

# Touch Image Manipulator

Documentation v1.0

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# 1. Document Manager:

The document manager is the main view of the application. Here you manage you documents.

## 1.1 Creating new documents:

Select the new document button from the tool bar, this will bring up a form in which you can specify the size of the document

## 1.2 Importing Documents:

Select the import image button, this will open the import images form, from this for you can select an image from you camera roll, photo stream

## 1.3 Opening documents:

Just touch down on the document you want to open, the application will switch to canvas mode.

## 1.4 Edit mode:

Select the edit button on the toolbar, this switched the toolbar to edit mode.

### **1.4.1 Delete a document:**

Select a document by touching it, then touch the delete button from the toolbar.

### **1.4.2 Copy a document:**

Select a document by touching it, then touch the copy document button.

### **1.4.3 Export a document:**

Select a document by touching it, then touch the export document button. This will bring up a menu from which you can select where to you want to export the document. Currently there are two options : export to camera roll, and send by email as png image.

### **1.4.4 Renaming a document:**

Touch down and hold the current document name, this will switch the tool to document name editing. Just enter the new document name.

## **2. Brush Manager:**

The brush pack manager can be opened from the main view. Just touch the brush manager button.

The brush manager allows you to view all the loaded brush packs and preview the brushes contained in the brush pack. You can also enable usage of the brush pack in the image editor. This allows you to limit the number of brushes shown in the brush tools configuration forms.

## **3. Image editor:**

### **3.1 Selection:**

The selection controls which part(s) of the active layer are affected by the painting tools, filters

#### **3.1.1 Selection tools:**

All selection tools have the following common options :

- Selection mode:
  - Replace : the current selection will be replaced by the new added selection.
  - Add: the new selection will be added to the current selection.
  - Intersect : the new selection will be the intersection (common area) of the current selection and the new selection.
  - Subtract : the new selection will be the result of subtracting the new selection from the current selection.
- Antialias : cause the boundary of the selection to be smooth by modifying the transparency of the boundary pixels.
- Feather : causes an gaussian blur of the selection boundary, this makes the transition from the selected area to the unselected area smooth. You can specify width of the feathering area.

### **3.1.1.1 Rectangle selection tool:**

Use this tool to select a rectangular area, touch and drag top select the area. After selecting the initial area you can modify the rectangle area by dragging the blue handles on the selection rectangle. You can also move the rectangular area by touching and dragging from inside the rectangle. Tap anywhere outside of the rectangle area to complete the selection.

This selection tool has an extra option to create rounded corners on the rectangle.

You can use this tool to paint a rectangle. First select a rectangular area and the use the bucket fill tool to fill the selected area. After this you can shrink the selected area and clear to create a non filled rectangle. You can also use the gradient tool to fill the selected area.

### **3.1.1.2 Ellipse selection tool.**

Use this tool to modify the selection with an ellipse. Just touch down to start the rectangle and drag top specify the size and shape of the ellipse. You can modify the ellipse by dragging the blue handles, or move the ellipse by touching and dragging from inside the rectangle.

Use the bucket fill tool to create a filled ellipse, You can then shrink the selection and clear the selected are to create a non filled ellipse. You can also use the gradient fill tool to fill the selected area.

### **3.1.1.3 Lasso select:**

Use the lasso select to draw a freehand selection area. Just touch down and paint the selection area in a single stroke. To edit the selected area switch the tool to add or subtract mode and refine the selection.

### **3.1.1.4 Magic Wand select:**

Use this tool to select a continuous area of the same or similar color. You can adjust how close the color has to be by adjusting the threshold setting. Use the “Sampled Merged” option to pick the color from the current rendered image or from the active layer only.

### **3.1.1.5 Select By Color :**

Similar to the “Magic Wand select” but the selection is not continuous, all colors within the threshold on the current rendered image or active layer will be selected.

## **3.2 Painting tools:**

All painting tools have a common set of configuration options:

- Current brush : what brush will be used for painting, the brush palette shows all brushes from the currently enabled brush packs. You can modify the set of used brush packs from the brush manager.
- Opacity : (or transparency) how much paint will be added by each stroke
- Scale : used to scale the brush , note currently brushes are limited to max size of 2048x2048
- Angle: the angle at which the brush will be drawn, currently this option is only available for the pencil, brush and air brush tool.
- Directional : if enable the angle will be adjusted dynamically to follow the direction of the stroke.
- Jitter : when specifying a non zero jitter the brush positions will be randomly scattered by the specified amount around the stroked path.
- Step : the distance between successive brush marks, the closer the smoother the paint stroke will look, but less texture.
- Fade : allows you to fade out your brush stroke over the specified length.

- Hardness : only for computed brushes ( currently only the circle brush), specifies how fuzzy the brush will be.
- Incremental : When off the maximum opacity (amount of paint) that is deposited in a single stroke (touch down, move, up) is the amount specified in the opacity, if incremental is overlaps in a single stroke will add the opacity amount of paint on top. So in incremental mode the total opacity of a single stroke can be higher than the specified opacity.

### **3.2.1 Pencil tool :**

Hard edge brush, all transparent area of the brush are replace by fully opaque areas.

### **3.2.2 Brush tool:**

No extra options, all standard brush options are available.

### **3.2.3 Air brush tool :**

This tool has two extra options : pressure and rate. Pressure determines how much paint will be added for each brush mark. Rate specifies how fast to repeat the marks.

### **3.2.4 Bucket fill tool:**

Fills either the whole selection or a continuous area based on the setting of the “Whole selection” option. In case of color based fill you can specify the threshold for which colors match.

### **3.2.5 Gradient fill tool:**

Fill the selected area with a gradient blend, you can pick from different gradients:

- Linear : will create a linear gradiengt in the direction of the stroke, the gradient will be distributed over the length of the stroke.
- Bilinear : similar to linear but fills int both direction of the stroke ( mirrored around the starting point)

- Radial : creates a radial gradient with the stroke being the radius .
- Conical : a gradient along a cone ( looking down from the top of the cone), there are two types of conical gradients : symmetrical and asymmetrical, in the symmetrical version the gradient is spread over 180 degrees and then mirrored, in the asymmetrical case the gradient is spread over the full 360 degrees cause a ridge at the stroke line. The length of the stroke is not important for this gradient.

Use the “Reverse” option to switch the gradient around (e.g Color to transparent becomes transparent to Color)

Use the repeat option to repeat the gradient along the selected stroke, there are two repeat modes : “Saw Tooth Wave” and “Triangular Wave”. In saw tooth mode the gradient is just repeated as is. In triangular wave the gradient is alternatingly mirrored.

Use the “Other Color” option to select the second color for the “Color to Color2” gradient.

### **3.2.6 Eraser tool**

Will erase the stroked areas of the active layer.

### **3.2.7 Clone tool**

The clone tool will copy from one location of the image and paint in the stroked area. You can use this tool to remove blemishes/spots or even whole objects from the image.

Use the “Sample Merged” option to clone from the whole currently rendered image or from the active layer only

Use the alignment option to specify the behavior of the starting location

### **3.2.8 Blur/Sharpen tool**

This tool applies a blur or sharpen filter on the brush shape, this is useful for locally blurring or sharpening. Sharpening works by increasing contrast. For blurring or changing contrast use selection tools to select the area you want to blur/sharpen and then apply the blur/contrast filter on the selected area.

### 3.2.9 Smudge tool

This tool smudges the area under brush by picking up colors from under the brush and mixing them with the next colors picked up in the stroke.

The rate parameter specifies how much of the previous colors are retained. Setting the rate to 1 will basically pick up the colors on the touch down and not mix any next colors at all.

### 3.2.10 Dodge/Burn tool

This tool will lighten or darken the area under the brush.

The mode parameter determines what kind of pixels will be affected. Shadows will affect the dark pixels only. Midtones will affect the medium tone the pixels. Highlights will affect the highest pixels.

The “Exposure” parameter determines how strong the dodge/burn effect will be.

### 3.2.11 Text Tool:

This tool allows you to add text to the image. Text is entered inside the tools configuration.

Tool options :

- Font : select the font to be used for the text
- Font size : the size of the font ( note that this will be adjusted automatically when you manipulate the text edit handles in the image)
- Opacity : the transparency of the added text.
- Draw Shadow : specifies whether or not you want a drop shadow around the text.
- Shadow color : the color to use for the drop shadow
- Shadow x offset : the number of pixels the shadow will be offset horizontally
- Shadow y offset : the number of pixels the shadow will be offset vertically
- Shadow blur radius : the blurring size of the drop shadow

## **3.3 Selection Menu**

The actions under this menu will modify the selected area.

### **3.3.1 Select all**

Replaces the current selection with the whole area.

### **3.3.2 Select none**

Causes the selection to be empty, note that this has the same effect as “Select All”, but will cause the tool to be a little faster.

### **3.3.3 Select Pixels**

Selects non transparent area, the selection will be based on the alpha value of the active layer.

### **3.3.4 Invert Selection**

Inverts the current selection.

### **3.3.5 Feather Selection**

Will soften the edges of the current selection, this is implemented by applying a Gaussian blur on the current selection.

### **3.3.6 Grow Selection**

Grows the current selection with the specified number of pixels. Feathering is preserved.

### **3.3.7 Shrink Selection**

Shrinks the selection with the specified number of pixels. Feathering is preserved.

## 3.4 Transform menu

The items in this menu transform the image or active layer by changing its size or orientation.

### 3.4.1 Crop image

Reduces the size of the whole image ( all layers are affected). Activating this action will switch the editor into edit mode. In edit mode you are able to drag the corner of the image to define the new image size.

The “Keep Aspect” option force the image aspect ratio ( width/height) to be maintained.

### 3.4.2 Resize image:

Activating this menu will bring up a dialog in which you can specify the new image size. The “chain” button allows you to lock the current aspect ratio, in unlocked state you can modify width/height independently. Width and Height can not exceed the maximum for your platform, and the amount of pixels ( width\*height) can not exceed the max pixel for your platform.

### 3.4.3 Move/Rotate/Shear:

Activating this action will switch the tool in “Move/Rotate/Shear” mode. In this mode you can transform the selected area (on active layer). Moving the resize handles will cause the selected area to resize, the shear icons will shear the area either in x or y direction. The rotate handle allows you to rotate the selected area around its center. You can move the selected area by touching down inside the selected area and dragging.

### 3.4.4 Perspective Transform

Activating this action will switch the tool in “Perspective Transform” mode. Here you can drag the corner of the selected area and warp it to a different position. The original rectangle will be transformed to the quadrilateral of the new corners. You can

move the current selected area by touching down inside the selected area and dragging.

### **3.4.5 Flip Horizontal**

Will flip the pixels horizontally in the selected area.

### **3.4.6 Flip Vertical**

Will flip the pixels vertically in the selected area.

## **3.5 Filter Menu:**

This will bring up the filter selection dialog, here you can select what kind of filter to apply. Selection a filter will switch the tool to that filters mode. In tis mode you can modify the filters parameter (if the filter has parameters) , and decide to apply or cancel the filter.

The filters are grouped in four categories:

- Image: these filter are general type of image filters and contain different kinds of blurring and embossing filters :
  - Gaussian blur
  - Box blur
  - Sharpen
  - Emboss
  - Tilt Shift
- Color
  - Brightness, contrast and saturation
  - RGB Balance
  - Haze
  - Sepia
  - Gray scale
  - Color invert
  - Saturation
  - Luminance
  - Gamma
  - Noise
  - Vibrance
- Effects

- Pixelate
- Polar Pixelate
- Cross Hatch
- Sketch
- Sobel Edge Detect
- Canny Edge Detection
- Toon
- Posterize
- Kuwahara
- Vignette
- Perlin Noise
- Distortions
  - Bulge Distortion
  - Pinch Distortion
  - Stretch Distortion
  - Swirl

### 3.6 Layers menu

Show the current set of layers. From this dialog you can enable/disable layers. You can also modify the layers transparency and blending mode.

Available blending modes:

- Normal
- Darken
- Multiply
- Lighten
- Screen
- Dodge
- Burn
- Overlay
- Difference
- Exclusion
- Hue
- Saturation
- Color
- Soft Light

In principle the number of layers is not limited, however the tool will not be able to efficiently render the image while editing in certain layer combination. When this happens the tool will automatically disable all layers above the active layer.

You will not run into this issue when having the top most layer as active layer, or when having only normal blend model layers above the active layer.

Also layer operations will become slow when have more layers then can be kept in memory ( the tool will need to page layer data to/from disk). But normal editing mode should still be efficient independent of the number of layers.

### 3.7 Color picker

Allows you the pick the active color.

### 3.8 Cut,Copy,Paste and Delete

To access the edit commands just touch down and hold (long press) , the edit menu will show. From the edit menu you can execute the cut, copy, paste, and delete commands.

- Copy : copies the selected area of the active layer to the systems clipboard. You can now paste this inside the application or in any other application that can paste image file. If there uis no selection the whole active layer is copied.
- Cut : same functionality as copy, except that it clears the selected area.
- Delete: clears the selected area, does not modify the clipboard
- Paste: pastes the current system clipboard to the active layer.Current it supports text data and image data. When pasting text, it automatically switch to the text tool, So you can modify the text properties,location,angle,... When pasting an image it automatically switch to the “Move/Rotate/Shear” tool, allowing you to move and modify the size and orientation of the pasted image.

## 4. Importing Adobe Photoshop Brush packs:

Brush packs are available from many website either free or commercial. For example : <http://www.brushking.eu> , <http://www.brusheezy.com>,...

Find the brush pack you want using the device's web browser, download the brush pack ( can be packed up in zip or plain abr format)

The browser should show the option to open the brush pack in “tim” ( Touch Image

Manipulator)