

muhCircles.html

Version 1.1 – August 04, 2015 (Deprecated December 03, 2015)

Introduction

muhCircles.html is an artistic creation for HTML5 browsers, created and used as background on AdolfIntel.com for a few months.

It requires a modern browser with HTML5 Canvas support, and is fairly heavy on the CPU, especially on Chromium based browsers, because even IE is better than Chrome nowadays.

Including muhCircles.html in your project

AI.COM “Mini CMS”

Copy muhCircles.html, FileSaver.js and canvas-toBlob.js to the root folder, then edit _config.php and replace the last 2 lines with this:

```
$Background_Page="muhCircles.html";

$Background_DefaultConfig="100,221,81,50,263,81,50,10,5,0,0.01,2,0,0,0.5,0.5,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50";
```

Optionally, you can also copy edit.frag, and use it to play around with the settings to learn how they work without reading this long boring file.

Single page / fully AJAX site

Add this to your <body>:

```
<div style="position:fixed; z-index:0; top:0; left:0; width:100%; height:100%; overflow:hidden">
    <iframe src="muhCircles.html" style="width:100%; height:100%; border:none; margin:0; padding:0; overflow:hidden" scrolling="no"></iframe>
</div>

<div style="position:fixed; z-index:1; top:0; left:0; width:100%; height:100%; overflow:auto;">
    YOUR PAGE CODE HERE
</div>
```

If you want to apply a custom config instead of the default one, replace src="muhCircles.html" with src="muhCircles.html?config" where config is the list of 35 parameters separated by commas, as illustrated below.

Now, if your site has links to other pages that will cause a full page reload, this method is a bit crap because you'd have to modify every page on your site, and since the background is partially random generated, you'll notice that it has changed pages.

This problem does not apply if you load fragments via AJAX, like I do on AdolfIntel.com.

The “wrapper” method

This method basically puts your whole website in an iframe and embeds it into a new webpage. This means you won't have to make any changes to your pages (unless they have a background-color somewhere, in which case, you'll have to remove it), but it also means that you won't be able to get an URL to a specific

page of your site, and you'll have to redirect search engine bots to your actual main page instead of the "wrapper" we're about to create (you can modify your .htaccess file to do that).

Let this be your new index.html page:

```
<!DOCTYPE html>

<html>

<head><title>YOUR SITE NAME HERE</title></head>

<body>

<div style="position:fixed; z-index:0; top:0; left:0; width:100%; height:100%; overflow:hidden">

    <iframe src="muhCircles.html" style="width:100%; height:100%; border:none; margin:0;
padding:0; overflow:hidden" scrolling="no"></iframe>

</div>

<div style="position:fixed; z-index:1; top:0; left:0; width:100%; height:100%; overflow:auto;">

    <iframe src="YOUR ACTUAL MAIN PAGE HERE" style="width:100%; height:100%; border:none;
margin:0; padding:0; overflow:hidden" scrolling="no"></iframe>

</div>

</body>

</html>
```

[Can I want use it in \[Insert popular CMS here\]?](#)

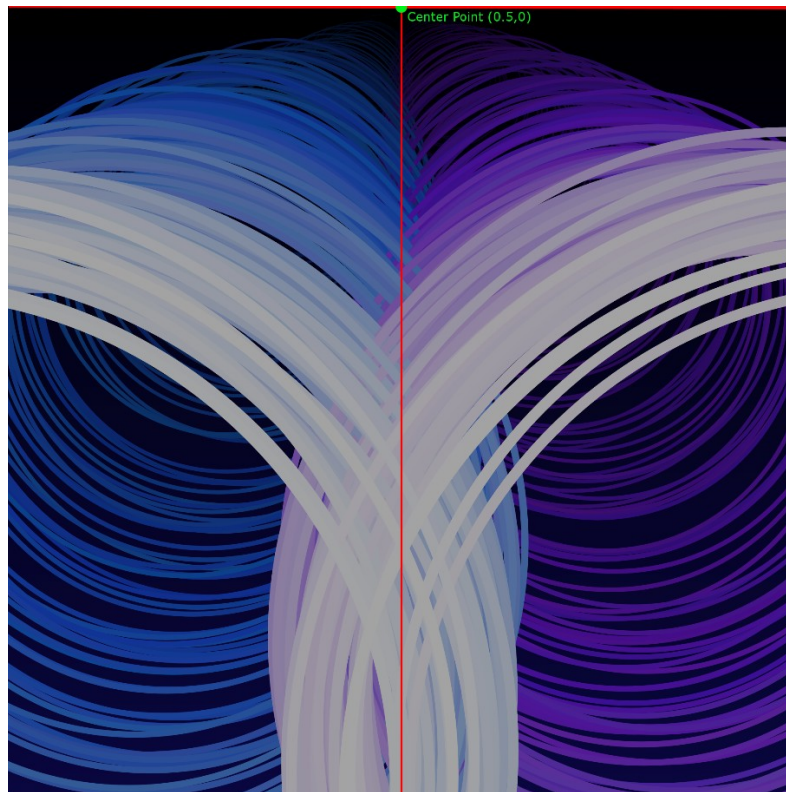
Yes. Edit the template. Have fun.

Parameters

Coordinate system and Center point

For the moment, let's assume that the canvas is a square (width/height=1).

Coordinates are not in pixels, of course, they refer to canvas width and height. They have origin in the Center point (see below), and the location of the Center point is specified starting from the upper left corner of the screen.



Example: In the default config, the Center point is (0.5,0), which means it's in the middle at the top of the screen. The point (-0.3,0.5) relative to that Center point means it's horizontally 30% of the canvas width left from the center, and vertically it's at the middle of the screen.

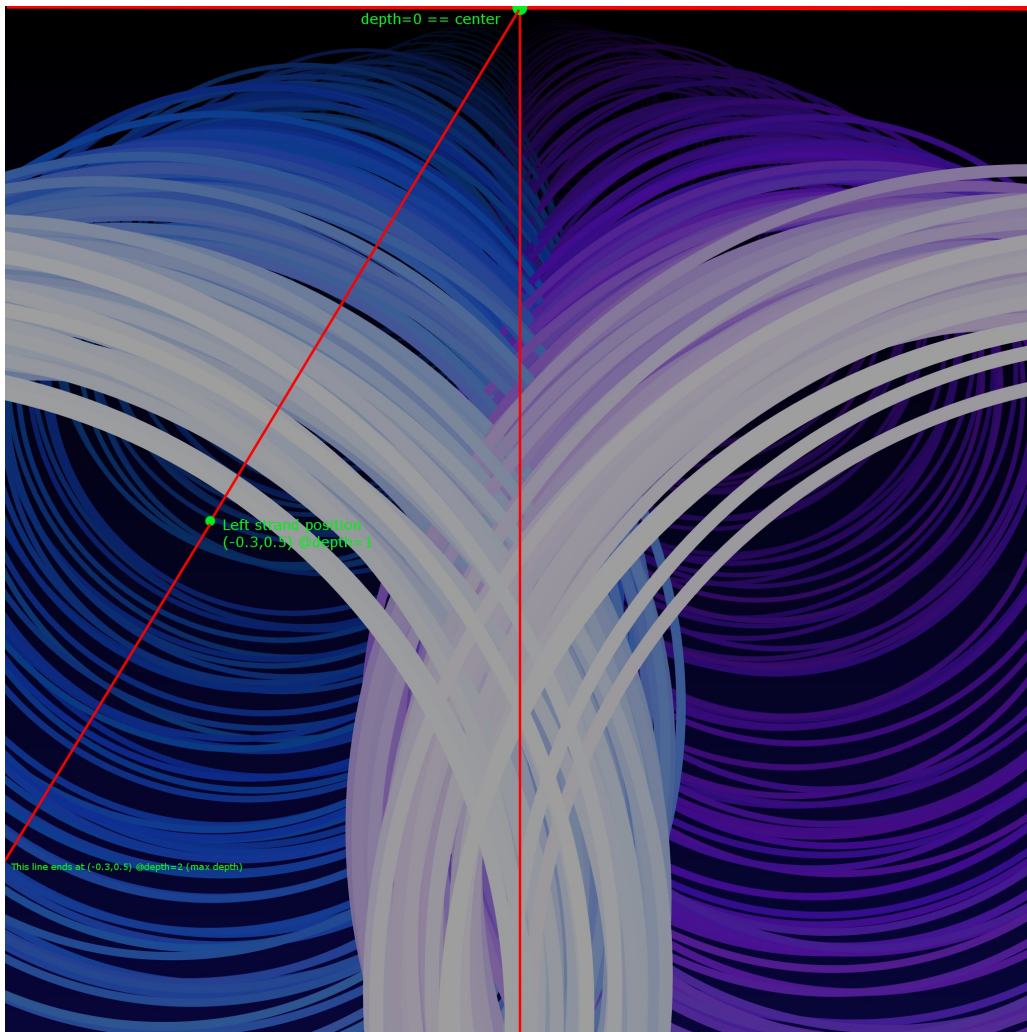
How aspect ratio is managed

When the canvas is wide (landscape, width/height>1), the bottom is cut off.

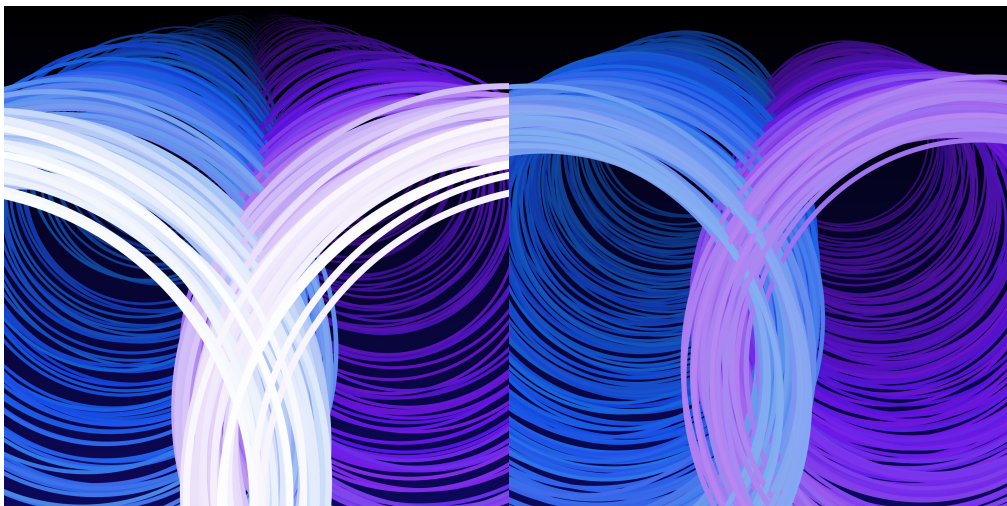
When the canvas is tall (portrait, width/height<1), Y coordinates are stretched (the circles won't be, only their position).

Strand positioning and depth

There are 2 strands, each with a couple of coordinates (x,y) that give the direction of the strand. Strands converge at the center point at depth=0, and "escape from it".



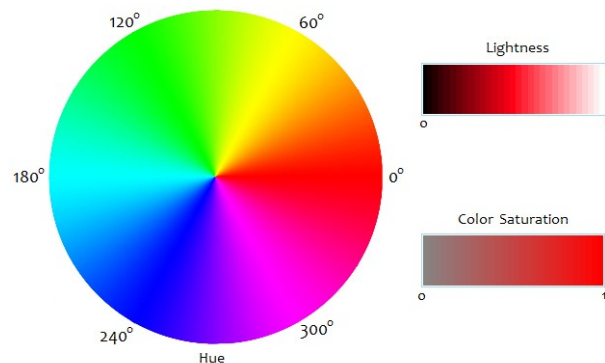
The Depth interval determines the depth of the circles. Look below: left has 0-2 interval, right has 0.5-1.5 interval.



As you can see, the right one is only a section of the left one. Note that the circles are more dense because the number of circles per strand is unchanged.

The position of circles is subject to a degree of randomness, the variance (x,y) determines how much they can deviate from the specified position. For instance (-0.3,0.5) with a variance of (0.04,0.04) means that circles will have center in the interval (-0.32,0.48)-(-0.28,0.52).

Colors



Above is the HSL color format. H stands for Hue and determines the color (0-360), S stands for saturation and determines how vibrant the color is (0-100), L stands for lightness and determines how bright the color is (0-100, 0 is always black, 100 is always white, 50 is the exact color you chose).

Lightness of circles is multiplied by their depth. So at depth=1 it will be the exact color you chose, at depth=0 it will be black, at depth=2 it will be twice as bright, and so on.

Each strand has its own base color. A degree of randomness on Hue, Saturation and Lightness can be specified.

Radius

The radius of circles is determined by the radius parameter, expressed relative to canvas width. For instance, 0.35 will mean that the circles will have 35% of the canvas width as radius.

A degree of randomness can be added with the variance parameter.

Circles per strand and line thickness

A parameter determines the (approximate) number of circles per strand (<500 recommended).

Line thickness, is expressed relative to canvas width, just like the radius.

The 2 parameters are quite related, because if you halve the number of circles per strand and double the thickness, you'll get the same "filling" effect, just with a more minimal look.

Animation

A couple of parameters determine how much the position of circles can deviate from their original position as they are moved by the animation. For instance if a circle has center at (-0.3,0.5) and the animation range is (0.02,0.02), the circles will move between (-0.31,0.49) and (-0.29,0.51).

The animation speed determines how fast they will move in this interval. The animation speed itself is subject to the speed variation frequency parameter (in Hz), which can make it pulse within the specified interval. Leave it to 0 for a constant speed.

Background gradient

2 HSL colors are used to generate the gradient in the background.

Other settings

The frame time (expressed in ms) determines the maximum framerate. If the animation is slow, a high frame time (such as 50 ms, which is 20 fps) is acceptable, but if the animation is fast, you'll want something smoother (such as 20ms, which is 50 fps).

Remember that higher framerate = more CPU.

Settings format

Settings are expressed as a long string of 35 comma separated numbers like this:

200,221,81,50,263,81,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

Here's what they are:

- Circles per strand
- Strand 1 Color (H,S,L)
- Strand 2 Color (H,S,L)
- Color variance (H,S,L)
- Depth Interval (Min,Max)
- Strand 1 position (x,y)
- Strand 2 position (x,y)
- Strand position variance (x,y)
- Radius
- Radius variance
- Line thickness
- Animation range (x,y)
- Background Color 1 (H,S,L)
- Background Color 2 (H,S,L)
- Animation speed interval (Min,Max)
- Animation speed frequency
- Center point (x,y)
- Frame time

A bunch of cool settings to try:

50,221,81,50,263,81,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.03,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

200,221,81,50,263,81,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

400,221,81,50,263,81,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.004,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

200,0,0,50,0,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,0,20,1,1,0,0.5,0,50

200,5,71,50,15,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,10,40,20,1,1,0,0.5,0,50

200,0,100,50,0,100,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.01,0.02,0.02,0,0,0,10,100,20,1,1,0,0.5,0,50

200,90,60,50,100,60,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,90,60,20,1,1,0,0.5,0,50

200,90,81,50,100,81,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,90,81,20,1,1,0,0.5,0,50

200,60,71,50,70,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,60,81,20,1,1,0,0.5,0,50

200,155,71,50,155,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,120,60,20,1,1,0,0.5,0,50

200,185,71,50,190,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,190,81,20,1,1,0,0.5,0,50

200,207,71,50,210,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,210,81,20,1,1,0,0.5,0,50

200,290,71,50,290,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,290,81,20,1,1,0,0.5,0,50

200,322,71,50,328,71,50,10,5,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,322,81,20,1,1,0,0.5,0,50

100,221,81,50,263,81,50,10,5,0,0.01,2,0,0,0.5,0.5,0.04,0.04,0.35,0.07,0.007,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

100,290,81,50,295,81,50,10,5,0,0.01,2,0,0,0.5,0.5,0.04,0.04,0.25,0.05,0.007,0.02,0.05,0,0,0,290,81,20,2,2,0,0.5,0,50

100,221,81,50,263,81,50,10,5,0,0.01,2,0,0,0.5,0.5,0,0,0.35,0,0.003,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

20,221,81,50,263,81,50,10,5,0,0.01,2,0,0,0,0,0,0.35,0,0.003,0.02,0.02,0,0,0,243,81,20,1,1,0,0.5,0,50

50,0,0,1000000,0,0,1000000,0,0,0,0.01,2,-0.3,0.3,0.5,0.5,0,0,0.35,0.04,0.003,0.02,0.02,210,85,40,210,85,40,1,1,0,0.5,0,50
70,0,0,200,0,0,200,0,0,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.001,0.02,0.02,0,0,0,0,0,1,1,0,0.5,0,50
20,221,81,50,221,81,50,0,0,0,0.5,1,-0.3,0.3,0.5,0.5,0,0,0.55,0.001,0.05,0.5,0,0,0,243,81,20,0.8,0.8,0,0.5,0,50
70,0,100,35,0,100,35,360,20,20,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.07,0.02,0.02,0.02,0,0,0,0,0,1,1,0,0.5,0,50
2,230,80,60,10,70,38,0,0,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.4,0.02,0.04,0.04,0,0,0,0,0,1.2,1.2,0,0.5,0,50
10,0,0,50,0,0,50,0,0,0,0.01,2,-0.3,0.3,0.5,0.51,0.04,0.04,0.35,0.3,0.007,0.04,0.04,0,0,50,0,0,50,1,1,0,0.5,0,50
30,221,81,25,221,81,25,0,0,80,0.1,4,0,0,0,0,0,0.5,0,0.1,0,0.04,0,0,0,0,0,1.5,1.5,0,0.5,1,50
100,221,81,50,300,71,50,10,5,0,0.01,2,0,0,0.5,0.5,0,0,0.2,0,0.01,0,0.05,0,0,0,243,81,20,1.5,1.5,0,0.5,0,50
100,0,0,50,0,0,50,0,0,20,0.01,2,-0.3,0.3,0.5,0.5,0.04,0.04,0.5,0.5,0.01,1,1,0,0,20,0,0,20,0.15,0.25,0.2,0.5,-1,20
0,243,81,20,243,81,20,0,0,0,0,0,1000

License

Same as AdolfinIntel.com: GNU GPLv3

Uses FileSaver.js and canvas-toBlob.js by [Eli Grey](#), under the [MIT License](#).