



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 2023.0.1 - 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 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.

Known Issues / Limitations

Denoiser ML - Artifacts In Extreme Whites

The Denoiser produces artifacts with extreme white values when using the Camera Noise v1.0 model. Either switch to the Compression+Noise v1.0 model or bracket the Denoiser ML node with Develop nodes that first lower the exposure before the Denoiser and then restore the exposure afterwards.

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.

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

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

Mocha Pro Not Licensed In OFX Host

When used in a Silhouette plug-in project, Mocha is not licensed in the OFX host application.

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

Copy/Paste Project In OFX Host Is Not Allowed

For a number of reasons, copying and pasting Silhouette plug-in projects causes issues. Please do not use this workflow.

Flame

Hang On Exit After Silhouette Is Used (Linux)

On Linux, Flame hangs on exit after Silhouette is used. Press Ctrl-C in the terminal to force the exit.

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 - 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.

