Inverting Things with Spherical by tatasz on DeviantArt

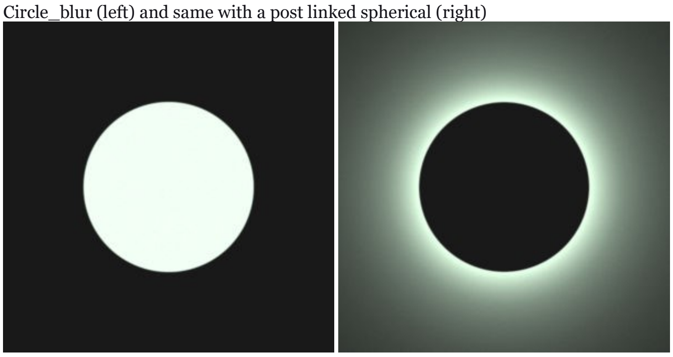
A few uses of spherical. Those are not all, not any close to it even, but hopefully a good bunch of directions and ideas.

Part of "structured IFS" Series
“ Structured IFS tutorial collection well, as usual, i need your help with this bunch of tutorials.
What should i write about? Is there anything you wanna know? Please ask, i´ll write about it ^^
If you wrote / want to write cool tutorials about structured IFS, poke me, i´ll add it to the collection.I need feedback Is anything too crappily written? Is it messy / unclear? Do tell!
Update Log:
2016 / 04 / 06 - Advanced Linear Tilings added
2016 / 03 / 20 - 2 new tutorials: Glynnsim and more on hypertiles.
2016 / 03 / 08 - 2 new Tutorials, and a bit of organization
2016 / 02 / 23 - Second blur tutorial added2015 / 11 / 23 - 3 tutorials added to list
XAOS
Xaos:
Xaos Basics
Linked Transforms
Shared linked transformsShared linked transforms - Examples”

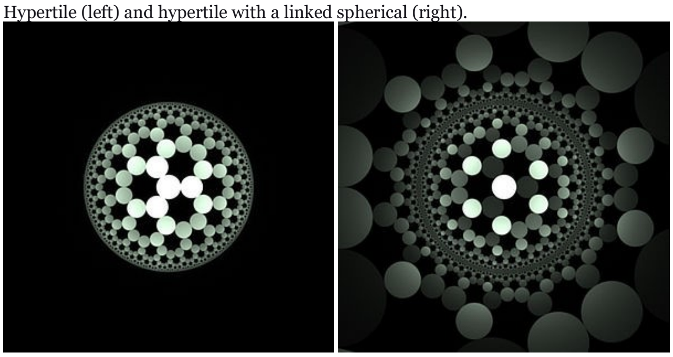
Circle / Spherical

To make an inverse of a circle, you can use spherical as linked transform:

Circle_blur (left) and same with a post linked spherical (right)



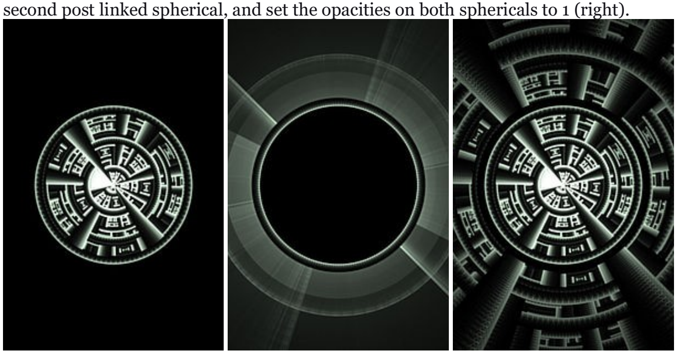
Hypertile (left) and hypertile with a linked spherical (right).



When you need to create an inverse but don't want to interfer with the shape, you may use 2 chained sphericals. Their effect on the other transforms will cancel each other (one inverts the circle, and the next one inverts the inverse of the circle, bringing it back to the original shape).

Lets see another example, disc + julian (Apo-Tuto_Disc-Julian).

First, we have a basic disc + julian pattern (left). Then, we add one post linked spherical to disc (middle), which messes up the original pattern. Then, we add a second post linked spherical, and set the opacities on both sphericals to 1 (right).



A third example is presented in Shared linked transforms - Examples in more details, but lets review it

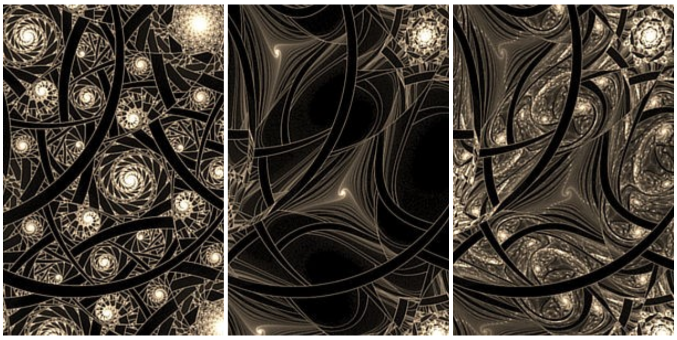
We will start with a simple lazysusan + julian: Basic Lazysusan

Add a pre-linked transform to lazysusan (don't forget to increase its weight), and replace linear with pre_spherical 1, spherical 1 and 0.1 eyefish, then scale down the pre_affine (a bit, until you get some clear shapes).

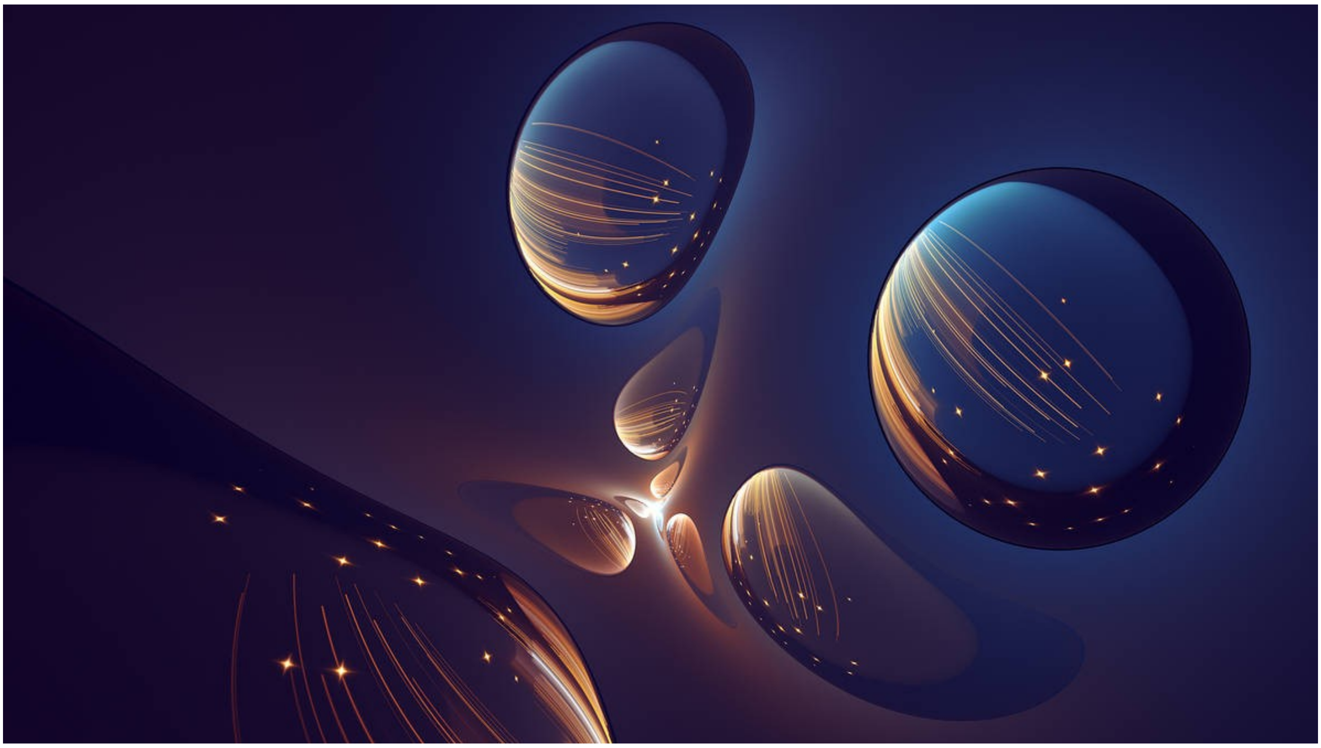
Now, duplicate this transform, replace everything with some hemisphere (0.24-0.28) and lower its weight to something like 3.

Final: Basic Lazysusan

Original lazysusan (left), lazysusan with holes (middle), holes filled with hemisphere (right):



Another example of inverting a circle is this work:



This is basically a simple plastic. To achieve the smooth blur effect, I used a sineblur with linked spherical to fill the area outside the bubbles. A step by step would be:

1. Make a simple plastic (2 transforms, spherical + eyefish on one, and a hemisphere filling the empy area on the other).
2. Duplicate the hemisphere transform.
3. Replace hemisphere with sineblur or blur_circle on the duplicated transform.
4. Add a linked spherical.
5. Scale the sineblur so it fills the whole area outside the hemisphere.

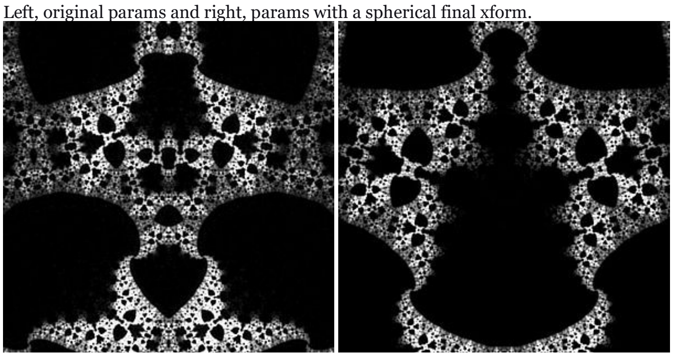
Spherical to put things to infinite

Frequently, specially when dealing with frameworks based on spherical, bipolar, elliptic and others, we need to fill not the center, but the outer areas of the fractal.

Lets start with an example: Juliascope + Spherical

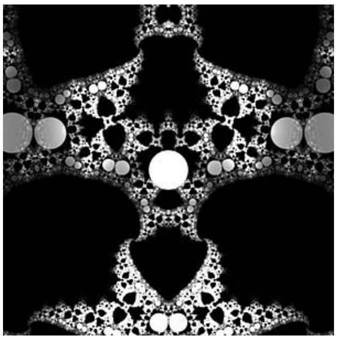
Now, we want to fill the outer areas of this structure. Notice that if we apply a spherical final transform to it, an empy spot will be now right in the middle.

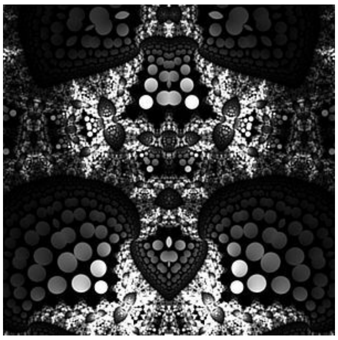
Left, original params and right, params with a spherical final xform.



So, if we just duplicate transform 1 and replace linear on it with blur_circle, and then add a linked spherical transform to it, the blurry circle will be positioned in the point corresponding to the center of the right picture.

Lets do it. Left, I duplicated transform 1, reduced its weight and replaced linear with circle blur. See that the blur overlaps with the structure. Now, on the right, I added a linked spherical transform, so the blr is now filling the previously empty area.





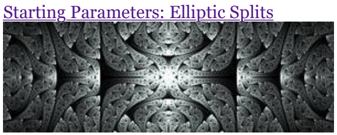
Feel free to take a look: Juliascope + Spherical + Blur

You may see a few more examples of usage of spherical here:

“ **Blurring Techniques - Part 1**Some methods to add cool blurs to your fractal, requested by BoxTail and written in collaboration with him
The parameters are for learning purpose only. Please tweak a lot and credit back.
Part of Structured IFS tutorial collection.”

Starting Parameters
As example, we will use basic elliptic splits parameters. Lets make it:
Start with a blank flameOn transform 1, replace linear with elliptic = 1Rotate it 90 degrees CCWScale transform 1 down by 150%
Add a new transformOn transform 2, replace linear with splits = 1Set splits_x variable to 1Rotate transform 2 90 CCWScale transform 2 up by 200%Or just grab the parameters here:

Starting Parameters: Elliptic Splits



Trick 1. Falloff2 / falloff3
Falloff2 and falloff3 create amazing blur effects. For best r “ **Blurring Techniques - Part 2**Some methods to add cool blurs to your fractal, requested by BoxTail
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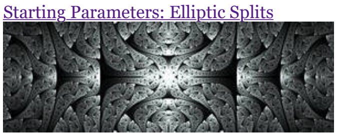

Trick 5. Spherical to send blurs to infinite
Sometimes you will have some empty ares in your fractal that cannot be filled by placing ele”