

Boris Continuum Complete vs. GenArts Sapphire

Competitive Analysis
Boris FX, December 2009

Since its inception, Boris Continuum Complete (BCC) was designed to complement NLE systems such as Avid Media Composer, Apple Final Cut Pro, and Adobe Premiere Pro by bringing high-quality compositing and effects creation to the editor's timeline. Along with eye-candy and organic looks, BCC packs core technologies such as Optical Flow, Motion Tracking, 3D Extrusion, and OpenGL.

Compositing applications such as Adobe After Effects benefit from BCC's 3D Extrusion features, integration with After Effects Camera and Lighting, and import of After Effects masks for use with extruded shapes and bevel profiles.

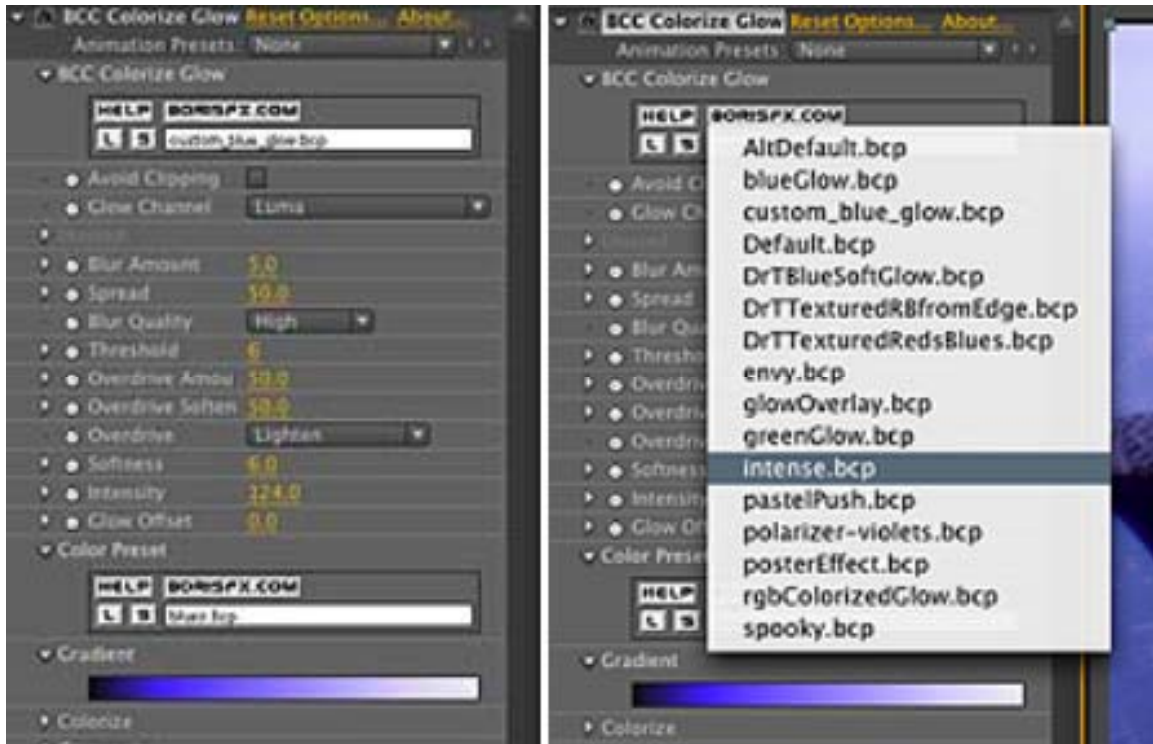
For the most part, the following discussion is limited to the features of BCC Version 6 that are currently unavailable within Sapphire. At the time of this writing, Adobe and Apple versions of Sapphire are at Version 2; the Avid version is at V3; and the Autodesk version is at V4 with V5 announced for 2010. This document considers the filters from the highest version of Sapphire even though some of the newer Sapphire filters may not be available on all platforms.

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Static and Animated Presets

BCC 6 includes hundreds of factory-installed presets. In addition, users can save their own looks and move them from one editing seat to the next, even across platforms. Version 6 brings an ability to save keyframe animation within a preset – an innovation currently unavailable with any other plug-in package.

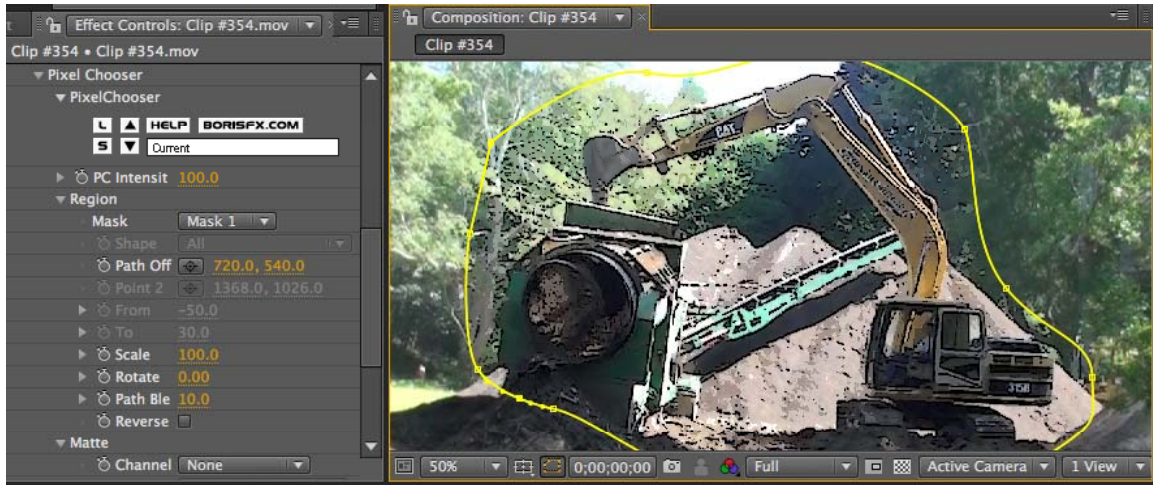


While After Effects and Avid provide a way to save filter animations within a bin or a project, moving these animations across applications is impossible without BCC animated presets.

PixelChooser

Most BCC filters include a built-in masking system for isolating a portion of the image for processing. In After Effects, PixelChooser is able to import After Effects native masks from the layer to which the filter is applied. In Avid, PixelChooser provides interactive on-screen Bezier controls natively unavailable within the Avid system. In After Effects, PixelChooser saves time by eliminating multiple steps and speeding up image processing. In

Final Cut and Avid, it provides a hard-to-achieve masking system.



Optical Flow

Built into a number of BCC filters, this technology takes advantage of temporal pixel movement data. This temporal motion data can be used to smoothly re-time clips, construct in-camera motion blur, automatically stabilize footage without the aid of tracking points, and even delete moving objects from the scene.

BCC Optical Flow. This filter facilitates high-quality speed-up or slow-down of footage in forward or reverse direction, accurately constructing synthetic frames of video that would correspond to an over-cranked film camera shot. Missing frames of video are reconstructed based on "motion vector" fields.



BCC Motion Blur – Based on Optical Flow motion vectors, BCC Motion Blur creates an in-camera motion blur effect from video shot with normal shutter speed.

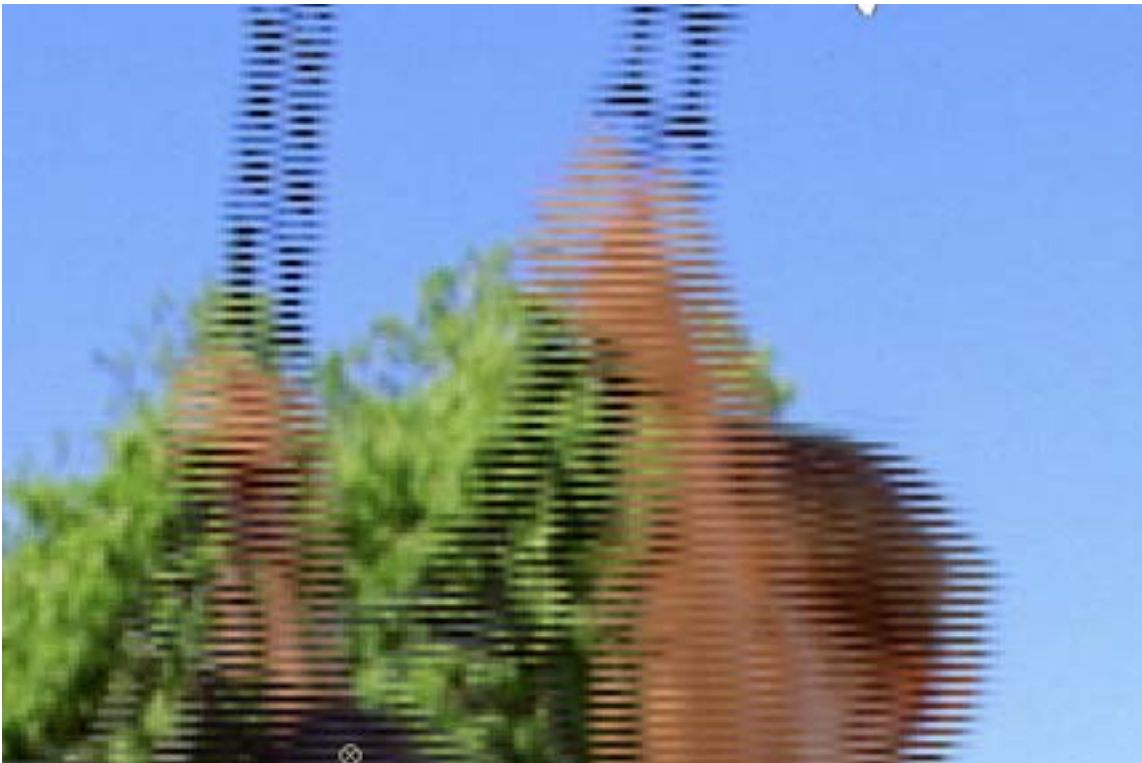


BCC Optical Stabilizer – Remove camera shake from a hand-held shot, lock a shot as if it was taken from a tripod, or smooth the motion of a panning or rolling shot. Image resizing and cropping is automatically calculated and rendered with high-quality up-scale

methods.



BCC DeInterlace – BCC DeInterlace is a high-quality de-interlacing filter that blends high-motion parts of an image while keeping low-motion areas sharp.



BCC Motion Key – BCC Motion Key is a "magical" effect that removes moving cars or other objects from a scene by automatically painting them out with Optical Flow technology.



Motion Tracking

High-quality, automated motion tracking allows animation of layers based on one or more user-selected tracking points. Significant time-savings can be achieved on day-to-day tasks such as match-moving, corner pinning, wire and rig removal, and witness protection effects.

BCC Match Move – Animate an object with alpha channel over a background using a tracking point. Sizing and rotation options are included.

BCC Corner Pin – Accurately texture-map an alpha image over any moving or rotating object in 3D space with the aid of four tracking points.

BCC Wire Remover – a high-quality and easy-to-use method of painting out rig or wire elements from a shot. The process is aided by an automated tracking of two end points.



BCC Witness Protection – Automatically blur out or mosaic out any part of a moving image with the aid of a tracking point. This time-saving filter is very easy to use.



As a tracking method for moving masks, Motion Tracker is built into most BCC filters that feature a PixelChooser.

3D Extrusion

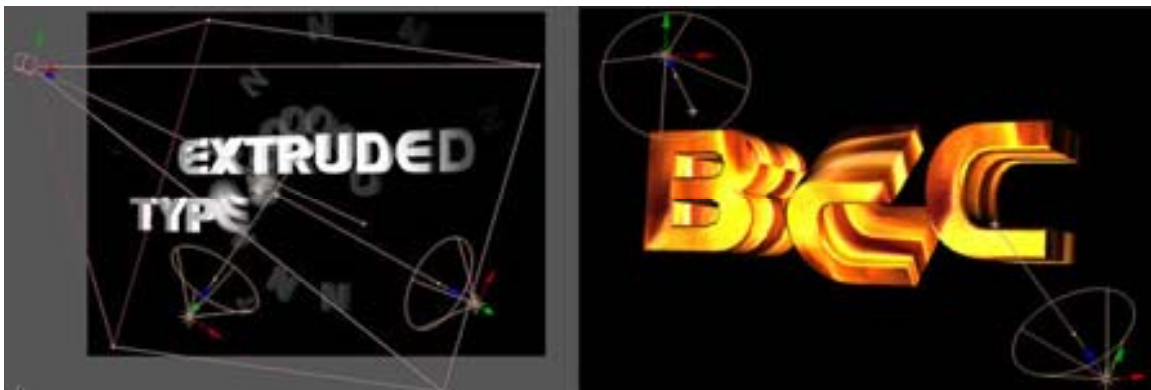
With the addition of 3D Objects to BCC 6, any spline-based shape can now be easily extruded in 3D including highly-detailed bevels, extrusion profiles, warps, and 3D shatter effects. 3D Extrusion is entirely based on OpenGL rendering – an enabling technology without which these features would be impractical. Custom OpenGL shaders were written to support light reflections, bump

maps, organic materials, and warps.

BCC Extruded Text – any system-level font can be extruded in 3D, beveled, texture mapped with bumps, and given reflections, lights, and shadows. In addition, the text objects can be bent, curled, rippled, or shattered with unique Open GL deformers included with every BCC 3D Objects filter.

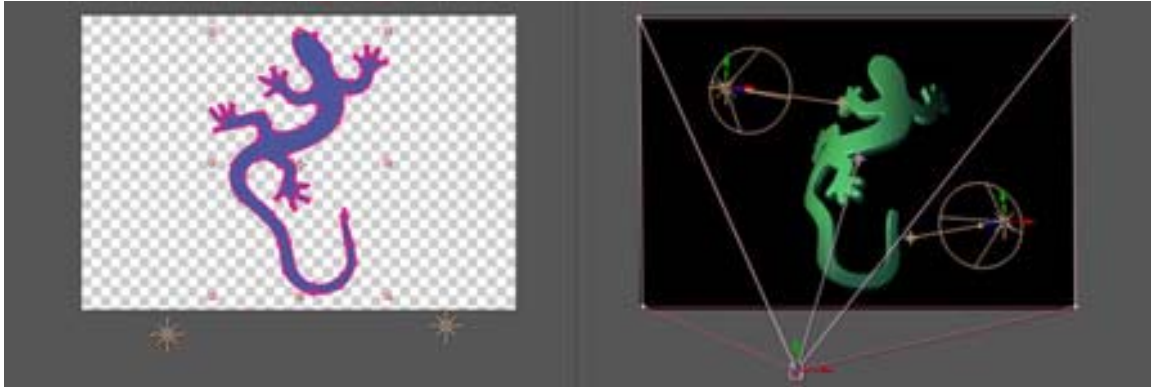


BCC Extruded Type-On Text – similar to BCC Extruded Text with the added benefit of automatic type-on and type-off animation.



BCC Extruded EPS – an easy way to import and extrude a custom logo from any compatible EPS file.

BCC Extruded Spline – can be used to extrude any After Effects mask.



BCC Layer Deformer – warp and shatter any video layer; includes options for sphere, cylinder, or cube shapes.

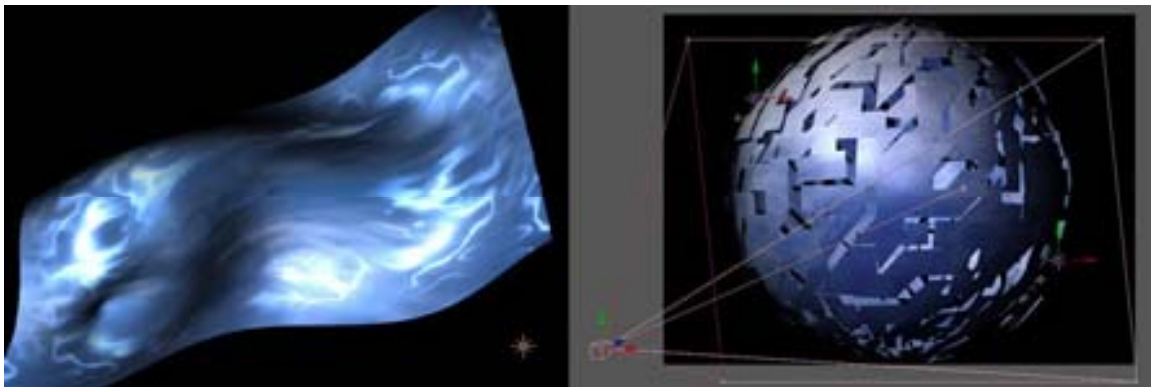


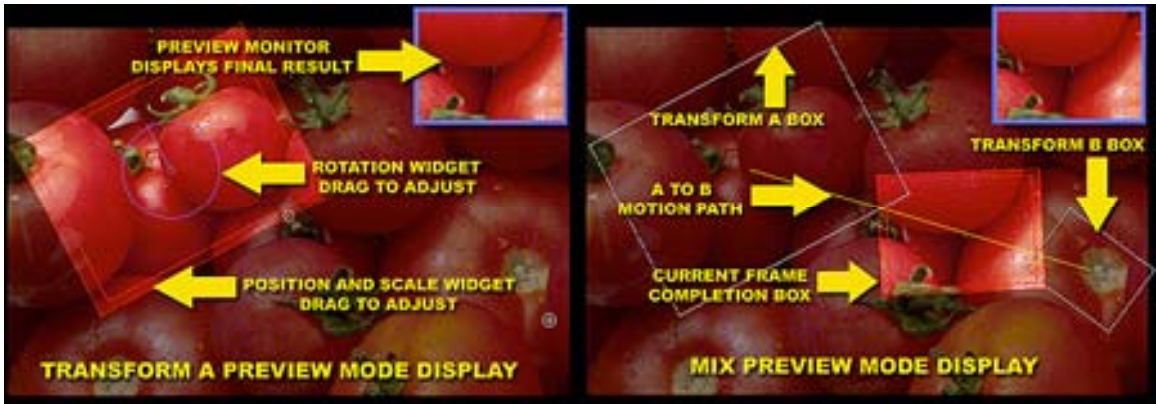
Image Restoration Tools

These tools can be used in day-to-day production where each tool is designed to solve a particular problem common to video editing.

BCC UpRez – convert SD to HD formats with the amazing quality of Magic Sharp filtering. BCC UpRez works great on stock footage or archived shots.



BCC Pan And Zoom – automated Ken Burns effect converts scanned images into video with stunning image quality.



BCC Smooth Tone – an "electronic makeup" tool for saving shots with skin blemishes or substandard makeup while preserving sharpness and full image detail. A great tool for working with "talking heads" and on-camera interview footage.



BCC DV Fixer – removes “jaggies” and DV compression artifacts from footage originated on consumer DV cameras.



BCC Pixel Fixer – removes bad pixels resulting from a faulty digital camera sensor or dust on the camera lens. Up to 10 bad spots can be repaired with a single filter application - without any degradation of image quality or sharpness.

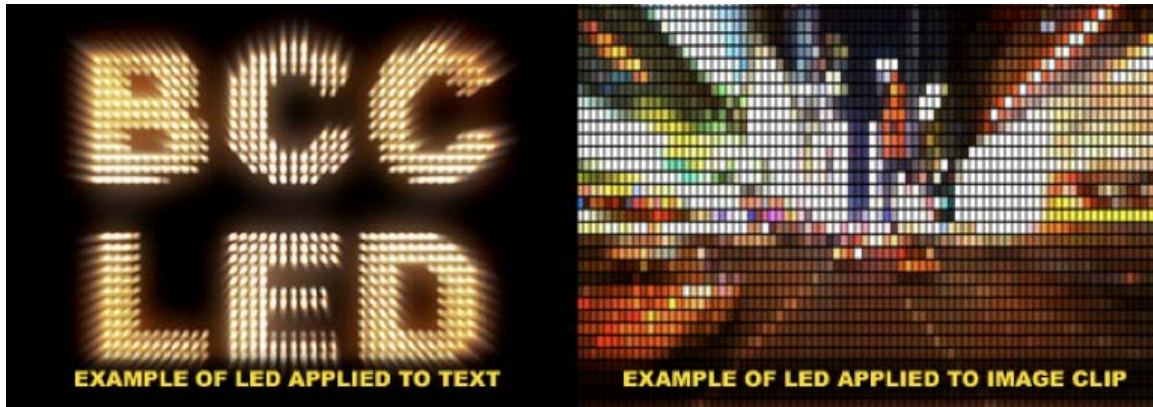
Keying and Compositing

Pulling quality keys is an area left out by Sapphire filters. BCC 6 includes an award-winning chroma key process complete with spill suppression, matte choker, and light wrap.



Unique Looks

BCC LED – make an image, text, or logo with alpha appear as a billboard made of an array of blinking or solid LED lights,



BCC Burnt Film – a useful way to transition from one shot to the next emulating the effect of a filmstrip burned and dissolved by an overheating light bulb in a film projector.



BCC Steel Plate – great for generating that non-slip steel plate look – ideal for backgrounds or multi-faceted objects. Controls for the number and size of rivets, bolts, and steel plates as well as the smoothness of the surface are included with this filter.

