't Be Keyframed

The Roto > Color > Outline Size and Fill Opacity could not be keyframed.

## Sapphire Preset Browser Did Not Open On Linux

The Sapphire Preset Browser did not open on Linux.

## Scripting

### Command-Line Scripts No Longer Require A Project

A project is no longer required to run a script from the command-line.

## Transform Menu & Point Trackers

Selecting a point tracker in the Transform menu had no effect.

## User Interface

### Font Size Preference Did Not Affect All Text

The User Interface > Font size preference only affected node labels. Now, it affects all Silhouette text.

### No Project Open Issues

- With no project loaded, the window title now says "Silhouette (NO PROJECT)".
- You are now prevented from dragging and dropping media files into the Sources window when there is not a project opened.
- An error dialog was added if attempting to open a project that didn't exist.

