

DIGITAL MOIRE ANIMATION / PHOTOSHOP SCRIPTS

This workshop draws from elements of my practice to experiment with digital moiré animation. Two folders of images are provided: one folder named **background** and the other folder named **foreground**. The images from both folders are named from 1 to 10. Images with matching numbers from both folders can be overlapped in Photoshop to form existing animations from my work.

1. INTRODUCTION

This introduction gives an understanding of the simple mechanisms behind digital moiré animation.

- *Select one image from the **background** folder and one image from the **foreground** folder. The numbers don't need to match. Open the 2 images in Photoshop.*
- *Overlap the images on top of each other. A simple way to do this is to drag the **foreground** image into the **background** image.*
- *The overlapping of the two images will create a third image. Moving one of the images vertically will generate motion.*

2. PHOTOSHOP

This step focuses on creating a digital moiré animation from scratch. First we need to create a background and foreground image from scratch. There are plenty of methods to do this; we will focus on a very simple one. Each participant can experiment with both layers of the animation and personalize their own animation.

Background creation:

- *Create a new document 960x540pixels at 72dpi.*
- *Create a new layer; select a square brush tool of one pixel. Trace a vertical line from top to bottom.*
- *Duplicate this layer and move it one pixel to the right. Change opacity or color. Repeat this step six times.*
- *Merge all 6 layers, duplicate the layer and move it 6 pixels to the right, repeat until the entire image is filled.*
- *Free transform layer (Ctrl + T), select nearest neighbour in the interpolation box, change horizontal offset, and apply.*
- *Save the file in the **background** folder as BACKGROUND_11.png*

Foreground creation:

- *Create a new document 960x960pixels at 72dpi.*
- *Create a new layer; select a square brush tool of one pixel. Trace a vertical line from top to bottom.*
- *Duplicate this layer and move it one pixel to the right. Repeat this step six times.*
- *Lower opacity to 0% on one or two layers that are next to each other (ex: 1 and 2, 4 and 5, etc.)*
- *Merge all 6 layers, duplicate the layer and move it 6 pixels to the right, repeat until the entire image is filled.*
- *Free transform layer (Ctrl + T), select nearest neighbour in the interpolation box, change horizontal offset, and apply.*
- *Delete background layer.*
- *Save the file in the **foreground** folder as FOREGROUND_11.png*

3. FLASH

This step focuses on animating the 2 layers using Flash/Animate. We will be able to export the animation using a variety of formats.

- Create a new document 960x540pixels, 24 images per second.
- Import the background image on the first layer; make sure it is centered on the document.
- Create a new layer. Import the foreground image on the new layer above the first layer. Convert the foreground image into a graphic (right-click on foreground image, convert to symbol, select graphic).
- Create a new keyframe in the timeline for the foreground layer. Around the 100 frame mark. Right click on the timeline and select insert keyframe.
- Place the timeline cursor on this new keyframe, then move the foreground image vertically up or down. Here we will try to move the foreground image so it loops seamlessly with the first frame.
- Right-click between the two keyframes on the foreground layer and select "Create a classic tween".
- Insert a frame on the background layer so it matches the amount of frames from the foreground.

- We can now see the animation play by clicking enter to play the animation within Flash/Animate.
- We can adjust the number of frames from the animation to make it longer or shorter.

- To export as an animated GIF: select File>export>export movie>animated GIF
- To export as an image sequence: select File>export>export movie>png sequence

4. SCRIPT

This step explores the use of Photoshop scripts to treat image sequences.

- In Flash, export the current animation as an image sequence: select File>export>export movie>png sequence
The image sequence can be exported into a folder named "images_1" or "folder_1" or "projectname_1"
- Open one of the images from the sequence in Photoshop, go to "Actions" and select "New Action". Name the Action.
- This will trigger a recording of the subsequent modifications done to the image.
- Once the modifications are done, save the image to a new folder titled "images_2" or "folder_2" or "projectname_2"
(When saving, make sure to not change the name of the file)
- Close the image after saving, and then stop the recording process in the Actions tab.
- Go to File>Automate>Batch. Select the Action. Select the folder containing the image sequence from the animation.
- Click OK and watch the magic happen.

5. COLOR INDEXATION

This step explores the use of color indexing algorithms in Photoshop.

- Open an image on Photoshop. Go to image>mode>indexed colors.
- Explore the different options of color indexation: number of colors, dithering algorithms, etc...
- Color indexing can be integrated to a script, and therefore used to treat an image sequence.