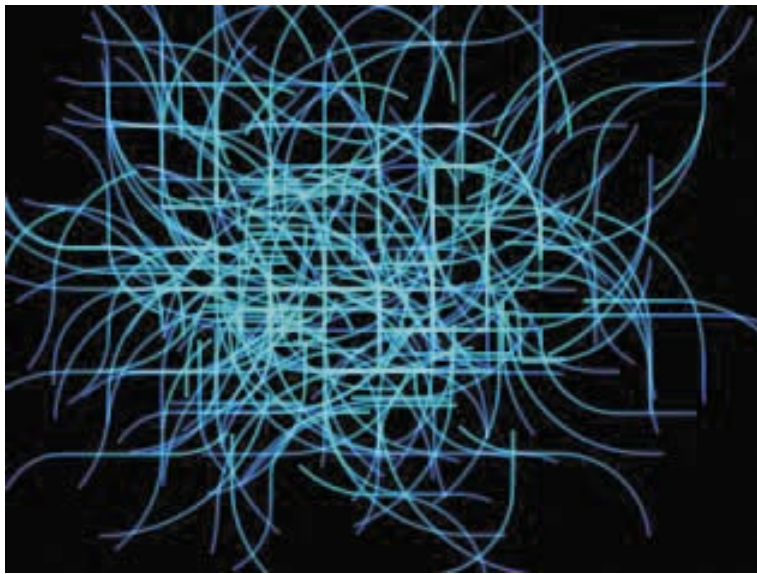


lovely liquid lines

Use GridLines from Geomancy to create beautiful flowing lines, in just a few minutes of setup for its underlying grid.



a tutorial for : [gridlines](#) from geomancy



[shapes and lines for broadcast design.](#)

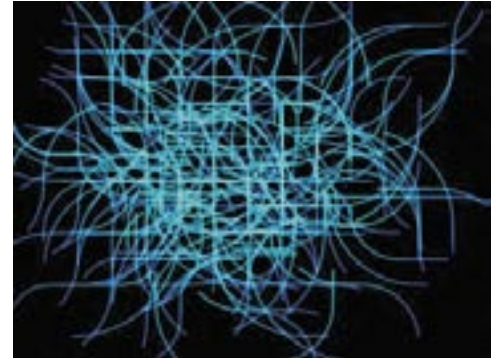
[from Digital Anarchy]

f/x tools for revolutionaries.



In this tutorial, we will use GridLines to create beautiful sweeping lines. This composition works great as a background, or as a foreground element that communicates the flow of information.

If you've watched the finished movie (in your download), you will realize that this project would take awhile to set up and animate using traditional methods. Using GridLines, we'll put the composition together in about 15 minutes. [figure 1]



[figure 1]

00- download & install

Before you start this tutorial, you will want to download the [geo-liquid-tute.zip](#) file from our website. This ZIP file contains an After Effects .aep file and QuickTime example movies.

You also need to install our Geomancy plugin set into your After Effects/Plugins folder. The plugins will appear in the 'Effect' dropdown menu, in a 'Digital Anarchy' submenu. [figure 2]

If you are working with the demo version of Geomancy, a red 'X' will watermark your footage.



[figure 2]

01- project setup

From your download folder, open up the [geo_liquid-lines.aep](#) project file in After Effects. The 'Final' comp shows your finished piece.

You can also play the QuickTime movie called [geo_liquid-final.mov](#) to see the final composition that you will create.

The 'Start' comp is simply a 640x480 project with a new Solid layer. Alternately, you can just create a 640x480 comp and add a Solid layer. [figure 3]



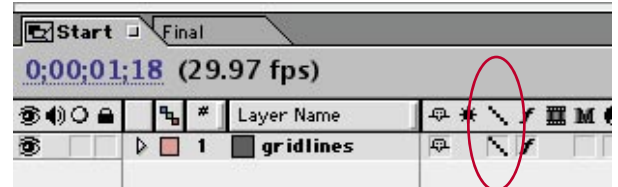
[figure 3]



02- apply gridlines

Apply GridLines to your Solid from the Effect> Digital Anarchy menu. Leave the layer at 'Draft Quality' for now. Draft will render much faster and make our setup easier. [figure 4]

Change the quality to 'Best Quality' when you render, so the Geomancy lines will be anti-aliased.

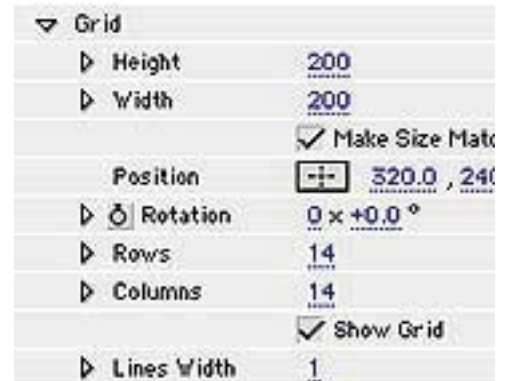


'Draft Quality' in Timeline. [figure 4]

03- grid setup

If you're going to control where something flows, you need places for that something to go. Our GridLines are no different.

Twirl the 'Grid' arrow down and turn the 'Make Size Match Layer Size' checkbox on. [figure 5] This will make the GridLines grid the same size as your layer.



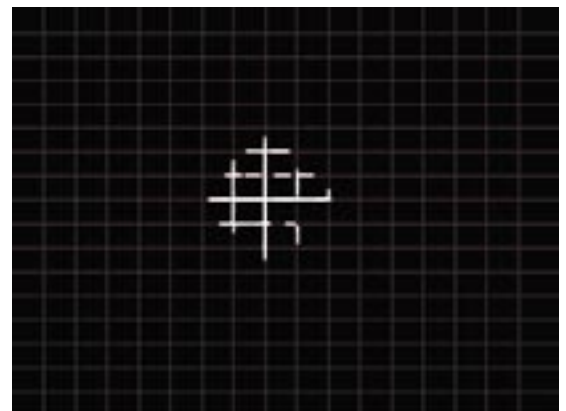
[figure 5]

04- preview grid

Now click on the 'Show Grid' checkbox. This option shows the grid that is the underlying foundation of the lines that are generated. We want to space the grid (thus, the lines) out a bit, so change 'Rows' and 'Columns' to 14 of each.

The plugin's lines will follow the red grid lines that you now see onscreen. [figure 6] 'Show Grid' is useful because it enables you to see the structure that the lines will follow, and visually preview any changes you make to the underlying grid.

The grid is now set up, so uncheck 'Show Grid' to hide the grid's lines.



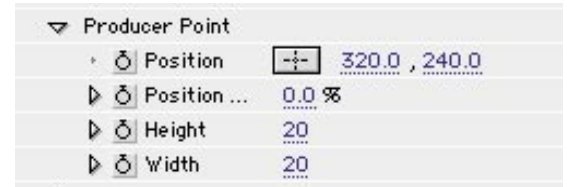
[figure 6]



05- producer point

While the grid defines where the Geomancy lines can go, the Producer Point defines where they start from. These lines, of course, are particles being generated by a particle system.

The Producer Point can be as small as a single pixel or as large as the entire grid area. For this project, keep the 'Height' and 'Width' parameters at their default size of 20, 20. We want all the lines to emanate from the center, so a small, central producer point is fine. [figure 7]



[figure 7]

If we wanted the lines to start at a different location, we would change the 'Position' parameter. For instance, to make the lines to appear from offscreen, the Position could be set to -24, 80.

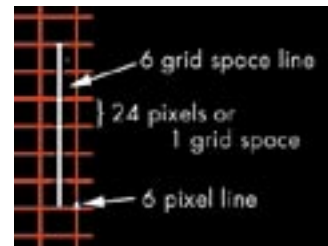
06- line setup

We don't need to make any changes in the 'Line Setup' section either. We want random lines moving off in all directions, and that is what the default settings do. [figure 8] Let's examine some of the settings anyway.



[figure 8]

The most important parameter here is the 'Random Lines' checkbox. With this option checked (as it is by default) the 'Vertical Lines' and 'Horizontal Lines' popups are ignored and lines go in any random direction. If it's not checked, these popups determine the direction of the lines.



[figure 9]

Another important parameter in this section is the 'Line Unit'. This determines what measurement unit is used for the lines. 'Pixel' is the default option that we're using. The other choice, 'Grid Space', is the area between one column and the next, or one row and the next. [figure 9]

DO NOT change this option without addressing the 'Line Attributes' section! Your rendering times may drastically increase if you don't have the filter set up correctly. See the full Geomancy manual for more details.

After Step 04, the GridLines will look like our figure at right. [figure 10] This looks nothing like our final movie, so let's get closer in the next step.



[figure 10]



07- line attributes

Now that we've created the grid attributes, we will set up how our lines will look. Twirl down the 'Line Attributes' section. Move the Time Marker to 04:00, so you can see what the lines look like as we change the parameters.

First, we want our lines to be much longer. Change the 'Minimum Length' to 100 and 'Maximum Length' to 200. [figure 11]

We want the lines to stay onscreen for 4 seconds, so change the 'Lifespan' to 120. 'Lifespan' is measured in frames. Since 120 frames is equal to about 4 seconds at 29.97 fps, which is what our comp is set to.

Let's vary the line thickness a bit. Change 'Thickness Randomness' to 50.

At this point our lines are arranged like a street map... or a waffle. [figure 12] See what you want to see. It's all about your artistic interpretation.

08- corner size

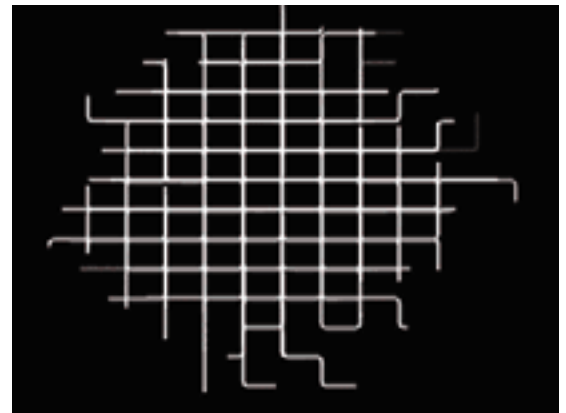
Now we'll get into the stuff that makes our lines look like the final movie.

Change the 'Corner Size' to 100. [figure 13] When a line makes a turn, this parameter determines the radius of the turn. By cranking this value up, we end up with sweeping curved lines.

Play around with 'Corner Size' to get an idea of the visuals that different sizes will give you. If you want to change things up a bit, try changing the 'Corner Size Randomness' to 50. [figure 14]

Line Attribute	
▶ <input type="checkbox"/> Minimum Length	100
▶ <input type="checkbox"/> Minimum Rando...	0.0 %
▶ <input type="checkbox"/> Maximum Length	200
▶ <input type="checkbox"/> Maximum Rando...	0.0 %
▶ <input type="checkbox"/> Birth Rate	2.0
▶ <input type="checkbox"/> Birth Rate Rando...	0.0 %
▶ <input type="checkbox"/> LifeSpan	120
▶ <input type="checkbox"/> LifeSpan Random...	0.0 %
▶ <input type="checkbox"/> Speed	50
▶ <input type="checkbox"/> Speed Randomness	0.0 %

[figure 11]



[figure 12]

▶ <input type="checkbox"/> Thickness	5.0
▶ <input type="checkbox"/> Thickness Rando...	0.0 %
▶ <input type="checkbox"/> Viscosity	0
▶ <input type="checkbox"/> Viscosity Rando...	0.0 %
▶ <input type="checkbox"/> Opacity	100.0 %
▶ <input type="checkbox"/> Opacity Random...	0.0 %
▶ <input type="checkbox"/> Fade In	5
▶ <input type="checkbox"/> Fade In Randomn...	0.0 %
▶ <input type="checkbox"/> Fade Out	5
▶ <input type="checkbox"/> Fade Out Random...	0.0 %
▶ <input type="checkbox"/> Corner Size	100.0
▶ <input type="checkbox"/> Corner Size Ran...	0.0 %

[figure 13]

[figure 14] Corner Size Randomness is set to 50 and 100.





09- color section

Next twirl down the 'Color' section. Change the 'Start' color to a dark blue and the 'End Color' to a lighter blue. [figure 15]



[figure 15]

After this steps, render out the project to take a look at your work, making sure to render in 'Best Quality'. You can also open and play the QuickTime movie [geo_liquid-half.mov](#) as a checkpoint. [figure 16]



[figure 16]

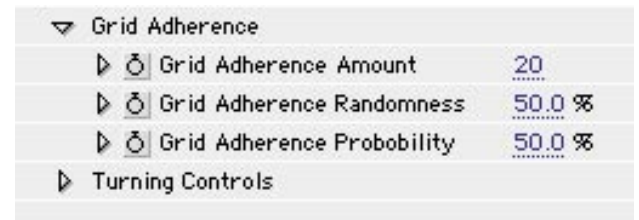
We already have a neat effect, but a little tweaking will give us different looks.

08- grid adherence

We mentioned earlier that the GridLines follow their rows and columns. 'Grid Adherence' is what causes this behavior. By default, it's set to make the lines stick like glue to their rows and columns.

But we can change that. Let's open the 'Grid Adherence' section.

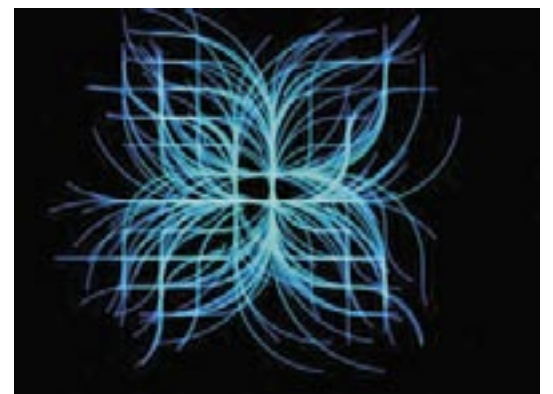
You can make the lines only "more or less" stick to the grid. Do this by setting the 'Grid Probability' to 50%. About half the lines will stick to the grid. [figure 17]



[figure 17]

The other half will be off by some amount. That amount is set by the 'Grid Adherence Amount'. Set this to 20.

Then set the 'Grid Adherence Randomness' to 50%. This varies the 'Grid Adherence Amount' from line to line. Some lines will be 10 pixels off the grid, some will be 20, or 2, etc. [figure 18]



[figure 18]

Now we'll make one last change.



09- producer points

Go back to the 'Producer Point' section and change the 'Height' to 200 and 'Width' to 300. This will spread out the origination point of the lines, creating lines that start from many different origins. [figure 19]

So there you have it. Lines flowing all over the place willy nilly, and it only took you a few minutes.

conclusion

Take a look at the final Liquid Lines movie in your download folder, called [geo_liquid-final.mov](#), or render out the composition that you've just built.

Really, the only difficult aspect of the GridLines plugins is understanding the grid that is controlling the lines. We suggest playing around with the 'Grid Adherence' parameter to become familiar with what's going on.

Otherwise, all of the Geomancy filters are pretty easy to control. Have fun!



[figure 19]