

Section 2 - How to create an autographic image-based input

Introduction

The autographic approach in making an image-based input ensures that the user can retain as much control as possible over the creation of an output. Through this method the user can adjust variables such as solid colour, texture and line through image layering. Throughout this document you will be guided through two methods of creating an appropriate image, one solely digital and the other incorporating hand-drawn aspects into the digital creation of the image.

Method One

The user can adopt many different pieces of software, however, for continuity and accessibility this guide will use Adobe Illustrator CC and Photoshop CC to carry out all image editing.

Step 1 - Image

Find your image. This can be any digital image of your choosing, however, keep in mind the complexity of image.

This image contains several different elements of texture and flat colour. The main challenges within this image will be achieving a subtle colour change within the jug and obtaining accurate texture qualities within the blankets and bottles.



Fig 1 – Source image containing different textures and complex shapes.

Step 2 - Illustrator

Open the image in Adobe Illustrator

Familiarise yourself with the pen tool, curve tool and pencil tool, which will enable you to draw paths around each object within the image.

Using a graphics tablet will enable the user to draw a more natural line whilst using the pencil tool.

The following screenshot demonstrates where each of the tools can be found in the sidebar.

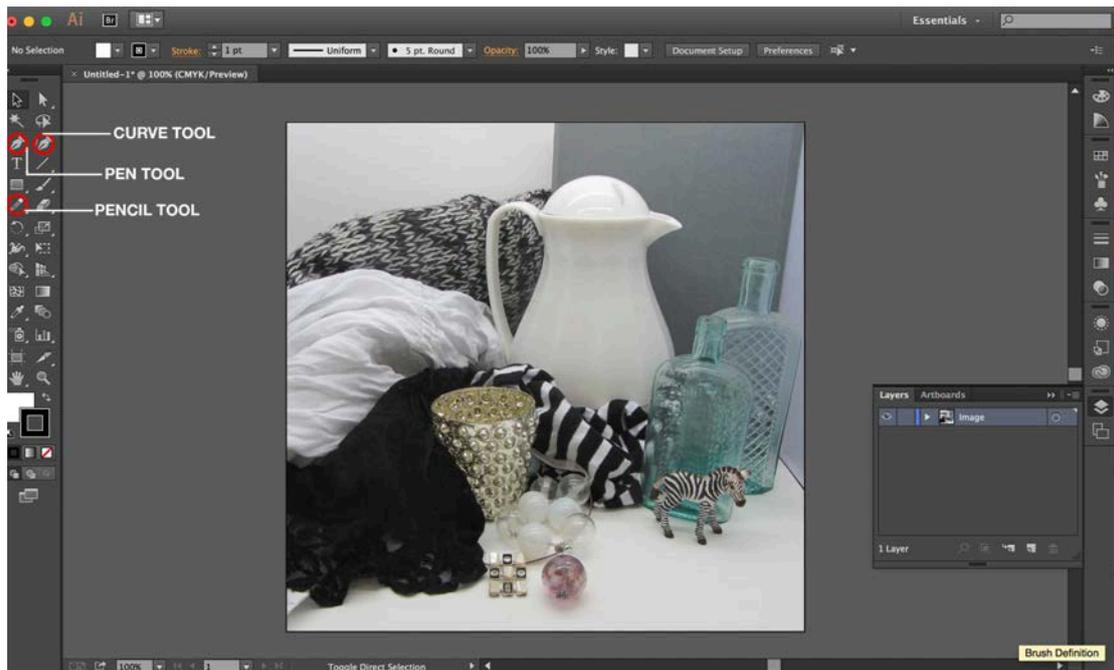


Fig 2. Layout of Illustrator and relevant tools

Step 3 – Creating the Paths

Using these tools, start to draw paths around each of the objects within the image. This will allow for solid colour to be allocated to each of the areas.

Whilst carrying out this task it would be best to ensure that the paths are correctly organised in different layers. This will make it easier for the user to navigate when carrying out any alterations to each path.

The use of colour is only used to help distinguish between layers. See figs 3 - 4,



Fig 3. The image is segmented into colours and corresponds to 6 different named layers in Illustrator.



Fig. 4 The completed image is divided into the fields of colour

The image to the bottom right of figure 4 is the complete where the main aspects of the image captured through paths. After carrying out this task the user now has the maximum amount of control over each of the layers created.

This can be exported, printed as is, or can be further manipulated through the addition of texture.

Step 4.1 Creating Texture, Image Trace and Expand Tool

The next step in this method is the addition of texture. This can be performed using a range of methods, tools, and can vary depending on what outcome the user requires.

In step 4.1, working from the original image, we will use the 'image trace' command and use the 'outline' command. This will add more detail to the image that can be used as another layer in the printing process.

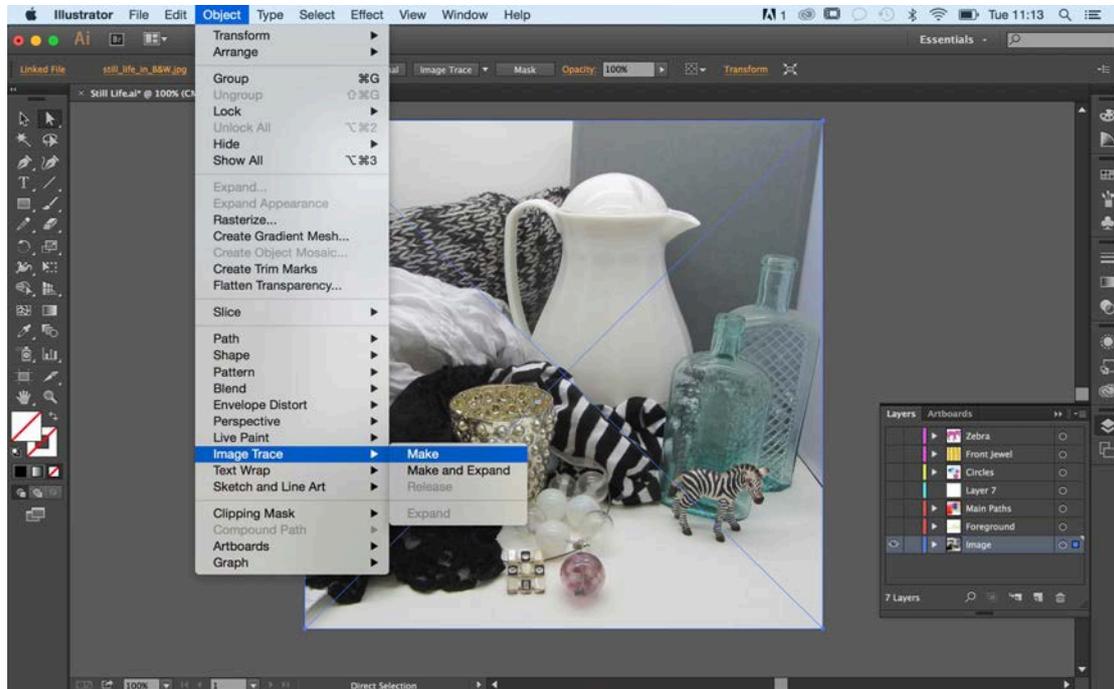


Fig 5. The tool is located in Object > Image Trace > Make

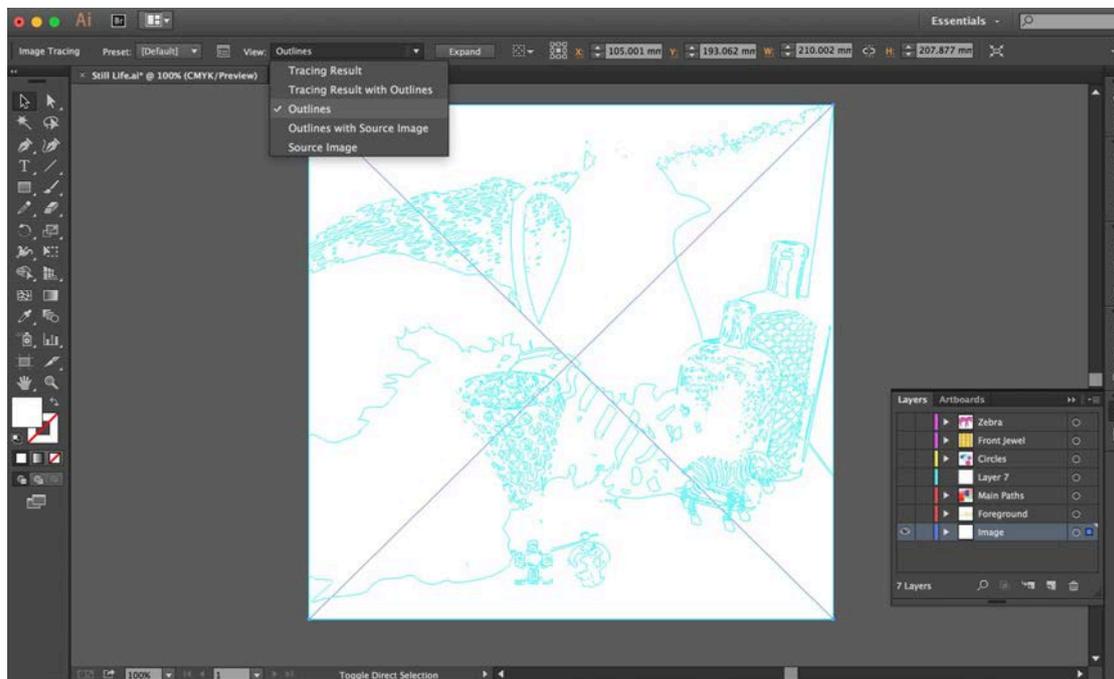


Fig. 6 Once the Image Trace command is made, use the drop down menu to select 'outlines' to only provide you with the outline the tool has found.

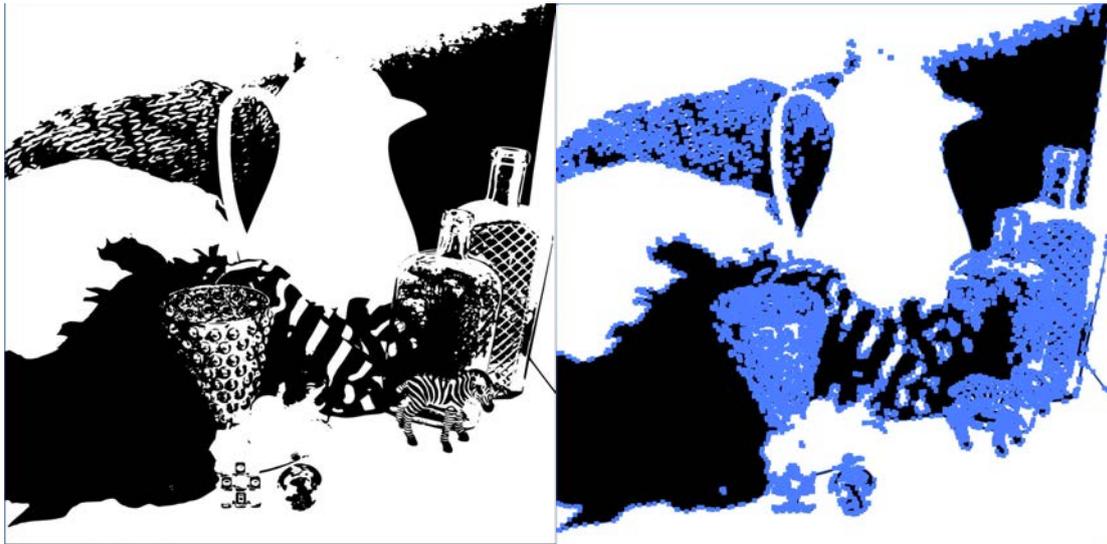


Fig. 7 Click the 'expand' button located directly next to the drop down menu. This will end the image tracing process and provide you with the paths.

The image in figure 7 demonstrates the resulting paths after clicking 'expand'. The user can then select the background of this layer by using the 'direct selection tool' (white arrow) and delete it to show how the layer will sit with the other layers. Copy and paste the layer over to the previous file (see step 3).



Fig 8. Highlighting the advantage of using Illustrator to create the paths: segmented areas, layers, and textures, align perfectly when creating additional texture.

This can be printed as it is or can be further manipulated.

Step 4.2 – Creating Texture, Adobe Photoshop

In 4.2 we will demonstrate how to use Adobe Photoshop to add texture and then in 4.3 we will combine the two approaches.

Using a graphics tablet can assist the creation of more natural line movements.

Open the original image in Adobe Photoshop to use as a template to draw on. Create a separate layer for your brush/line making. Think of this as placing tracing paper over a printed image.

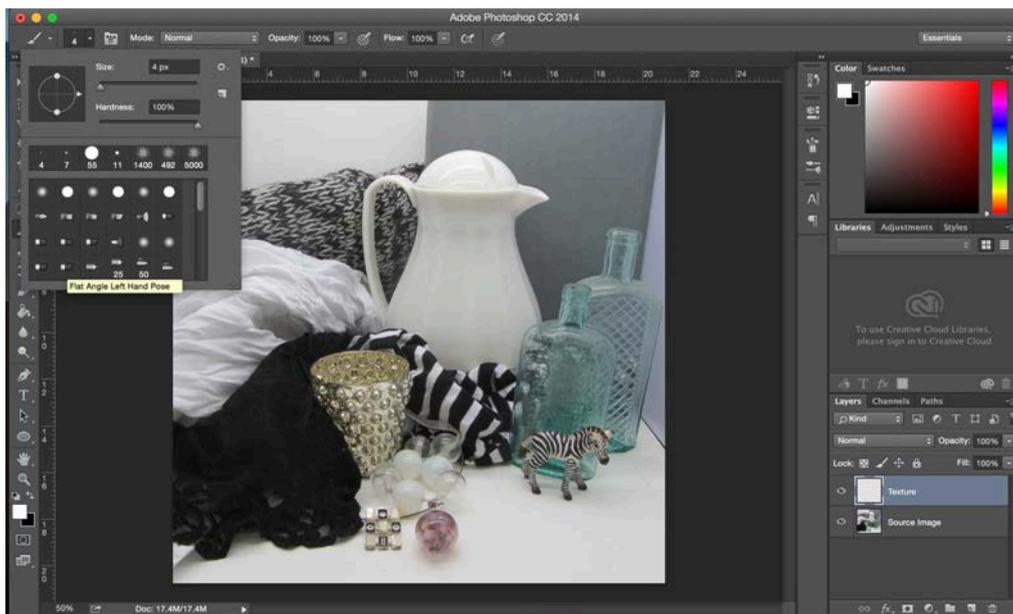


Fig. 9 In Photoshop demonstrating the use of a separate layer to trace the original image

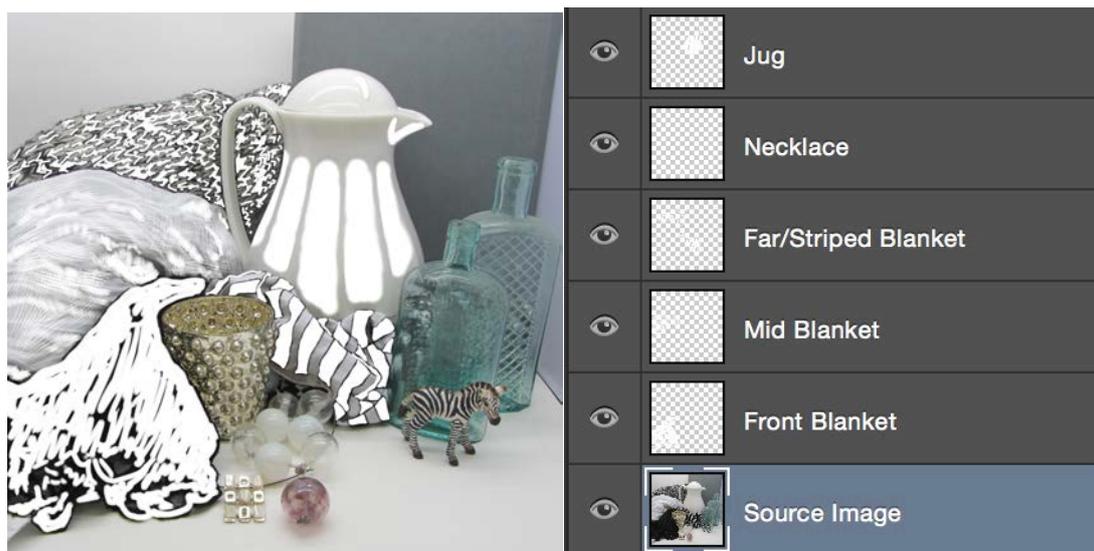


Fig 10. Demonstrating the use of several different types of brushes. We have used white only to highlight the brushed areas for this guide.

As in Illustrator, ensure that every layer is kept separate, as this means the user will have flexibility over which layers are printed. For example, if layers are kept separate, we can choose to print 'Front Blanket' and 'Mid Blanket' in two separate tones of grey. If the layers are combined, this choice would not be available.

Each layer can then be saved as a separate JPEG to be exported to the printer.

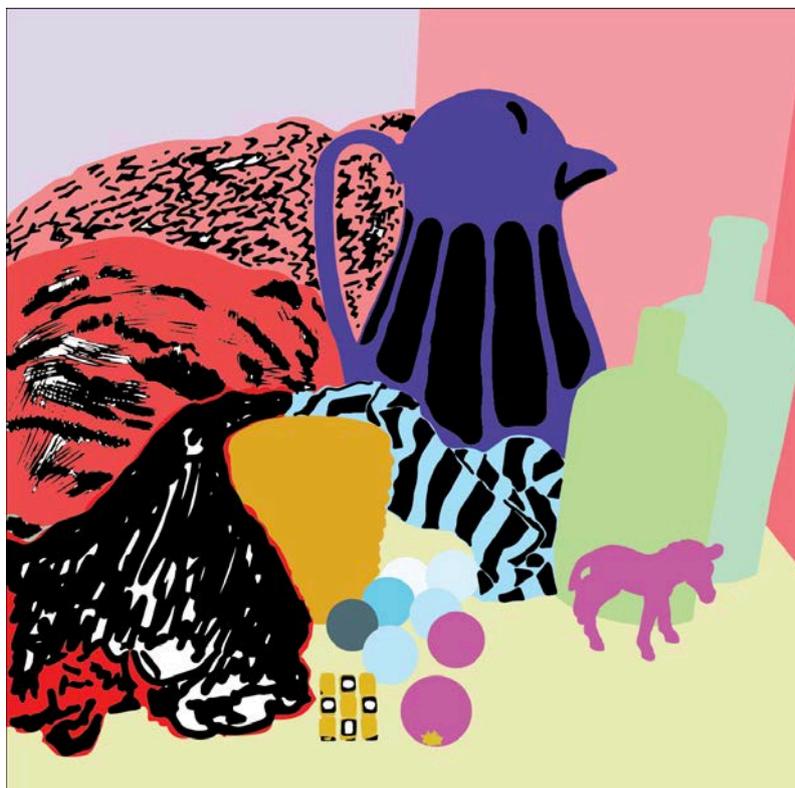


Fig 11. Showing the brush marks that has been achieved in Adobe Photoshop and then exported to Adobe Illustrator using the process described in section 4.1.

If the user wishes to combine the approach taken in 4.1 and 4.2 it would be advisable that all layers are kept together in the same file.

Part 4.3 – Creating Texture, Combining 4.1 and 4.2

Begin by using the file that was created at the end of section 4.1. Delete all other layers within the Adobe Illustrator file, leaving only the layer creating by using 'Trace Image'.

Save this as a separate PDF file, ensuring that you don't save over the existing file. Open this file in Adobe Photoshop and you will see the layer with no background as in figure 12. Then, drag across the original image into the same file. This will work as a template over which to draw, as was performed in 4.2.



Fig. 12 Highlighting the single layer, with no background.

It is then up to the user to decide how much detail to add, however, as can be seen in figure 13, where there is no information in the middle area of the blanket or jug, further the detail could be added here.



Fig. 13 Demonstrating the addition of detail to the middle area of the blanket and the jug.

Once you have completed your additional drawing, delete the 'Original Image' layer and the 'Image Trace' layer, only leaving the brush strokes that have been added in Adobe Photoshop (figure 13 and 14 right image).

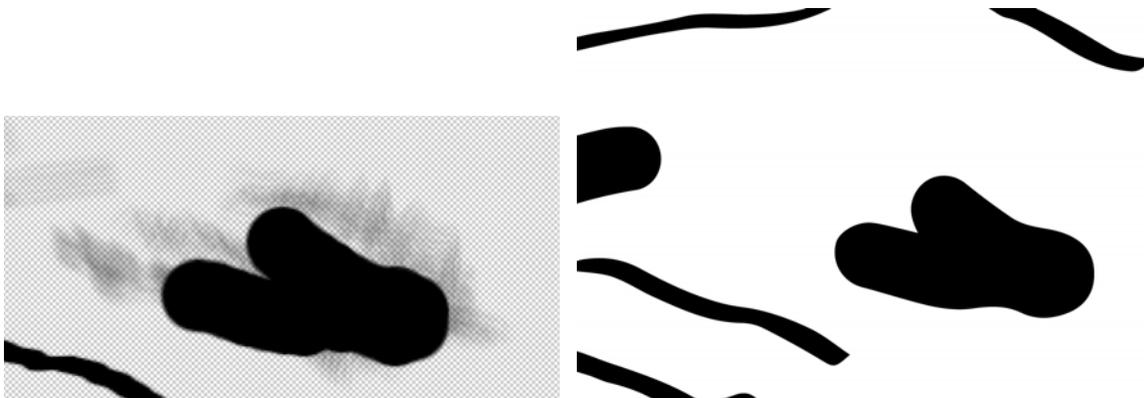


Fig 14. The image on left shows the added texture in Adobe Photoshop. The image to the right shows a screenshot of the traced texture that has been added to the blanket area (a softer brush and a harder line) once the 'Original Image' layer has been deleted.

Save the file as a PDF and then open in Adobe Illustrator. Now perform the 'Image Trace' process that was described in section 4.1.

As can be seen from the image below, all the subtle texture that was drawn has been deleted. This demonstrates that the mark making has to be quite thick and contrasting when carrying out this process. Delete the background of the 'Image Traced' Adobe Photoshop file using the 'Direct Selection Tool'. Copy and paste it to the main Adobe Illustrator file.

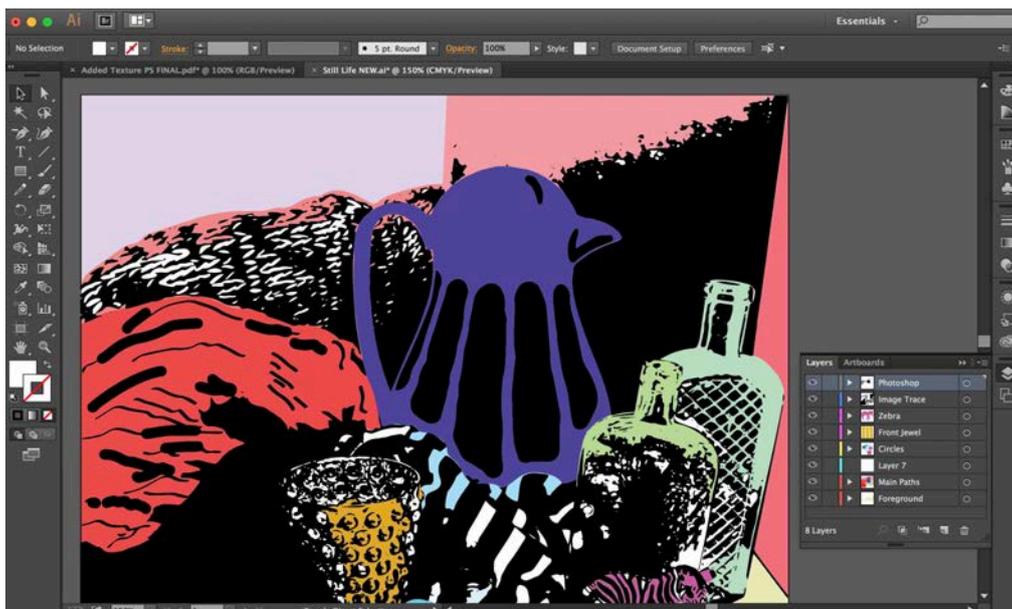


Fig 15. Demonstrating the combined image (in black) where all texture that has been added to the different fields.

The image file can be further manipulated by adding additional layers by repeating the same steps.

This step by step has shown how to create a base layer, on which to add detail, either by using the tracing function or by adding hand drawn marks. Once you have reached a stage where you are happy with your image you are ready to export it to the "Processing" software that will then drive the printer rig. This will be explained in a separate 'How to' guide **Auto-Segmentation Process**.

Below is a pros and cons list of Method One:

Pros	Cons
A lot of detail can be generated in a variety of different ways	Advanced knowledge required of Adobe Photoshop and Illustrator
A lot of control over the image making process	Graphics tablet required to generate natural-looking lines
Colours can easily be changed whilst generating the image	Generating texture can be complicated