

EFX RE plugins for After Effects

These plugins were developed to let you to do more with the technical render passes (ZDepth, NodeID, Velocity) that you render anyway.

You'll find some new uses for them.

Also, while working with Render Elements, you'll find that very often you're left with some artifacts in compositing. It's nothing you did wrong, it's just a technical limitation of working with render passes. You'll find plugins that will help you deal with these issues as well.

Hope you'll enjoy them,
Filip Kaczorek

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Installation

The plugins are written in PixelBender.

To install:

- find your After Effects plugins directory, ie.:

c:/program files/adobe/adobe after effects cs5/Support Files/plugins

- copy the efx plugins to any subdirectory.

It doesn't matter exactly what subdirectory the plugin files are in, as long as they are within the After Effects' main plugins directory.

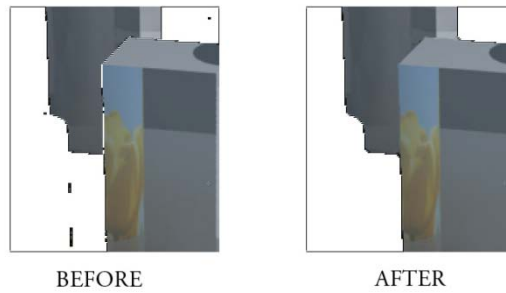
In After Effects you'll find the plugins in Effects under **EFX RE group**.

Caution:

the suite contains some plugins that are also available for free. If you downloaded and installed them before, you might get a conflict of double plugin files.

Just delete the previous free versions - or don't install the ones from the suite.

Alpha streaks



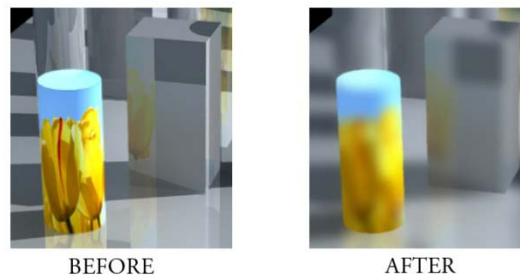
Removes holes and islands from the alpha channel that form streaks (lines).
Use it together with ID select.



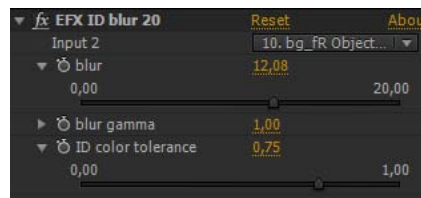
mode - select the pixel width of the streaks to remove

Remove threshold - if the original pixel had an alpha value lower than this threshold, then the pixel will be removed even if it is not part of a streak.

ID Blur



Lets you blur the image with respect to the boundaries of individual objects.
Great for faking blurry reflections/refractions.



Input 2 - the layer containing the Node ID render element (needed for isolating individual objects).

blur - the amount (radius) of blurring.

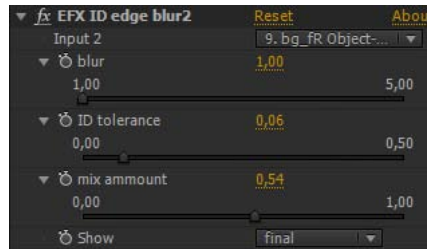
blur gamma - adjust the curve/falloff of the blur - lets you achieve characteristics of a box blur as well as Gaussian blur.

ID color tolerance - how much can neighboring pixels of ID layer vary to still be considered a single object.

The plugin comes in three versions - 10, 20 and 40. These indicate the maximum blur radius allowed, which also influences the speed at which the plugin initializes. As a rule of thumb - use the lowest blur that meets your needs.

ID edge blur

Based on a supplied Node ID pass, finds the edges of all objects in the frame, creates a mask from these edges, and blurs the image within the mask. This helps reduce artifacts that often occur on object edges when working with render passes.



Input 2 - the layer containing the Node ID render element (needed for isolating individual objects).

blur - the amount (radius) of blurring.

ID tolerance - how much can neighboring pixels of ID layer vary to still be considered a single object.

mix amount - lets you create a mix between original image and filtered.

Show - tell the plugin what to display: Edges, Soft Edges, Final blurred composite.

You can use this filter just to find the edges, then use it as an alpha matte on an Adjustment layer and try your own blurring methods to remove the artifacts.

ID select

Lets you select up to five ID colors from a supplied Node ID pass, creating a selection (alpha) for current layer.



Input 2 - the layer containing the Node ID render element (needed for isolating individual objects) .

Show - tell the plugin what to display: ID pass, Original image, Final image selection.

0 sel. tol. - if the difference of an ID pixel color and ANY of the 5 selected ID colors is greater than this value, the pixel will receive an alpha value of 0.

Full sel. tol. - if the difference of an ID pixel color and ANY of the 5 selected ID colors is lower than this value, the pixel will receive an alpha value of 1.

Anything in between these two values will receive a partly transparent alpha.

ID1...5 - select a color ID, remains black if unused.

Invert - lets you invert the current selection

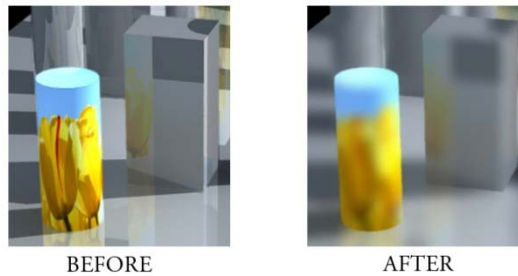
Original alpha - the plugin creates a new alpha channel based on ID colors. This option lets you decide what to do with the original alpha channel, ie.:

A*B - if the layer had transparent objects and you want to keep the transparencies, or

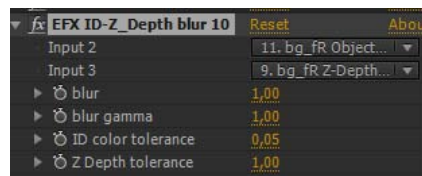
A+B - if you want to select more than 5 IDs and you are using more than one ID select filters.

*The new selection disregards original transparencies so that you can select different parts of the object with different plugin instances. This results in artifacts (no aliasing) on edges of objects that were rendered on transparent background. Use the original layer as an alpha matte or the A*B "Orig. Alpha" mode for a single instance to fix it.*

ID Z_Depth Blur



Like ID Blur, lets you blur the image with respect to the boundaries of individual objects. Great for faking blurry reflections/refractions. This filter additionally lets you supply a ZDepth map to aid in situations where you have a single big object intersecting with itself (torus knot, snake). You still don't want the blur to go over edges but this time the Node ID consists of a single color since it's all one mesh. With the help of a ZDepth map the plugin can find different parts of the mesh that are in different depths and find an edge this way.



Input 2 - the layer containing the Node ID render element (needed for isolating individual objects) .

Input 3 - the layer containing the ZDepth render element .

blur - the amount (radius) of blurring.

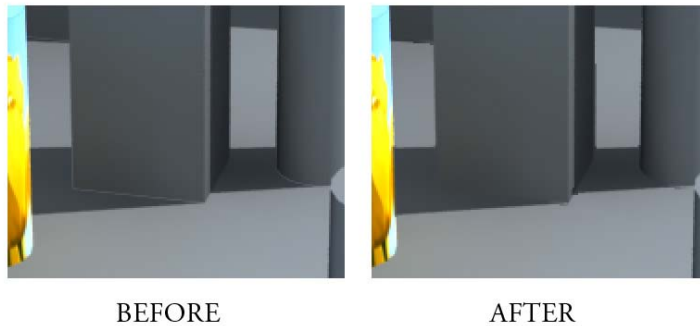
blur gamma - adjust the curve/falloff of the blur - lets you achieve characteristics of a box blur as well as Gaussian blur.

ID color tolerance - how much can neighboring pixels of ID layer vary to still be considered a single object.

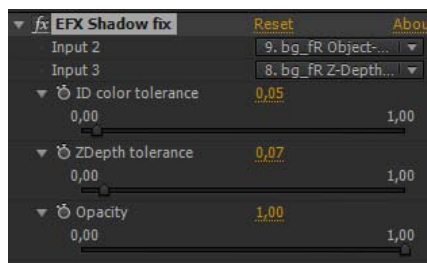
ZDepth tolerance - how much can neighboring pixels of ZDepth layer vary to still be considered a single part of the object.

The plugin comes in three versions - 10, 20 and 40. These indicate the maximum blur radius allowed, which also influences the speed at which the plugin initializes. As a rule of thumb - use the lowest blur that meets your needs.

Shadow fix



Fixes the one pixel gap between the shadow in the shadow pass and the object that's throwing the shadow.



Input 2 - the layer containing the Node ID render element (needed for isolating individual objects) .

Input 3 - the layer containing the ZDepth render element .

ID color tolerance - how much can neighboring pixels of ID layer vary to still be considered a single object.

ZDepth tolerance - how far from each other can two crossing objects be for their border to get a shadow fix treatment.

Opacity - lets you create a mix between original image and filtered.

By default the plugin just expands the shadow pass by 1 pixel in every direction without checking if it's on an edge between two objects or not. If you're okay with that - you don't need to supply the two inputs.

Velocity select (motion vector select)

Lets you select objects based on a supplied Velocity pass (motion vector pass).



Input 2 - the layer containing the Velocity render element .

velocity format - pick one of three possible velocity pass formats.

Direction - indicate which direction the objects you want to select are moving.

Direction spread - (in degrees) a width of the direction window - the plugin will select objects moving in directions from D-Ds to D+Ds.

Direction sp. falloff - (in degrees) a soft selection on the edges of the direction window.

Min. value - objects with speeds below this value will not be selected.

Max. value - objects with speeds above this value will not be selected.

Falloff value - a soft selection for Min. Max value thresholds.

Invert - inverts the selection.

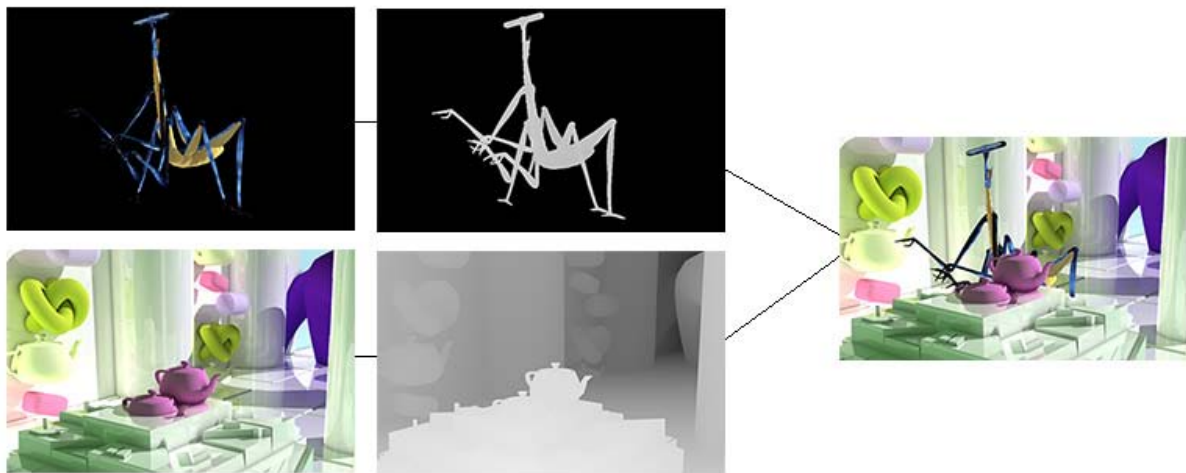
Original alpha - the plugin creates a new alpha channel based on motion. This option lets you decide what to do with the original alpha channel, ie.:

A*B - if the layer had transparent objects and you want to keep the transparencies.

*If you just want to select objects based on their velocity values, and you don't care about the direction of their motion - set the **Direction spread** and **Direction spread falloff** to 0 - this will disable the direction checking.*

*The new selection disregards original transparencies so that you can select different parts of the object with different plugin instances. This results in artifacts (no aliasing) on edges of objects that were rendered on transparent background. Use the original layer as an alpha matte or the A*B "Orig. Alpha" mode for a single instance to fix it.*

Z_Depth Compose



BEFORE

AFTER

The plugin lets you compose a layer INTO a second layer based on ZDepth maps of both of them. On a technical note - the plugin just cuts out parts of the current layer that would be obscured by elements from the background layer.



Input 2 - ZDepth map of the current layer.

Input 3 - ZDepth map of the background layer (the layer you want the current layer to be composited INTO).

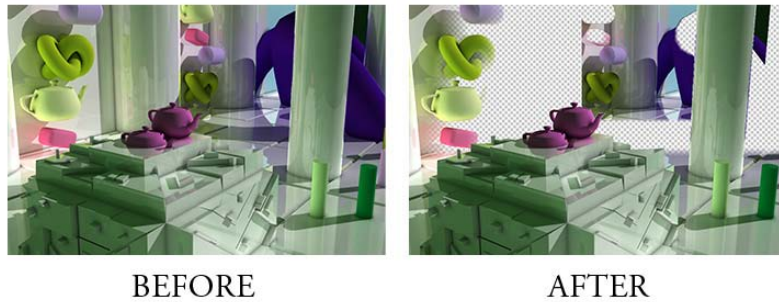
Move in depth - a depth offset. Lets you move the current layer closer or further in depth.

TIP.

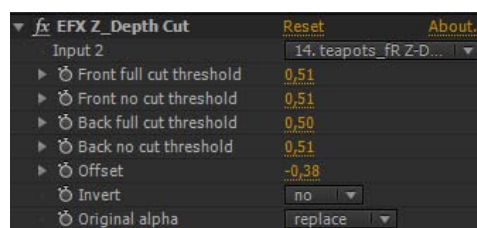
If one of the layers is rendered on transparent background - like the insect above - remember to render a ZDepth pass for it WITHOUT antialiasing. If you render it with antialiasing (nice feathered edge) then the depth data on the edges will be invalid - the real data is mixed with black color of the background and thus changes the stored depth info.

In 3dsMax to render a Render Element without antialiasing uncheck the "Filtered" checkbox in the RE parameters.

Z_Depth Cut



Lets you select pixels based on depth information.



Input 2 - ZDepth map

Front full c.t. - pixels with depth value higher than this will be cut out.

Front no c.t. - pixels with depth value lower than this will have an alpha of 1.

Depths in between will fade out.

Back full c.t - pixels with depth value lower than this will be cut out .

Back no c.t. - pixels with depth value higher than this will have an alpha of 1 .

Depths in between will fade out.

If definitions are a little confusing remember that in a depth map objects that are closer are brighter, and the ones really far are almost black - so objects close have a high value in a depth map, and the ones far away have a small value.

Offset - an offset value for the entire selection. Lets you perform a depth wipe, for instance.

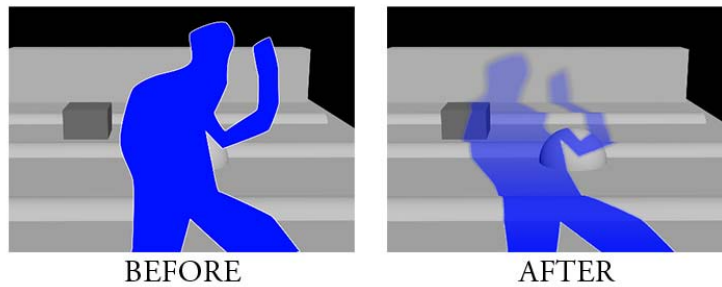
Invert - invert the selection.

Original alpha - the plugin creates a new alpha channel based on depth. This option lets you decide what to do with the original alpha channel, ie.:

A*B - if the layer had transparent objects and you want to keep the transparencies

*The new selection disregards original transparencies so that you can select different parts of the object with different plugin instances. This results in artifacts (no aliasing) on edges of objects that were rendered on transparent background. Use the original layer as an alpha matte or the A*B "Orig. Alpha" mode for a single instance to fix it.*

Z_Depth Shadow



Displaces and transforms the layer so that it looks like a shadow thrown ONTO another layer.



Input2 - ZDepth map of a background layer.

Invert Z_Depth Map - inverts the colors of the ZDepth map.

Move in XY - amount of horizontal and vertical displacement.

Opacity - the amount of drop in opacity with distance.

Opacity falloff - the curve of the opacity drop.

blur - amount of blur of the shadow.

blur gamma - blur curve - lets you set characteristics of a box blur or Gaussian blur.

Absolute move - translate the entire layer.

Show - select what you want to view: original shadow layer, background ZDepth map, final deformed shadow layer.