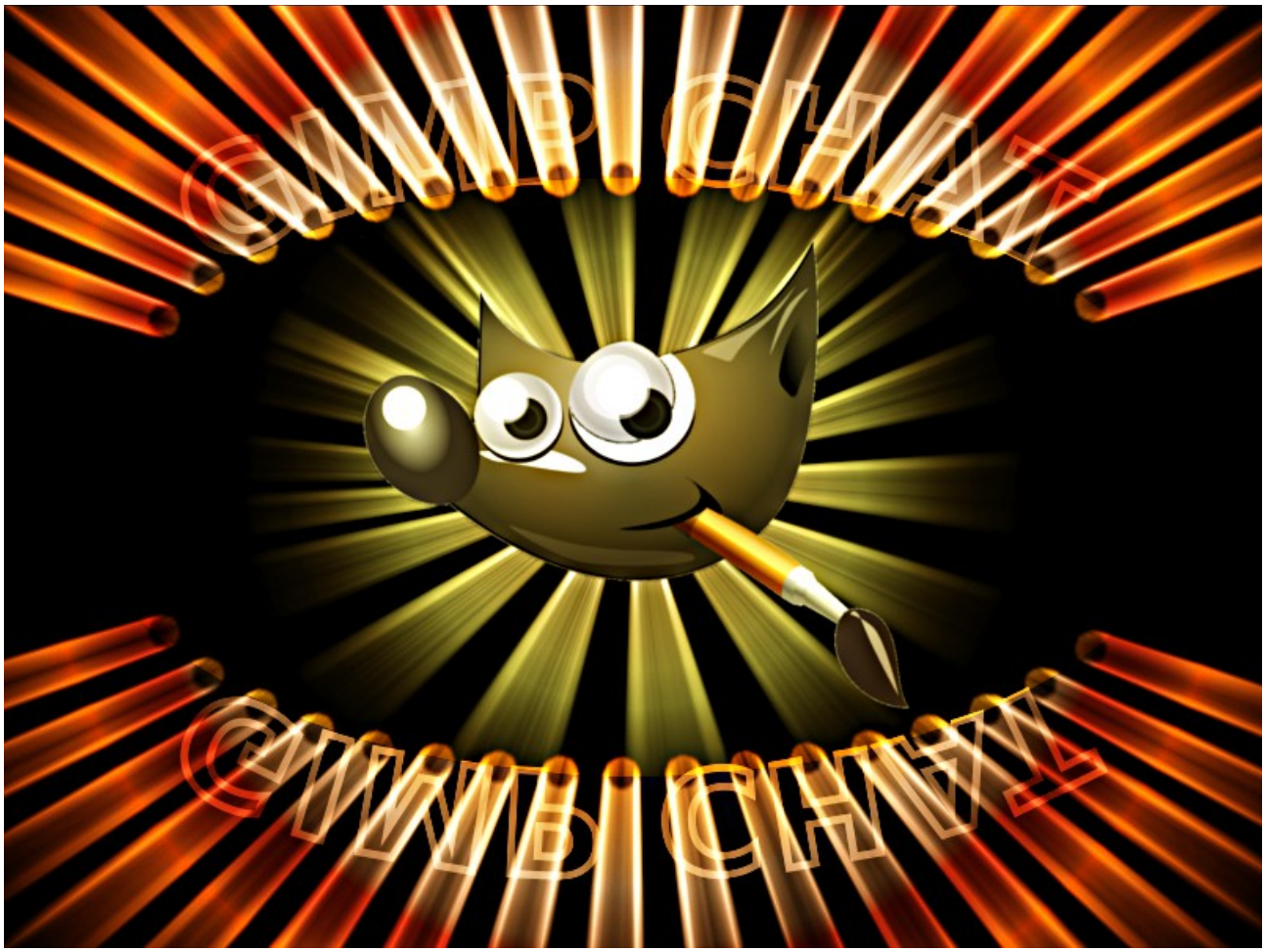
Playing With Light Rays (Part 3)

A tutorial in three parts on how to use the GMIC 'Light Rays' filter in GIMP



By OldManGrumpy



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Introduction

This is part 3, the final part of a series on creating images using the GMIC Light Rays filter. This tutorial was created following a number of requests from members of the Gimp Chat forum in a thread I originated with the same name – Playing With Light Rays.

Essentially this tutorial reflects my own journey and the experience I gained along the way, when learning to use the GMIC Light Rays filter. The possibilities are endless and all I am really doing is providing some hints so that others can achieve beautiful outcomes with light rays and GIMP.

As always this tutorial is geared specifically for **less experienced** GIMP users, but I am sure that that both new and more experienced GIMP users will find some benefit in being able to create images like those shown on the title page and also those to be found in the Gimp Chat thread at:

http://gimpchat.com/viewtopic.php?f=11&t=14263

This tutorial series comes in three parts as follows:

1. **Part 1** (already posted in Gimp Chat) itself is in three sections, the first of which addresses the basics of the filter, its behaviour and the parameters available to manipulate it. Two short, 'step by step' simple tutorials are then provided, one using a single image/shape and default parameters in the filter to start the 'light rays' ball rolling, the second with a single image, offset from centre and two sets of rays. Colouring options for the light rays are also identified.
2. **Part 2** (already posted) addresses a more complex image with more objects/shapes each with multiple light rays in varying directions to form a monochrome light ray pattern on the canvas. A number of colouring options are then demonstrated using standard GIMP gradients which can change the pattern outcomes considerably.
3. **Part 3** - this last part was originally designed to address the creation of sharply focused, slimmer light rays with no 'bleeding' of light, by cutting/shaping rays and/or using 'paths' and a 'layer mask' equivalent, for example, a flying saucer space scene – refer post #107 at http://gimpchat.com/viewtopic.php?f=11&t=14263&start=100. However, this tutorial exercise has also taught me some lessons and I believe that I have found more simple ways to produce, direct and focus the light rays as desired and I will expand on that below.

Assumptions

Given that we are using a GMIC filter in this tutorial, then you must have already installed GMIC in your GIMP plug-ins folder. For more information if required please visit:

http://gmic.eu/gimp.shtml

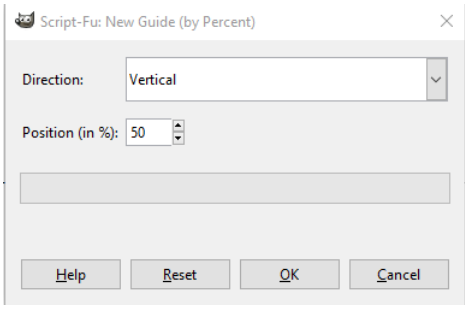
Conventions used in this tutorial

Instructions on accessing and using various GIMP functions and filters are expressed in the following format:

Image>Guides>New Guide (by Percent)…

This means that the user with a mouse, firstly left clicks on **Image** from the main GIMP menu, which then shows a drop down list of Image options available.

From this list the user with a mouse then left clicks on **Guides** to show the Guides options available. From this list the user then left clicks on **New Guide (by Percent)…** to display the following form for completion:



For ease of reference in this tutorial, I will use both **layer and path names** and instructions to name each such layer/path are included in the step by step dialogue.

References to the path names that we use will be identified like this – **Path name 1**
References to the layer names that we use will be identified like this – **Layer Name 1**
References to any guides we use when positioning objects on the canvas or as we create any required paths, will be in the following format:

Horizontal 1 for horizontal guides, top to bottom.
Vertical 1 for vertical guides, left to right.

I should state here that the correct name and location of the 'light rays' filter, the subject of this tutorial, is found under:

Filters>GMIC>Lights & shadows>Light rays

Other Scripts Used In/Required By This Tutorial

In this tutorial we will use guides at set intervals to accurately position the objects that form our image. It is possible to create these guides manually and I cover that aspect in the tutorial.

I also use Ofnuts 'text-along-path-0.4.py' plug-in which can be downloaded from:

https://sourceforge.net/projects/gimp-path-tools/files/scripts/

This script must be placed in users/user name/.Gimp-2.X/plug-ins.

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TUTORIAL PART THREE

First timers with GMIC Light Rays will probably benefit from having a look at Parts One and Two of my tutorials, which can be found at:

http://gimpchat.com/viewtopic.php?f=23&t=14311
http://gimpchat.com/viewtopic.php?f=23&t=14324

Enclosed with this Tutorial 3 set is an image of 'Wilbur' the Gimp mascot, which will be used as a centrepiece in our target image. You need to unzip it and store it in your preferred folder. Otherwise all gradients, brushes and fonts used should appear in your standard Gimp system.

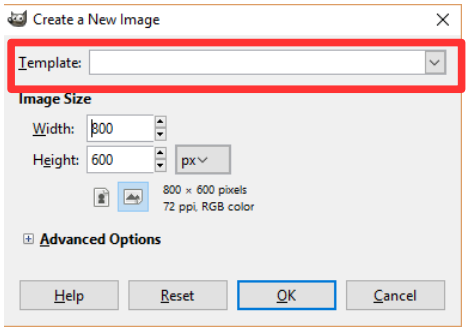
Our objective then is to create a fitting tribute to both Gimp and Gimp Chat using a number of slim sharply focused light rays, some with default settings and others with custom settings. The method to create these type of rays will be described and emphasised by repetition. Some colouring options will be included but I encourage you to try out your own ideas and preferences for that aspect to demonstrate your creativity and the power and flexibility that GIMP offers.

OK lets start; but remember to save your xcf file regularly.

Phase 1 – Setting Up To Create the Rays

In this phase we will create some paths, write text along one, then stroke the paths to give us a series of 'dots', in preparation for and from which we will create the light rays.

1. Let's open a new canvas; click on File>New to show the Create a New Image window as below. The Width and Height size shown will vary depending on current open images. So either enter 800 in the Width box and 600 in the Height box or click on the Template drop down arrow and select the 800 x 600 pixel size template from the list. Then click OK. You will then a new image with a single layer in white named **Background**.

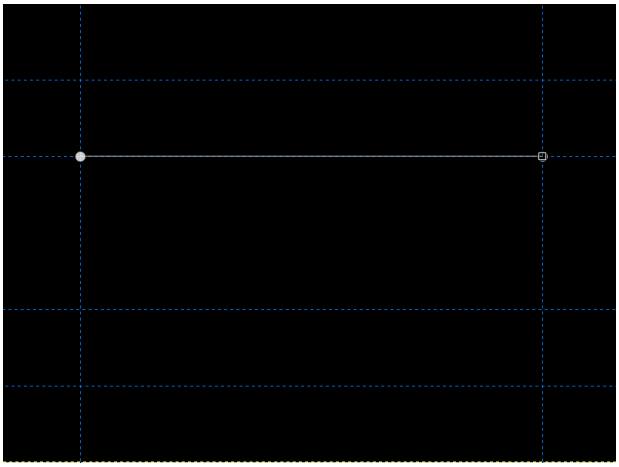


2. To assist with object positioning, lets set up some 'cross hair' guides on your canvas.
    1. Move your cursor to the top edge of the canvas window, left click, hold the button down and then drag down a **horizontal guide** level with the 500 pixel marker on the left of your canvas.
    2. Repeat step 2.1 to create **horizontal guides** at 400, 200 and 100 pixels.
    3. Now move the cursor to the far left of your canvas window, left click, hold the button down and then drag across a **vertical guide** to the 700 pixel marker on top

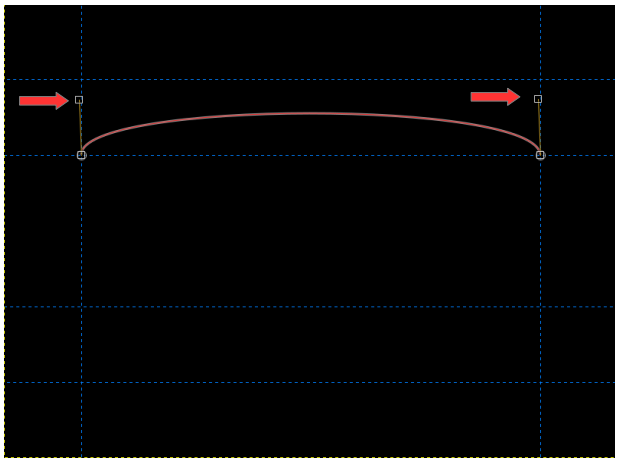
of your canvas.

4. Repeat step 2.3 to create a second vertical **guide** at 100 pixels.

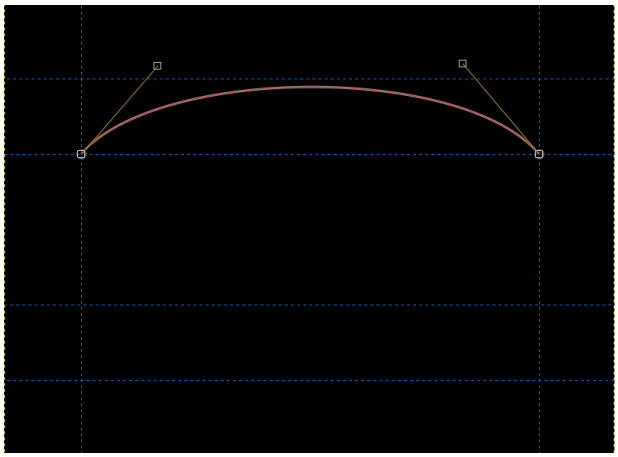
3. Just to be sure, check that in the View menu, Snap to Guides is set on, i.e. there is a tick to the left.
4. Also lets change our background from white to black; select the Bucket Fill tool from the Tool Box, in Tool Options ensure that the FG Color Fill radio button is set then click on the canvas. Now our guidelines will also show up better.
5. Now select the Paths Tool from the Tool Box, check that in the Tool Options the Design mode radio button is set on. Then place the cursor on the intersection of the **horizontal guide** at 200 pixels and the vertical **guide** at 100 pixels and click to create the first control point of the path. Move the cursor to the intersection of the **horizontal guide** at 200 pixels and the vertical **guide** at 700 pixels and click again to create our single segment path. Your screen should now look like that below.



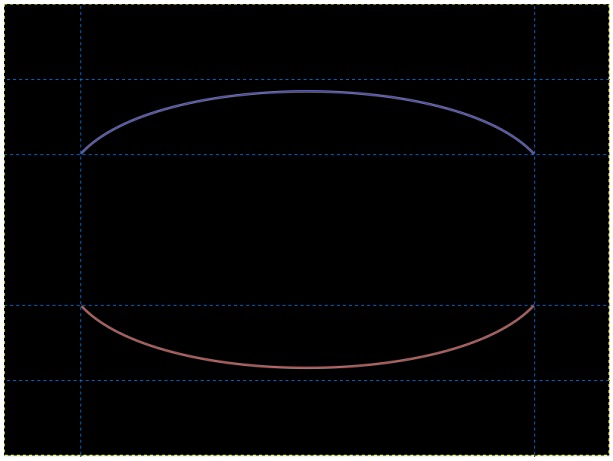
6. Now click on the Paths Dialogue window tab where you will now see your new path icon and it will be called **Unnamed.** As it is not yet properly visible, click on the far left of the icon to display the eye symbol and to make it visible as a path on your canvas, then rename the path as **top curve.**
7. Now position your cursor on the centre of the path at 400 pixel mark, left click and hold the button down and drag the line slightly upwards to make a curve and to display the handles at each node. Your canvas should look something like that below, with handles pointing upwards at each end, as highlighted by the red arrows I have added.



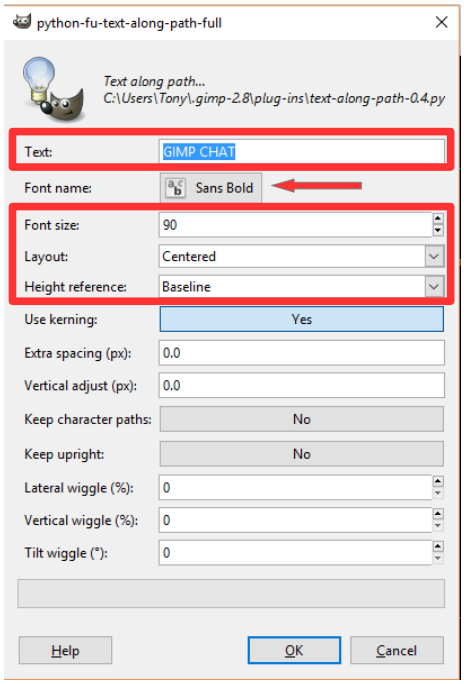
8. Now place the cursor directly over the left handle, click and hold down the left mouse button and drag the handle diagonally upwards and right to a point that is approximately at the 200 pixel mark horizontally and 90 pixel mark vertically, then release the button. You will see the curve change shape as you drag.
9. Repeat the action in step 8 above for the right end handle, only now drag upwards left to a point approximately at the 600 pixel mark horizontally and 90 pixel mark vertically. You should now see a curved path looking something like that below.



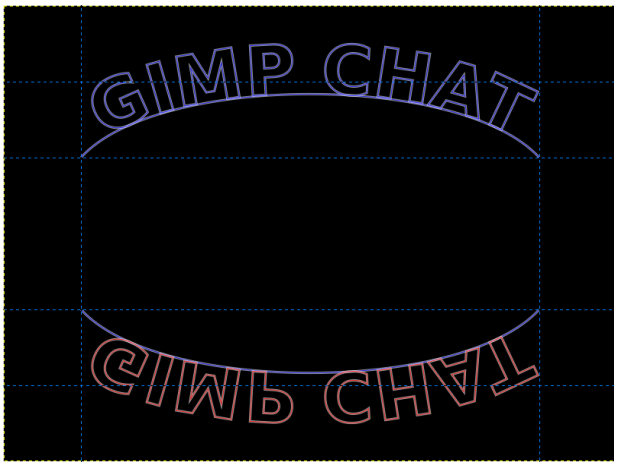
10. Now we will create a curved path at the bottom of the image but lets do it the easy way. In the Paths Dialogue window, right click on the top curve path to display the menu and then select Duplicate Path which will be called top curve copy. So rename it **bottom curve.**
11. Select the Flip Tool from the Tool Box and in the Tool Options click on the Vertical radio button. Now click on the canvas and you will see the path flip over to the bottom of the canvas. So your canvas will now resemble my example below.



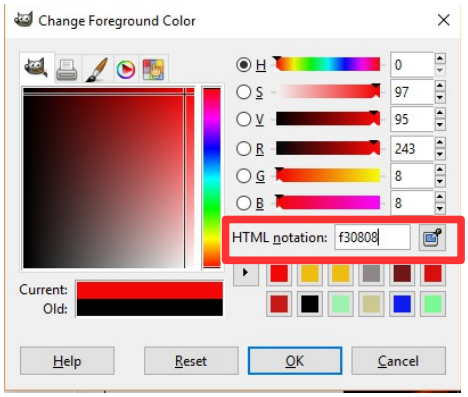
12. Create a new transparent layer – right click on the Layers dialogue box to display the New Layer window, ensure that that Transparent radio button is selected and click OK. Your new layer will appear with a name **Layer** which we will change soon.
13. In the Paths Dialogue with the top curve path active, right click to display the Paths Menu and select Tools>Text along path... to display the script window ready for completion. Enter details as highlighted below with red rectangles, select the Sans Bold font and then click OK to create our desired text along the **top curve** path.



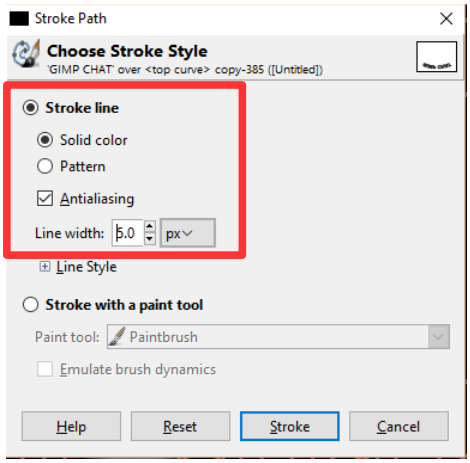
14. You will see Ofnut's script quickly create a new visible text path called **'GIMP CHAT' over <top curve>**
15. With this new path active right click to display the Paths Menu, select and click Duplicate Path and a new visible path named **GIMP CHAT' over <top curve> copy** will be created on top of the first.
16. Now select the Flip Tool from the Tool Box and in the Tool Options ensure the Vertical radio button is set. Now click on the canvas and see the path flip over to the bottom of the canvas, which should now resemble a reflection image like mine below.



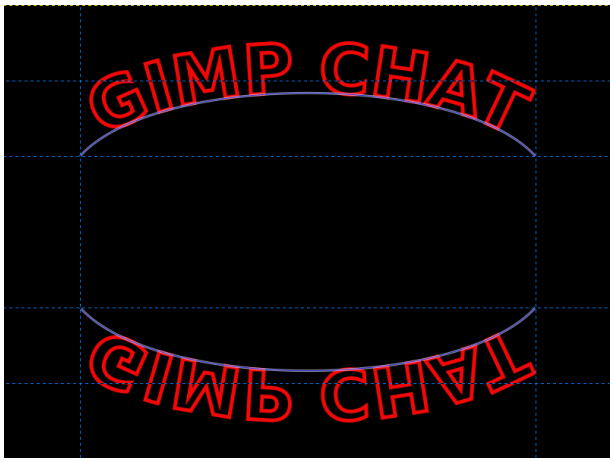
17. Keep this new path as the active path, open the Layers Dialogue window, right click and select/click on New Layer to open the relevant window. Ensure that the Transparent radio button is set on and then click OK to create that new layer named **Layer**.
18. Click on Foreground colour in the Tool Box to open the Change Foreground Color window. In the HTML notation box enter f30808 as below and click OK to select that red shade.



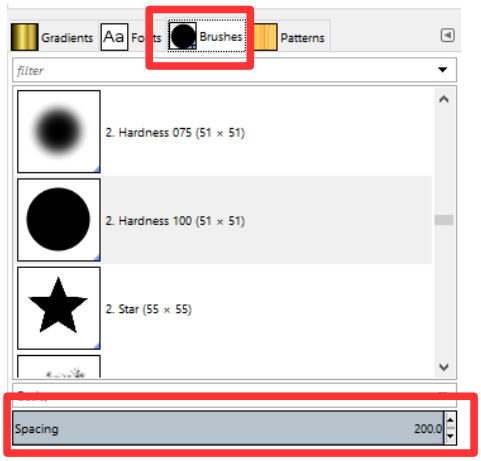
19. In the Tool Box select the Paintbrush Tool and in the Tool Options open the Brush selection window and choose the 2. Hardness 100 brush. At this stage the pixel size does not matter as the next script takes care of that.
20. Now select Edit>Stroke Path to open the window and ensure the settings are as shown below with a 5 pixel brush, then click the Stroke button.



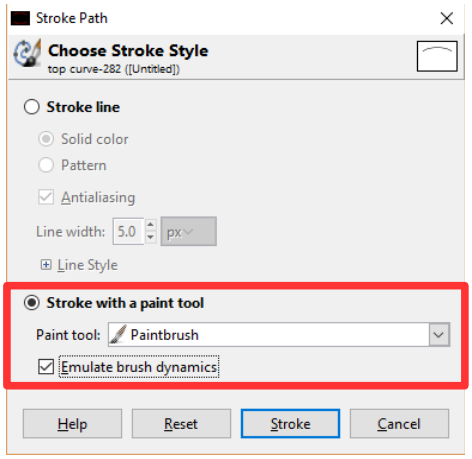
21. The bottom GIMP CHAT text will now appear in that red shade as a result of that script stroking function. Rename that layer as **f30808 stroke @ 5px bottom**.
22. So now go and make the top curve path active in the Paths dialogue, create another new transparent layer and repeat step 20 above to colour the top path in the same manner. Then rename that layer as **f30808 stroke @ 5px top.**
23. Make both these paths invisible now in the Paths Dialogue and make the top curve path active for use in just a moment. Now you should have a canvas looking like this.



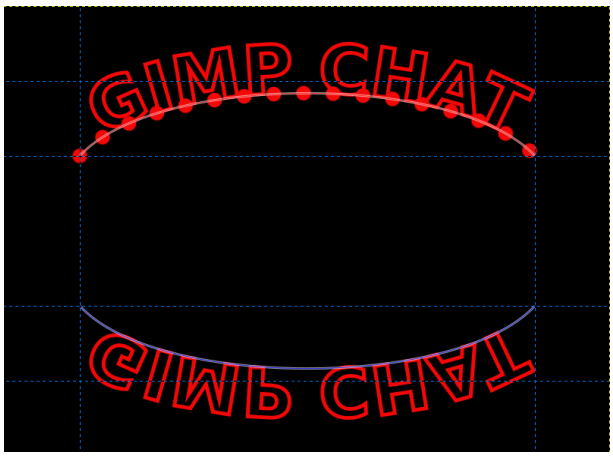
24. Now we are getting the fun part and we will create a series of 'large dots' along the path from which we will produce the light rays in GMIC. In the Tool Options for the Brush Tool, make the brush size 20 and then click on the Dynamics icon to open the available selections. Click on Track Direction so we will get a consistent result across the path
25. Just one more preparatory task. In the Brushes Dialogue tab there is a Spacing option and we need this set to 200 – which means 200 % of the brush width.



26. Now create a new transparent layer and again select Edit>Stroke Path to open that stroking window. This time we will use the second available option so set the parameters as shown in the example below and then click the Stroke button.



27. Hopefully your canvas now resembles my example image below with spaced, large red 'dots' along the top path. So in the Layers Dialogue rename this layer as **path dots top**.



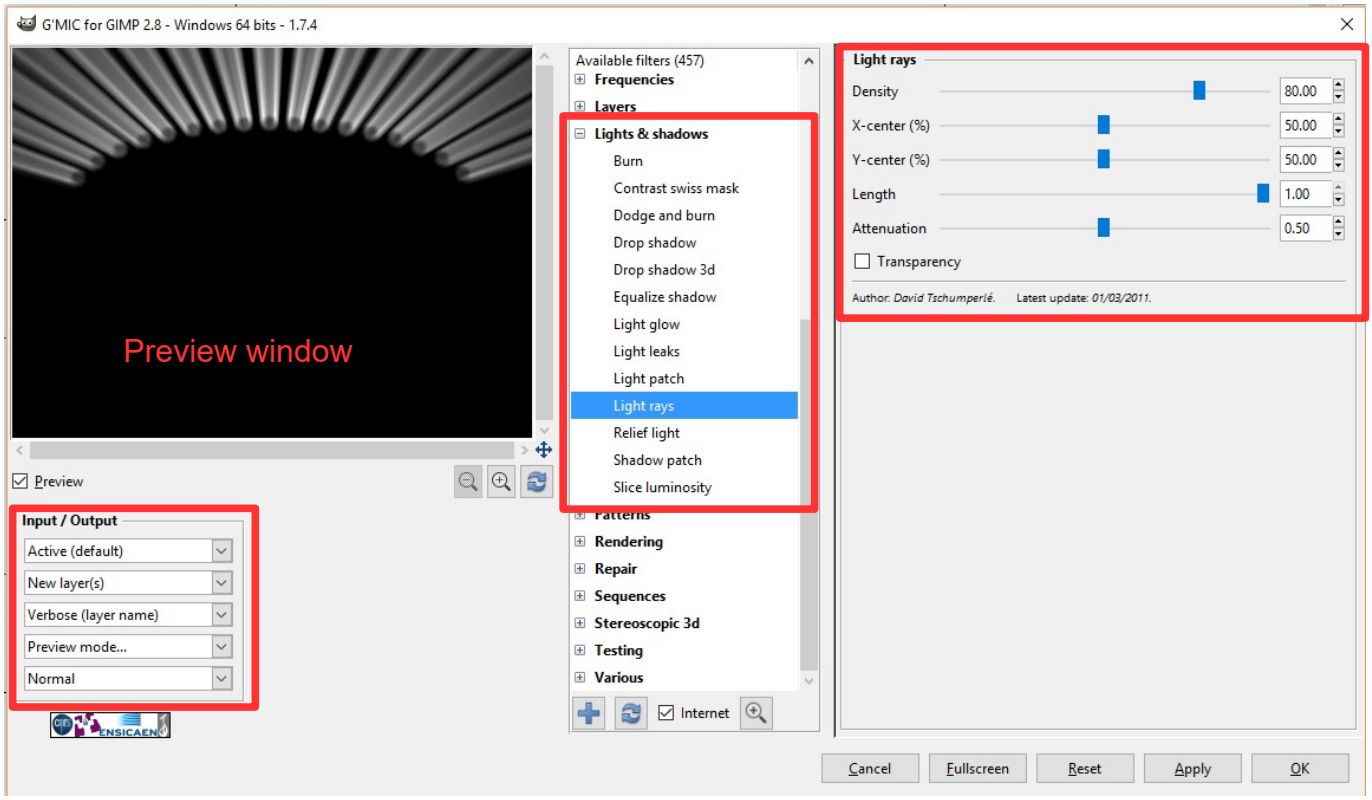
28. Now change the active path to **bottom curve** and repeat step 26 to create another layer with a set of dots along that path. In the Layers Dialogue rename this layer as **path dots**

bottom.

That completes phase 1.

Phase 2 – Creating the First Sets Of Rays

1. Make **path dots top** the active layer then the Select Filters>GMIC>Lights & shadows>Light rays to open the filter window and ensure that the settings for Input/Output and Light Rays are exactly the same as in the example below. The latter are the default settings for this script and you can see in the preview window the expected outcome of processing it. So click the Apply button to create a new layer with our first set of rays. You will note that GMIC has named the layer for us and included the parameter settings in that name. This is as a result of setting the Verbose (layer name) option in Input/Output.



2. You can close the GMIC filter as, typically, it only operates on the active layer and we will need a layer change next to create our light rays at the bottom. Firstly though set the blend mode of this first rays layer to Screen and make the **path dots top** layer invisible as we have finished with it.
3. Now make **path dots bottom** the active layer then repeat the steps in 1 and 2 above. You can also make the two curved path layers invisible as we have finished with them too.
4. Create duplicates of each of the first two light ray layers, by right clicking on each one to display the Layers Menu, then select and click on Duplicate Layer. Now we have some really bright focused rays of light, which we will colour next.
5. Create a new transparent layer again by right clicking on the Layers Menu and selecting

New Layer, in the window ensure the Transparent radio button is set and click the OK button.

6. From the Tool Box select the Blend Tool. In the Tools Options tab click on Gradient and choose Shadows 1 and in the Shape box select Radial. Position the cursor at centre canvas – we have no centre guide this time but it is easy to check that the cursor is positioned at vertical 300 pixels and horizontal 400 pixels on the side and top rulers. Holding the left button down, drag the cursor almost to the top right corner of the canvas and release the button. Rename this new layer as **golden shadow** and set its blend mode to Color.
7. You will notice that the words GIMP CHAT have now changed to white and merge in with the whiter rays at the centre of the canvas. Duplicate the **golden shadow** layer and set its blend mode to Overlay.
8. Create another new transparent layer and repeat step 6 except choose the gradient Golden and rename the layer **golden tinge**. Your canvas should now resemble that immediately below.



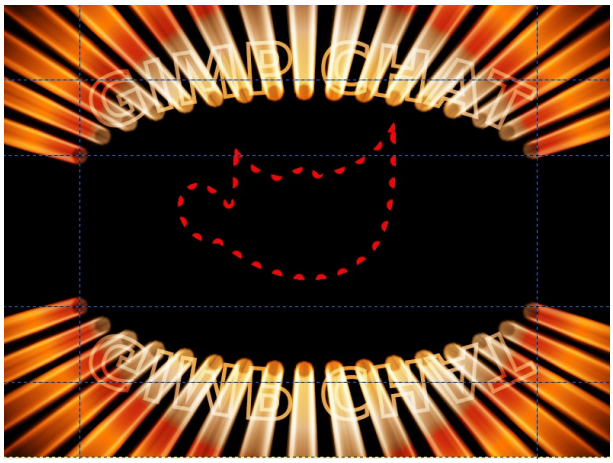
That ends Phase 2 – hope you think it is looking good so far!

Phase 3 – Creating Wilbur and His Sets Of Rays

1. Select File>Open as layers … >your preferred folder string>Wilbur.png, which should place Wilbur in the centre of your canvas.
2. Select the Fuzzy Select Tool from the Tool Box and click on the canvas anywhere away from Wilbur, so that effectively you have a selection of all the transparent pixels surrounding Wilbur. Now right click on the canvas and choose Select>Invert from the menu so the selection is of Wilbur and his brush, with marching ants.
3. We need just one small adjustment here so select the Free Select Tool from the Tool Box and in the Tool Options set the Mode to Subtract from the current selection (3rd icon in the mode set) and draw a selection just like that in the image below that will remove that protruding part of the brush from our selection when you join up the last point to the first.

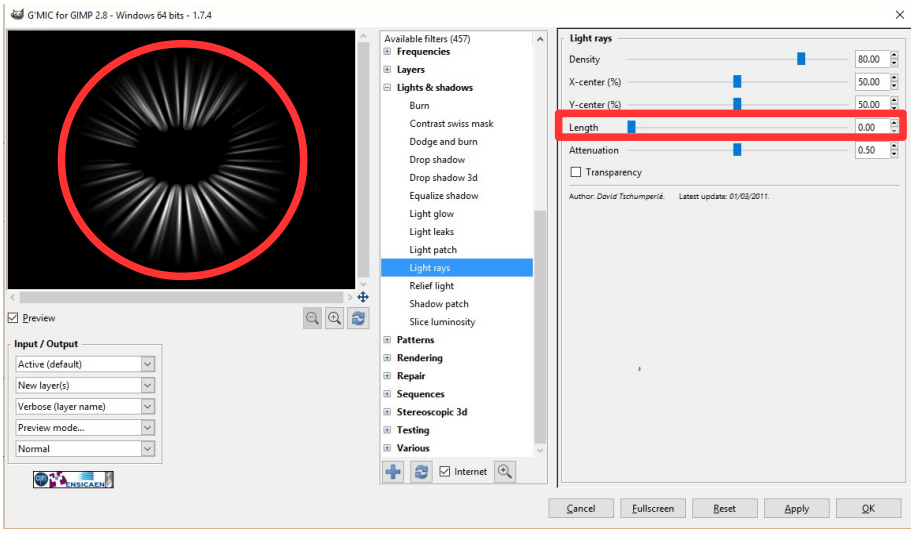


4. Now right click and choose Select>Shrink to open the that window and enter 2 in the Size (pixels) box and click the OK button. Now right click again and choose Select>To Path. Rename the path **Wilbur Rays**. Just to note we resized the selection/path because I want the rays to start behind Wilbur, not from the very edge of Wilbur.
5. The selection should still be current on screen, but if not just perform Select>From Path to make it so. Now select the Paintbrush Tool from the Tool Box and in tool options ensure that 2. Hardness 100 brush is selected, then change the brush size to 15 pixels. Note that the Spacing in the Brush Dialogue should still be set to 200%.
6. Select Edit>Stroke Path... and in the window that opens you should set the same parameters as for step 1.26 above, i.e. stroke with a paint tool/emulate brush dynamics.
7. Because we have a selection active as the stroking is performed you will see a set of red semicircles appear on the inside of the selection in the new layer as shown below. Now you can right click on the canvas and Select>None and rename the layer as **Wilbur dots**.

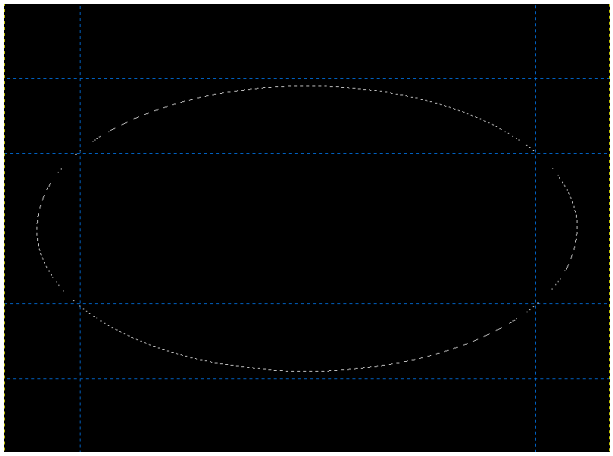


8. Make **Wilbur dots** the active layer then the Select Filters>GMIC>Lights & shadows>Light rays to open the filter window and ensure that the settings for Input/Output and Light Rays are exactly the same as in the example below – note that Length is set as zero this time. The rest are still the default settings for this script and you can see in the preview window the expected outcome of processing it. So click the Apply button to create a new layer with our set of Wilbur rays. You will note that GMIC has named the layer for us and included the parameter settings in that name. Change the

blend mode of the later to Screen.



9. You can make the **Wilbur dots** layer invisible now as it has served its purpose. However, now move the **Wilbur.png** layer above the light rays layer.
10. Select the Ellipse Select Tool from the Tool Box and draw an oval shape as shown below; you can use the guides to help you draw/position it. The intention is to enclose with this selection, all of Wilbur and all of the last created set of light rays.



11. Next, create a new transparent layer (you know exactly how now!) above Wilbur and select the Blend Tool, with Golden selected for the Gradient and Radial for the Shape.
12. Now centre the cursor (as we did before!) left click and hold the button down and drag the cursor to the right edge of the selection. Select>None and rename this layer as **Wilbur Gold** then change the blend mode to Overlay.
13. Duplicate the Wilbur Gold layer and move the original layer to just below Wilbur.png. You should now see a golden Wilbur and golden light rays as shown on the title page of this tutorial.
14. To finish off make the top layer active, right click to show the layers menu, then select New From Visble and run Filters>Enhance>Unsharp Mask against it.

That is the end of this phase.

At last you have finished and I hope you have enjoyed the journey. Remember try a few things out with this image, add/delete coloured layers and change blend modes – experiment and be sure though to have fun.

Thank you for doing my tutorial.