University of Bristol
Information Services

Creative image manipulation using Serif PhotoPlus

Practical workbook

Aims and Learning Objectives

This document aims to introduce the basics of image processing using Serif PhotoPlus.

When you have completed these exercises, you should be able to:

- make selections using a variety of tools
- adjust the hue and saturation of colours within an image
- retouch a damaged photograph
- blend images to create a seamless montage
- add and edit text

Document information

Course files

This document and all its associated practice files are available on the web. To find these, go to www.bristol.ac.uk/is/learning/resources and in the **Keyword** box, type the document code given in brackets at the top of this page.

Related documentation

Other related documents are available from the web at:

http://www.bristol.ac.uk/is/learning/resources

Creative image manipulation using Serif PhotoPlus (Jan 11)

Contents

Introduction

This course is for people who want to learn a selection of creative image manipulation techniques. The software used is Serif PhotoPlus, for which the University has a site licence. The skills are, however, transferable to other image editing software packages such as Photoshop.

Prerequisites

This document assumes that you are familiar with the use of a computer keyboard and mouse, Microsoft Windows-based products and the use of a Web browser such as Mozilla Firefox or Internet Explorer.

Task 1   Using the Standard Selection Tool

Objectives   To "frame" a selection with a clear geometrical shape, you can use either the **Rectangle** or **Ellipse Selection Tool**.

Comments   Selecting parts of an image is an essential skill in PhotoPlus. It is often the starting point for further manipulations, such as combining images together and applying filters/effects or making tonal adjustments to part rather than all of the image/layer you are working on.

1.1   Select part of an image with the **Selection Tool**:

➢ Open the photograph **C:\Training\Graphics\manneken_pis.jpg** and duplicate it (**Image / Duplicate**), accepting the suggested name.

➢ In the **Tools toolbar**, click the dropdown arrowhead to the right of the **Selection Tool** and select the **Elliptical Selection Tool** (see Figure 1).
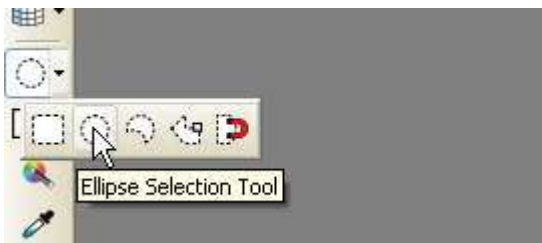

Figure 1 - Choosing the Ellipse Selection Tool

Note   A dropdown arrowhead in the **Tools toolbar** denotes the bundling of two or more related tools. Click the arrow head to expand options.

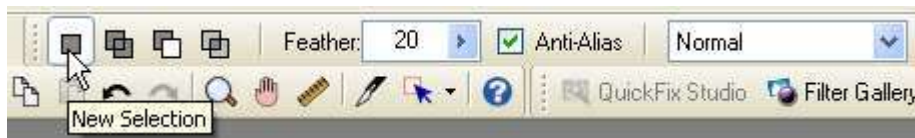➢ Make sure the New Selection option is set in the **Context Toolbar** (see Figure 2).

Figure 2 - Context Toolbar for the Standard Selection tool

➢ Select an area of the image (for example the head of the statue) by holding down the left mouse button and dragging.

TIP: Hold down the **<Ctrl>** key as you draw your marquee, to obtain a circular or square shape, rather than an elliptical or rectangular shape.

➢ Reposition your selection if necessary by clicking inside it and dragging to a new position.

➢ Deselect the selection by holding down **<Ctrl>** and clicking the **d** key

1.2   Use your final selection to create an image that blends into the background colour.

➢ Deselect your current selection

➢ Set feathering to 20px (see Figure 2).

Note   Feathering creates a soft edged border around the selection that blends gradually into the background.

➢ Select the **Background Color** icon located in the **Color Tab**, located towards the top right of the screen (see Figure 3), to launch the **Adjust Color** palette (Figure 4).
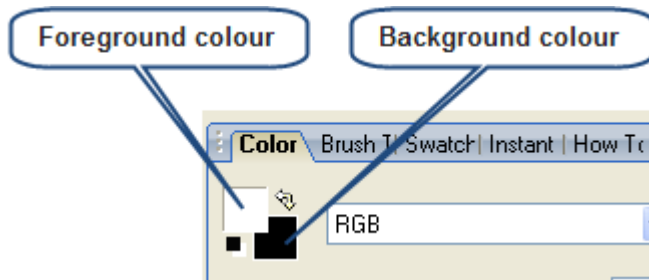
1

Figure 3- The Color Tab
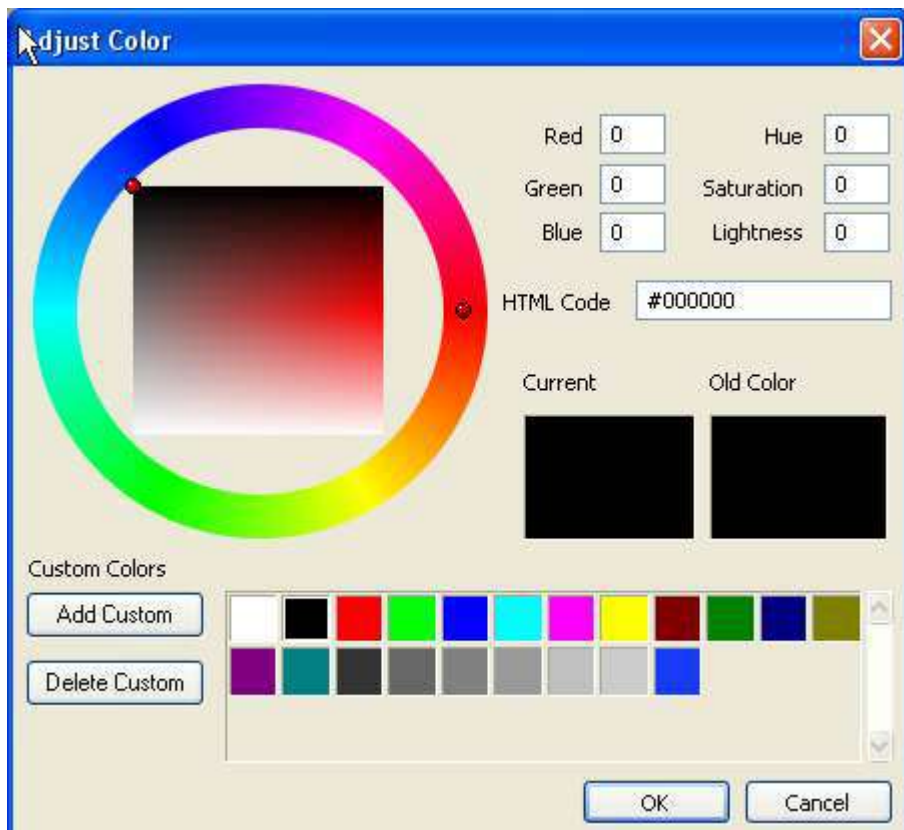
Figure 4 – The Adjust Color palette

> ➢ Choose a colour, using the outer wheel or custom colours selection to set the hue, and the inner rectangle to set the lightness and saturation.

> ➢ Go to the **Select** menu option and choose **Invert**. This will inverse the selection so that the area outside your selection becomes selected (note the marquee around the edges of the image).

> ➢ Go to the **Edit** menu option and choose **Cut**. You should be left with a cut-out of the statue blending smoothly into your chosen background colour.

> ➢ Close the images without saving.

Task 2   Selections using the Color Selection Tool

Objectives   To select an area defined by colour.

Comments   The **Color Selection Tool** allows selections by colour-matching. It is particularly useful when selecting an area containing pixels whose luminosity values are close, such as a blue sky for example.

2.1   Select part of an image with the **Color Selection Tool**:

➢ Open the photograph **C:\Training\Graphics\willstower.jpg** and duplicate it (**Image / Duplicate**).

➢ In the **Tools toolbar**, select the **Color Selection Tool**.

➢ In the **Options** bar, select the **Add to Selection** option (see Figure 5).
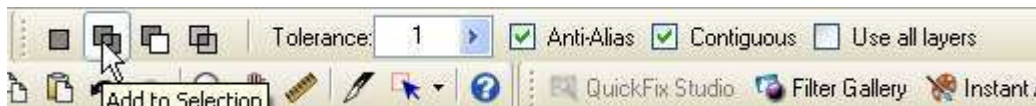

Figure 5 - Context Toolbar for the Color Selection Tool

➢ Set **Tolerance** to 1 and make sure **Contiguous** is checked.

Note   The **Tolerance** option controls the range of pixels that will be included in the selection on either side of the pixel you click on. The **Contiguous** option only allows neighbouring areas to be selected. If it is unchecked, similar colours in unrelated parts of the image will also be selected.

➢ Click four or five times in different parts of the blue sky area, noting the low tolerance. Change the tolerance to **10** and continue; you will notice that the whole sky soon becomes selected, outlined by a marquee (6).
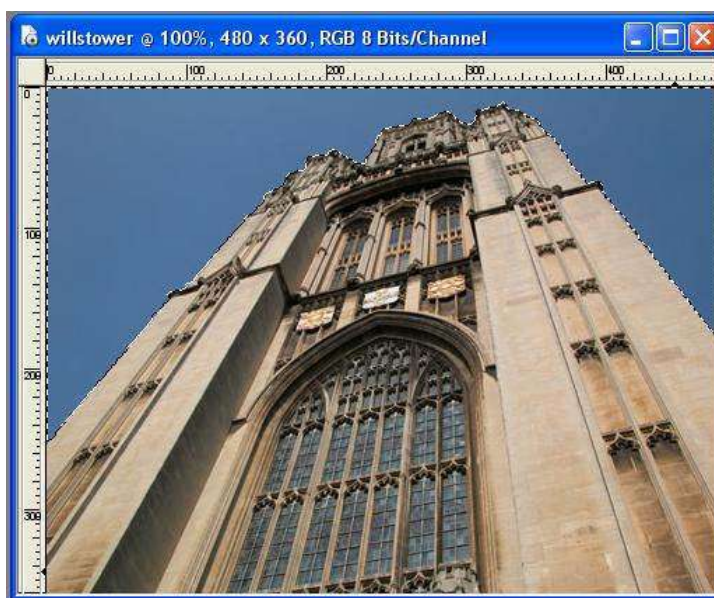
Figure 6 - Sky selected using the Color Selection Tool

2.2 Add a two-colour linear gradient to the selection:

➢ In the **Tools toolbar**, click the dropdown arrowhead to the right of the **Flood Fill Tool** and select the **Gradient Fill Tool**.
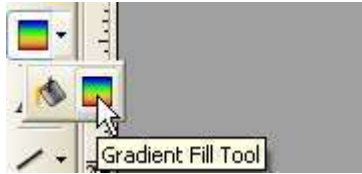
➢ **Working in the Context toolbar**, select **linear fill-type** from the dropdown menu (Figure 7), then click the colour sample to the left, to open the **Gradient dialogue** (Figure 8).

Figure 7 – Selecting fill-type and colour sample

Figure 8 – Gradient dialogue

➢ Working in the **Gradient dialogue**, click the left **colour stop**.

➢ Click the colour box to open the colour picker

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> ➢ Referring to Figure 3 in task 1.2, choose a hue by clicking and selecting from the outer wheel. Choose a lightness/saturation level from the inner rectangle and click OK.

> ➢ Repeat for the right colour stop, choosing a contrasting colour.

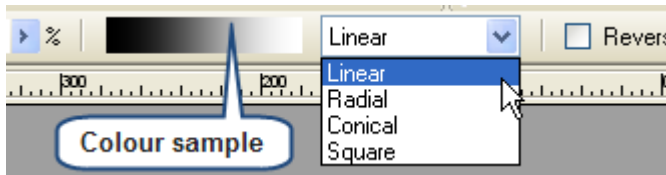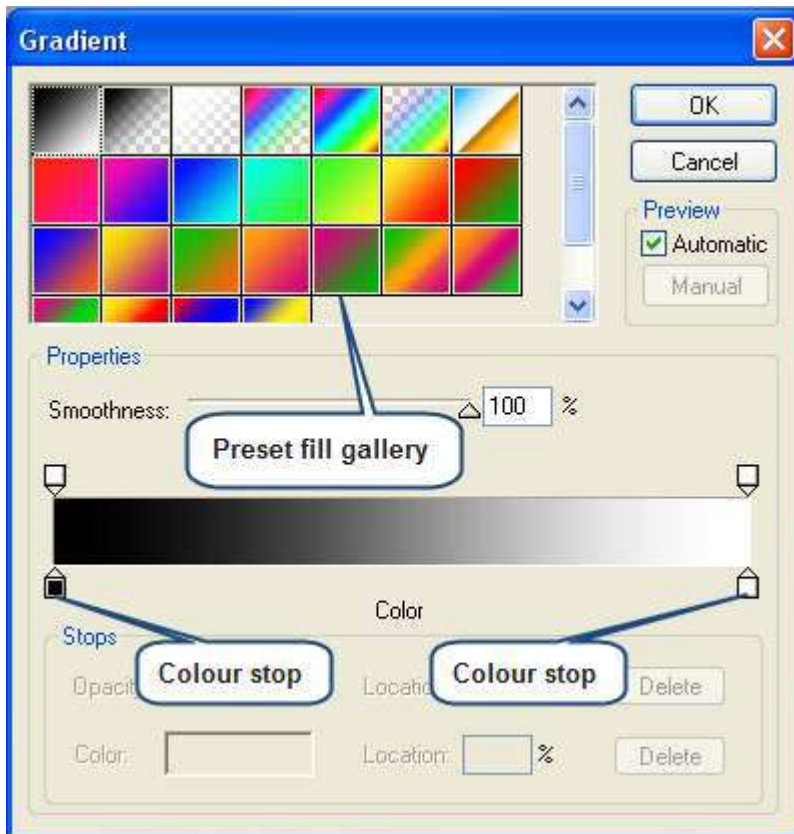> ➢ Place the cursor against the left-hand side edge of the blue selection and, holding down the left mouse button, drag the cursor in a straight line to the right edge of the sky and release.

Note You will notice that a gradient – a transition between your two selected colours - has been applied, but only to the selected area. If you are unhappy with the result, you can simply drag a new gradient over the selected area; there is no need to deselect each time. The direction and width of the mouse drag will determine the colour order, and the wider the mouse-drag, the more gradual the gradient will be.

   Alternatively, you can simply select from a gallery gradients comprising two or more preset colours.

> ➢ Click **<Ctrl> + D** to deselect the selection.

> ➢ Close the image without saving.

Task 3 Selections using the Extract Tool

Objectives To select an irregular area by filling it in.

Comments The Extract Tool enables you to isolate an area by drawing a rough outline around it.

3.1 Select part of an image using the **Extract Tool**:

➤ Open file **C:\Training\Graphics\hockey.jpg**

➤ Select the **Extract Tool** situated on **Photo Studio toolbar**.

➤ Select the **Zoom Tool** on the left and left-click on the image three times to zoom in to 300% (3:1)

Note Right-click to zoom out

3.2 Outline the middle hockey player:

➤ Select the **Edge Marker**, situated on the left of the palette

➤ Working in the **Tool Options** on the right of the palette, select a thin brush - by either using the slider or typing a value into the accompanying box. A value of 3 (pixels) is appropriate for this task.

Note If the Magnetic Edges option is checked, the tool will attempt to detect edges. Because of the detail in this image, its use is not recommended on this occasion.

➤ Holding down the left mouse button, begin at the bottom left of the hockey player and drag around the edge to create a semi-opaque, green (by default) outline. It is important to ensure the outline overlaps the edge of the image. If you make any mistakes, use the **Edge Eraser** to rub out unwanted portions of the outline and reselect the **Edge Marker** to paint in corrections.

➤ Starting and finishing at the edge of the canvas will 'seal' a selection; you do not necessarily need to draw right around the object.

➤ Click the **Foreground** tool and click within the outlined area to select it. The selection will be highlighted in a semi-transparent colour (red by default).

Note Any 'holes' in selection will result in flood-filling of other areas of the image. If this occurs click again within the selection to revert and use the marker tool to fill any gaps.

3.3 Set advanced options

➤ Expand the **Tool Options** by selecting the button labelled **More >>**

Note The advanced options determine the smoothness of the selection using three criteria. These are represented by sliders with values ranging from 0-100.

➤ **Recoloration** matches semi-transparent areas with neighbouring pixels, to a greater/lesser degree. Enter a value of 50

➤ **Smoothing** adds a blur around the edge: a wider setting will apply the blur to a wider area. Enter a value of 70

➢ **Threshold** determines how wide to set the soft edge (i.e. how wide the transition between opaque and transparent should be)... widest gives hard edge - narrowest gives softest edge. Make sure the link box is checked and enter a value of *50*

➢ Select **Preview**. You will see your selection against a transparent background

If you are unhappy with your selection, you can click Revert and edit your selection. Alternatively, for minor adjustments you may wish to experiment with two tools only available in the preview screen (icons displayed beneath the Foreground Tool):

➢ The **Touch Up Tool** enables erasing during preview. Alternatively, hold down shift key to paint layer back where it has been deleted. Use keys 1-9 to change the tool pressure incrementally. There's no need to hold the keys down; simply select a value as and when you need to change it. An appropriate brush size should be used; experiment using the **Brush Size** slider.

➢ The **Edge Cleaner** can be used to smooth out edges if necessary; left-click, hold and drag along the edge repeatedly to straighten it gradually. As above, keys 1-9 will determine the tool's pressure. A brush size of around 15 is ideal for demonstrating the process in this case. Note how the cursor rotates as you move around the edge.

➢ If you want to reject changes made with these tools, click the button labelled 'Reapply' to reject changes.

➢ When you are happy with your, selection click OK. Your selection now exists as an unlocked, movable layer.

Note Once selected the Tool Options will remain expanded. To close click the button now labelled **Less >>**

➢ Restore the image down. This is essential if more than one image is to be displayed simultaneously

3.4 Create a simple photo montage:

➢ Open the photograph **C:\Training\Graphics\royalfort.jpg**. Note the appearance of the Documents tab thumbnail gallery at the bottom of the screen for easy toggling between images.

➢ Return to image **hockey.jpg** and, having selected the **Move Tool** ✛, place the cursor on the highlighted hockey player and drag the selection on to the Royal Fort image and click to move the focus from the original hockey player image. A new, independent layer will be created.

➢ Use the **Move Tool** to position the hockey player where you want it on the Royal Fort image.

➢ Check that the top layer containing the hockey player is highlighted in the **Layers** palette.

3.5 'Clone' the flowers surrounding the hockey player, and use them to paint over the join in the images.

➢ In the **Tools toolbar** click **Clone Tool** icon 🖌 .

➢ Working in the **Context Toolbar** make sure the boxes labelled **Aligned** and **Use all layers** are checked, and set **Opacity** 50% and **Flow** to 100% (see Figure 9)

Figure 9 – Context Toolbar for the Clone Tool

Note The **Aligned** option means that the whole image can be gradually painted back with repeated clicks whilst moving around the canvas. If this option is unchecked, the same sample will painted back with each click.

➢ Click the **Brush** icon to open the **Brush Options**. Choose **Size** to set diameter to 75 (px) and **Shape** to set hardness to 25. This sets 25% of brush to fully opaque with the remainder gradually becoming transparent towards edges (See Figure 10).
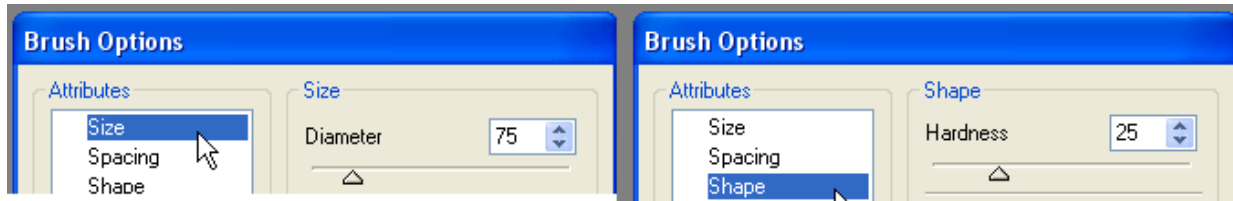
Figure 10 - Setting brush options

➢ Hover over the image to find a suitable sample, in this case grass and flowers whose colours and lightness are a good match for the surrounding area (see Figure 11).

➢ Hold down the **Shift** key and click once to sample required area.

➢ Place the cursor over part of the area you wish to obscure, and click several times (dependent on the opacity set above) to paint the sample over the join.

➢ Repeat the clone process along the length of the join, choosing a slightly different sample each time in order to avoid obvious repetition.

Figure 11 - Choosing a suitable sample to hide a join

➢ If any traces of hockey stick are visible in the player's hand, try using the same technique to remove them.

➢ Save the image as **success.Spp** in **C:\Training\Graphics**.

Task 4   Selections using the Magnetic Selection Tool

Objectives   To explore a shortcut to select a well-defined but irregular shape.

Comments   The **Magnetic Selection Tool** is useful for selecting irregular shapes with high edge-contrast against the background.

4.1   Select a shape using the **Magnetic Selection Tool**:

➤ Open the image **C:\Training\Graphics\autumnleaf.jpg**

➤ Select the **Magnetic Selection Tool**, revealed by clicking the dropdown arrowhead to the right of the selection tool (see Figure 12).
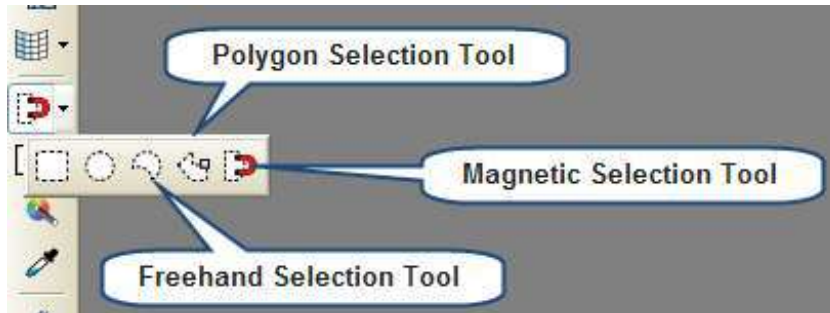

Figure 12 – Polygon, Freehand and Magnetic Selection Tools

Note   This tool works by plotting points (nodes) around an image to create a marquee, using contrast to detect edges. The higher the value in the contrast box, the higher the contrast between neighbouring pixels required to define an edge.

➤ As the image comprises a light shape on a very dark background, set the contrast slider on the **Context Toolbar** to maximum: a value of 15 (see Figure 13).

Figure 13 – Context Toolbar for the Magnetic Selection Tool

➤ The **Frequency** box sets the distance in pixels between nodes plotted around the image: the lower the frequency, the more nodes and the greater the precision. As the leaf edge changes direction very frequently, set this to a (low) value of 20.

➤ Make sure the **Feather** option is set to 0 to ensure a sharp outline.

➤ Place the cursor at any point along the edge of the leaf, click once and release the mouse-button.

➤ Drag the mouse slowly around the edge of the leaf

➤ If the selection starts to veer off down the wrong path at any point, use the delete key to undo the nodes one at a time. Now hold down the ctrl key and continue along the desired path, left-clicking the mouse to plot points.

➤ When you have drawn around the leaf, complete the selection to create a marquee, by clicking on the start point. Double-clicking at any earlier point will join the most recent node to the start point with a straight line.

Note   The **Freehand Selection Tool**, does not plot nodes, giving complete, flexible control over the selection, but requires a very steady hand. To make selection, hold down the left mouse-button and drag around the shape.

The **Polygon Selection Tool** enables selection visa series of straight lines. Simply

click on a starting point, release and drag around the shape clicking once prior to each change of direction.

4.2 Copy the leaf on to another image to create a simple montage

- ➢ Restore the image down.
- ➢ From the main menu select **Edit > Copy**
- ➢ Open image **C:\Training\Graphics\grass.jpg**
- ➢ From the main menu, select **Paste > As New Layer**
- ➢ Use the **Move Tool** to drag the leaf to the centre of the image (see Figure 14)

Figure 14 - Leaf superimposed on grass background

4.3 Duplicate the leaf layer:

- ➢ From the main menu, select **Layer > Duplicate**. Accept the proposed name and click OK.

4.4 Move, rotate and resize the leaf:

- ➢ Make sure the top layer is selected and choose the **Deform Tool** from the Tools toolbar . A solid selection box will appear, with handles on the edges and corners.
- ➢ Left-click and drag within the sizing box to move the layer down and to one side thus rendering both copies visible (see Figure 15).

Figure 15 - Repositioned duplicate layer

- ➢ Hover the mouse just outside the top left-hand corner of the box, noting the cursor transforming to a curved arrow. Rotate the leaf clockwise or anticlockwise by dragging the mouse right or left respectively (see Figure 16). If you wish to change

the point of rotation, left-click and drag the fixed point which is, by default, in the centre of the selection box.

Figure 16 - Using Deform Tool to rotate a layer

➢ Hover over one of the corner handles to change the cursor to a straight, double-headed arrow. Hold down the shift key to preserve proportions and drag the mouse down to reduce scale (see Figure 17). Dragging upwards will increase size, but note that some pixelation will occur as the image becomes stretched.
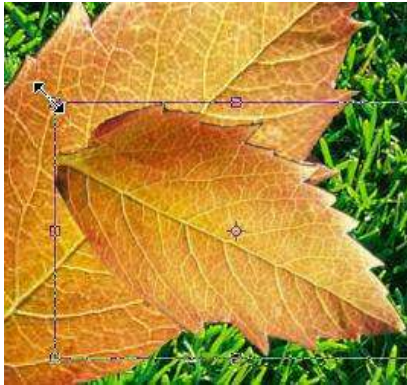
Figure 17 - Resizing a layer down with the Deform Tool

➢ When you are happy with the size of the leaf, move it on the canvas if necessary, by left-clicking and dragging in any direction within the selection box as per task 4.4.

4.5 Working in the main menu, flatten the image by selecting **Layers > Merge > Merge All.**

4.6 Add a filter effect

➢ Working in the main menu, select **Effects > Filter Gallery**

➢ Click the arrow to the left of the **Stylistic** option near the top right of the palette to display a selection of artistic filters.

➢ Experiment by clicking on individual filters (e.g. **Paper Cutouts** - an effect that simplifies colours and edges to give the effect of shapes cut out of paper). Use the menus displayed at the bottom of the filter Gallery to modify the filter settings.

➢ When you have chosen an effect, click OK and minimise the image.

Task 5   Manipulating colours

Objectives   To change the hues and colour-saturation within whole images and individual colour channels.

Comments   This is achieved by the addition of a **Hue** / **Saturation** / **Lightness** adjustment layer.

5.1   Open the image **C:\Training\Graphics\crayons.jpg**

5.2   Add a **Hue** / **Saturation** / **Lightness** adjustment layer

➢ Select **Layers > New Adjustment Layer > Hue/Saturation/Lightness**. This will launch the palette shown in Figure 18.

Figure 18 - Hue/Saturation/Lightness palette

5.3   Adjust the hue and saturation of the whole image:

➢ Slide the **Hue** slider to the far right and wait for the settings to update. Note how all the colours have moved along the spectrum. The two spectrum bars at the bottom show how colours have been offset: the top bar represents the original colour and the bottom shows the new replacement. Gradually move the **Hue** slider to the far left, stopping at different points.

Note   The master setting affects all colour channels.

➢ Reset the **Hue** slider to the centre point, by typing 0 into the corresponding box.

➢ Move the **Saturation** slider to the far-left and wait for settings to update. Saturation determines the colour concentration: the minimum setting will render a greyscale image.

➢ Experiment with the **Lightness** slider, before resetting all settings to 0.

5.4   Modify an individual colour channel

➢ From the dropdown labelled *Edit* (see Figure 18), select **Yellows**.

➢ Enter a hue of -60. Notice that the yellow crayons turn red and certain hues within the green crayon fall within the range (**tolerance**) set for the yellow channel.

5.5   Fine-tune the adjustment using the sliders that appear between the spectrum bars (see Figure 19)

Figure 19 - Sliders between spectrum bars used for fine-tuning

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➢ Working between the spectrum bars, remove the orange halo from the left-hand crayon by gradually sliding the far-left slider to the left until the whole crayon is red.

Note This technique works by increasing the **Tolerance**, including more hues in the colour selection to be modified. The inner sliders show the colour range to be fully affected by the hue/saturation/lightness sliders. Between this section and the outer sliders, the effect is feathered, reaching zero at the outer point to help produce a smooth transition into the background.

➢ Return the green crayon to its original colour by sliding the far-right-hand slider up against the right-hand inner slider. This example reduces tolerance, excluding the hues in the transition between yellow and green.

➢ To isolate areas of an image to be modified, you should apply a marquee using one of the techniques explained in tasks 1 to 4. A feathered or soft edge will help blend the selection into the background.

Task 6   Repairing a damaged photograph

Objectives   To remove scratches and dust spots from an image.

Comments   This task brings together a variety of techniques and tools: filters, adjustment layers and cloning.

6.1   Open image: **C:\Training\Graphics\old_image_before.jpg**. The photograph has become damaged with time; there are obvious scratches and creases, and it lacks contrast through fading over the years.

➢ Working in the top menu, duplicate the background (the only layer in this case), by selecting: **Layers > Duplicate**. Accept the suggested name for the copy and click OK. You will now see two identical layers (see Figure 20).
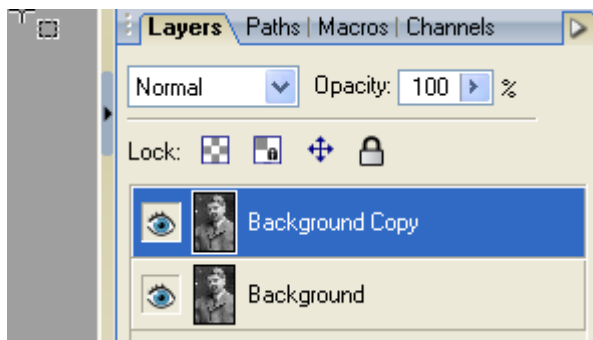

Figure 20 – Duplicated background layer

The main aim of the task is to apply a filter - the **Dust and Scratch Remover** - to the whole of the top layer, and selectively reveal the original background where deemed superior to the filtered version. This is because the **Dust and Scratch Remover** cannot distinguish between blemishes and detail (e.g. eyelashes, intricate fabric patterns etc.).

6.2   Apply the **Dust and Scratch Remover**

➢ Make sure the top, background copy layer is selected (see Figure 20) and working in the top menu, go to : **Effects > Noise > Dust and Scratch Remover**. This will launch the filter along with a preview screen.

➢ Working in the panel on the right-hand side, experiment with the **Radius** setting. As the value is increased, detail will gradually be removed from the image.

➢ Set the **Radius** value to *4*. This means that any distinguishable area of the image with a size of four pixels or fewer will be replaced by pixels matching larger neighbouring areas. In other words, the smaller areas will disappear into the background.

➢ Experiment with the **Threshold** setting. The greater the threshold, the greater contrast required between neighbouring pixels in order for the filter to be applied. In other words, increasing the **Threshold** will gradually return naturally neighbouring smaller areas to the image, whereas unnaturally high-contrast areas, such as white scratches on a dark background will remain filtered out.

➢ Set the **Threshold** value to *25* and, once the preview screen has updated to reflect the latest settings, click **OK**.

6.3   Notice that along with the removal of blemishes, the pattern in the man's tie has been affected). For this reason it is important to display the filtered area only where appropriate. This is achieved by masking the top layer and painting it back only where required.

> Make sure the top layer is selected and apply a layer mask: **Layers > Mask > Add Mask > Hide All**

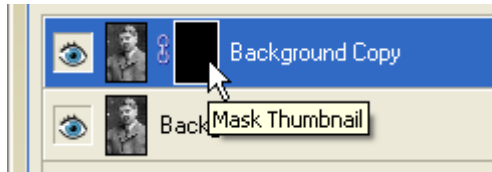This will render the layer invisible and a **Mask Thumbnail** icon will appear (see Figure 21)

Figure 21 – Mask Thumbnail appearing in Layers palette

6.4 Paint the top layer back where required to hide blemishes.

> Select Paintbrush Tool icon ✎ on the Tools toolbar to launch Brush Options Context toolbar (as per task 3.5).

> Set **Opacity** to100

> Select the Brush icon ⬤ Choose the **Size** option to set diameter to *50* (px) and **Shape** to set hardness to *50*.

> Making sure the **Mask Thumbnail** in the top layer is selected, click several times on each blemish on the image to paint the hidden layer back where required.

Note If the **Mask Thumbnail** is not selected, the brush will paint colour over the image

> Add a new layer: **Layer > New Layer**, naming it *Repairs* and accepting other defaults in the **Layer Properties** dialogue box. Make sure the new layer is at the top of the layer stack.

Note You can also use the **New Layer** icon ⊞ to create a new layer. To reorder layers, left-click and drag up or down within the layers palette.

> Referring back to **Task 3.5**, use the **Clone Tool** to replace any remaining imperfections with suitable samples. Once again, make sure the **Use all layers** option is checked.

Note Use the **Size** option in the context menu to resize brush as necessary.

6.5 Add a **Levels Adjustment Layer** to improve contrast.

> Working in the **Layers** palette, make sure the top layer is selected

> In the top menu select: **Layers > New Adjustment Layer > Levels**. This will add an editable **histogram** representing the contrast throughout the image (see Figure 22).
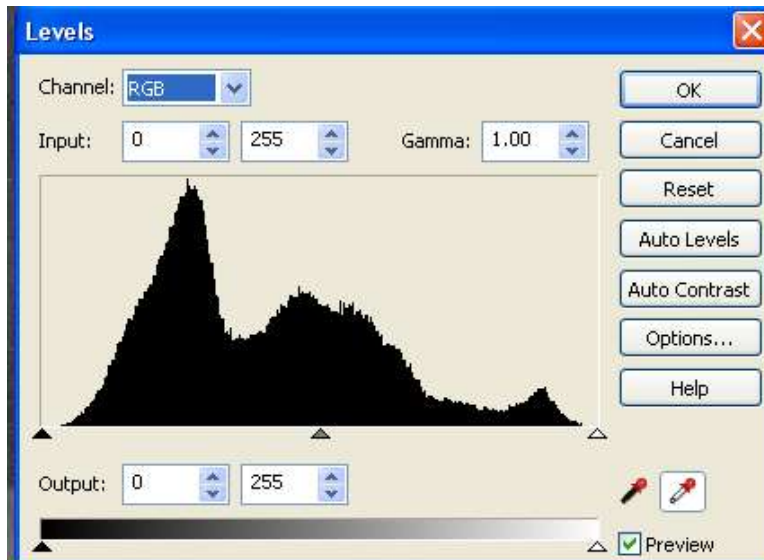
Figure 22 – Levels Adjustment Layer showing histogram

Note Working from left to right, the three sliders under the histogram, represent the black, gamma (mid tones) and white levels in the image. If the black and/or white sliders sit outside the histogram, this indicates that the colour range falls within the mid-tones, i.e. there is no pure black or white in the image. In the case of this photograph, the black areas have faded and the white areas become darker with age.

➢ Drag the black and white sliders inwards until they meet the edges of the histogram. This will set the darkest areas to back and the lightest to white creating a contrast across the whole tonal range.

➢ Move the middle slider to the left or right to darken or lighten the image respectively.

➢ When you are happy with the result. Save the image as *old_image_after*, selecting the format **.Spp**

Note The **.Spp** format is a Serif PhotoPlus format that preserves individual layers. For future editing.

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Task 7   Blending images using a layer mask and gradient

Objectives   To merge images together in a smooth transition.

Comments   This technique is ideal for creating seamless photomontages.

Creating a new document

7.1   Create a new file:

➢ Go to **File > New**. In the **New** dialogue box, set the **Width** to *300* **pixels** and **Height** to *100* **pixels**. Make sure the **Color Mode** is set to **RGB Color** and **Background** to **White** (see Figure 23).
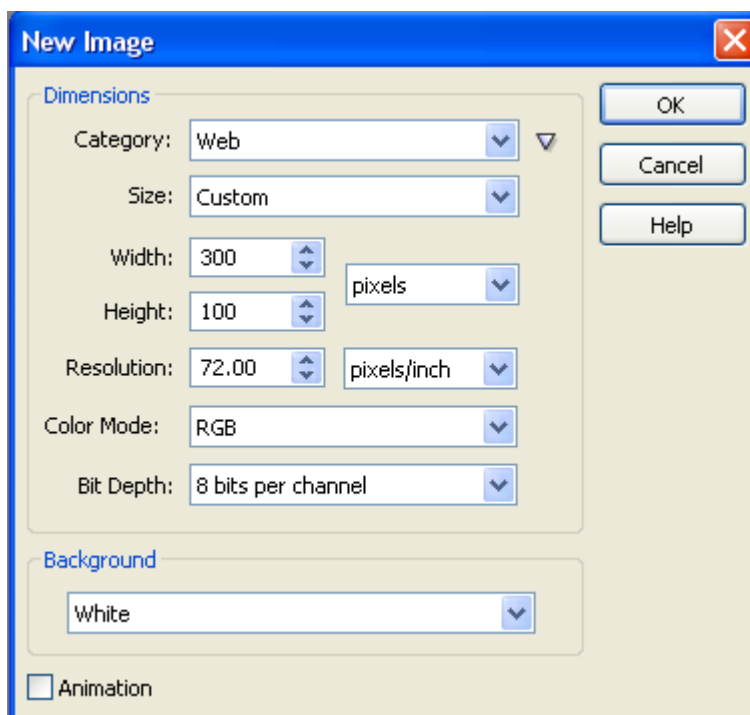

Figure 23 - New file dialogue box

➢ Click **OK**.

➢ Click the Restore the image down so it occupies its own floating window.

7.2   Move images to the new document:

➢ Open the image **library.jpg** located in **C:\Training\Graphics**.

➢ Go to **Edit > Copy**.

➢ Click on the new blank image and go to **Edit > Paste > As New Layer**.

Notice that a new layer containing the library image appears above the white **Background** layer in the layers palette.

Note   If rulers are not displayed, click **View** / **Rulers**. Right-click somewhere inside the ruler and set the unit of measurement to **Pixels**.

7.3   Resize the image to make it smaller:

➤ Ensure the top layer is selected in the **Layers** palette and, in the Tools toolbar, select the **Deform Tool** 🔳.

This will display sizing handles around the image – if you cannot see the handles, you can increase the canvas size by dragging its edges.

➤ Hold down **<Shift>** to preserve the aspect ratio, and move the corner points inwards until you can see enough of the student in the image.

As you do this, you can reposition the image by placing the cursor inside the transform boundaries, holding down the left mouse button and dragging. Drag the image to the right of the canvas, leaving approximately 1/3 of the canvas uncovered and experiment with vertical alignment until you are happy with the position of the student (see Figure 24).
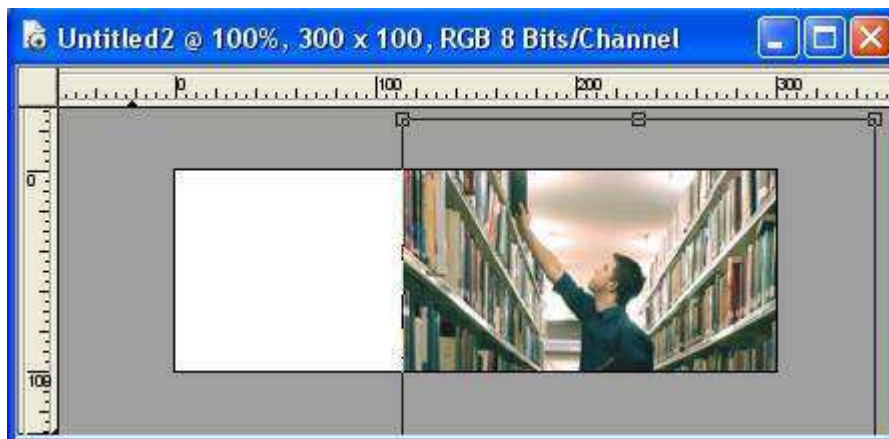

Figure 24 - Scaling down and positioning the library image

➤ Select the move tool ✛ from the Tools toolbar, left-click in the top ruler, hold and drag to the right to set a vertical **guide** (blue line) at the left-hand edge of the photograph.

Note Horizontal guides can be created by dragging up and down within the left ruler. To reposition a guide, using the Move Tool, hover over the guide until it turns into a double-headed arrow, then left-click and drag within the image. Drag the guide out of the canvas to delete it.

7.4 Repeat steps   and 7.3 with the image **computer.jpg**, aligning it left, overlapping the library image. It should cover just over ½ the canvas (see Figure 25). The guide should be set against the right edge of the photograph.

Note If the image keeps snapping to edges of the canvas, turn the **Snap** feature off by selecting **View > Snapping** to uncheck it. Repeat this process to reset it if required. The **View > Snap To** options enable snapping to guides, a grid if displayed, or document edges.
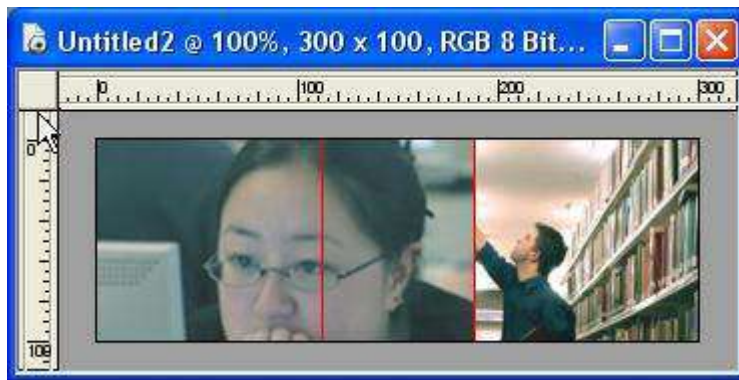
Figure 25 - Two overlapping layers with guides to highlight edges

Note It is important that the images overlap sufficiently for the blending effect to work.

Blending the images

7.5 Add a **layer mask** to hide the top layer:.

➢ In the menu bar at the top, go to **Layers > Mask > Add Mask > Reveal All** to add a layer mask.

Note The '**Reveal All' layer mask** performs the opposite role to the **'Hide All'** option (shown in task 6.3) by rendering a layer fully visible. Tools usually associated with painting, flood-filling etc. can then be used to paint the layer away.

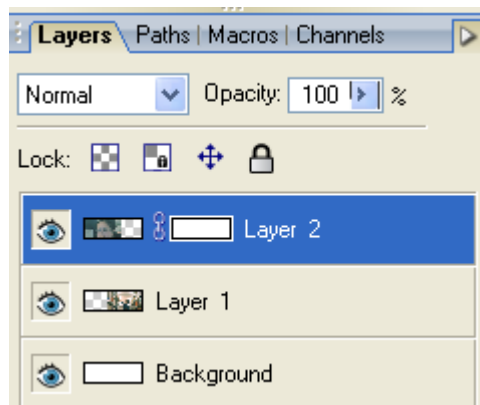This renders the layer invisible, indicated by a white thumbnail in the **Layers** palette (see Figure 26).

Figure 26 – Reveal All layer mask applied to top layer

Various tools can be used to 'paint the layer away'. In this case, the **Gradient Tool** is used to achieve a smooth transition from transparent to fully visible.:

➢ Having made sure the foreground colour is set to black, select the **Gradient Tool** (if you can't see it, click on the small black triangle to the right of the **Flood Fill Tool** and select it).

➢ Working in the Gradient Tool's **Context toolbar** (below the top menu) the drop-down settings should read *Normal* and *Linear*, respectively, the opacity should be set to *100%* and the top-left gradient preset (black-white) (see Figure 27).

Figure 27 – Context Toolbar for Gradient Tool

Note   Is important the black-white gradient is selected to ensure a transition between fully opaque and fully transparent (i.e. other options will result in the layer being rendered semi-transparent).

➤ Make sure the layer mask (white thumbnail) is highlighted in the **Layers** palette, by clicking on it once.

➤ Place the cursor just inside the right-hand guide image (roughly in the middle, vertically). Click and hold down the left mouse button and drag the mouse to the left, in a straight, horizontal line, stopping just before reaching the left guide, and release. You will notice the computer image gradually fade away. The image becomes 100% transparent at the point at which the mouse is released. If you are unhappy with your gradient, simply click and drag the mouse again. The shorter the drag, the less gradual the transition between invisible and opaque.

Note   If the image icon is highlighted in the **Layers** palette, a colour gradient will flood the layer.

From the top menu, hide the guides (**View > Guides**). Your blended image should look something like Figure 28.

Note   Select **View > Guides** again to redisplay your guides if required.

Figure 28 - Layers gradually blended together

7.6   Link the two layers:

➤ In the **Layers** palette, select one of the image layers, press **<Shift>** and select the other image layer.

➤ Working in the top menu, go to **Layers > Link layers**. Notice the link symbol displayed to the right of each image layer.

Note   Linking layers is particularly useful for keeping layers together when repositioning. To separate linked layers, repeat task 7.6, noting the menu option now reads **Layers > Unlink layers.**

7.7   Merge the layers:

➤ Select both layers as per task 7.6 and, working in the top menu, go to **Layers > Merge > Merge Selected Layers**. As a result the two linked layers will become one

Note   To flatten the image, use the option **Layers > Merge > Merge All**

➤ Save the image to your working directory as **firstmontage**, accepting the **.Spp** file extension.

Task 8   Working with text layers

Objectives   To add and manipulate text layers.

Comments   You can create type (text) anywhere in an image in PhotoPlus. When you create text a new layer is added to the layers palette. You can then manipulate it like any other object (image, shape, selection, etc), and the text itself will remain editable as long as the file is saved in the **.Spp** format.

Adding a text layer

8.1   Create a new image with dimensions 400px x 400px with a white background (see task 7.1)

8.2   Activate the **Text Tool**:

➢ In the **Tools toolbar**, select the **Text Tool** ![A] and left-click inside your new canvas. This will automatically create a new layer.

Note   The **Text Tool** comes bundled with the **Text Selection Tool**. This enables the creation of a text-shaped selection.

➢ In the **Text Tool** context menu (Figure 29) choose a font and size from the font options (for example **Arial**, **48pt**).

➢ Ensure the **Anti-Alias** option is checked and choose a colour (click the neighbouring colour picker to launch the colour palette).

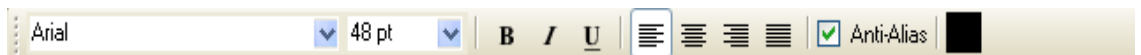**Note**   Anti-Aliasing adds an effect to make jagged edges appear smooth.

Figure 29 Text Tool context menu

Note   Working at different image resolutions will result in variations in apparent text size. For example text will appear much smaller in a 300dpi image than in a 72dpi (typical screen display resolution) image.

8.3   Add some text:

➢ Click inside the canvas, toward the top left and type your name.

8.4   Reformat and edit the text:

➢ Making sure the type layer is highlighted, select the **Text Tool** and click just to the right of the final letter of your text.

Note   It is important you do not click anywhere else in the document; this will result in the creation of a new text layer

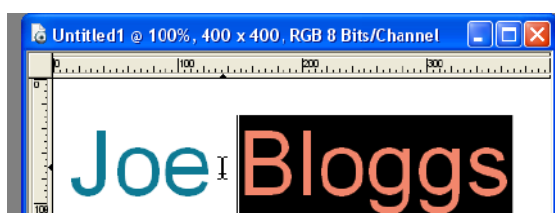➢ Hold down the left mouse button and drag to highlight some or all of the text (see Figure 30)

Figure 30 - Selecting text

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➤ Experiment with font faces, sizes, and colours within the context menu. You can also use the keyboard to edit the text.

Adding a text box

8.5 Use the shape tool to create a box with a drop shadow to set it away from the background:

➤ Create a new layer and make sure it is positioned between the text and background layers (see notes in task 6.4).

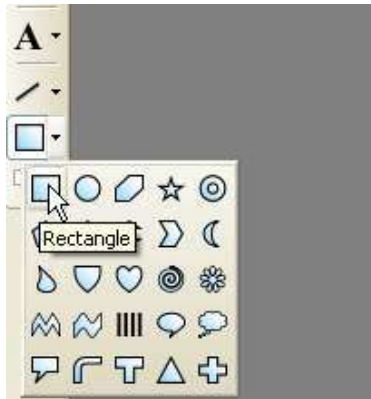➤ Select the **Rectangle** tool in the **Tools toolbar** (see Figure 31)

Figure 31 - Rectangle Tool

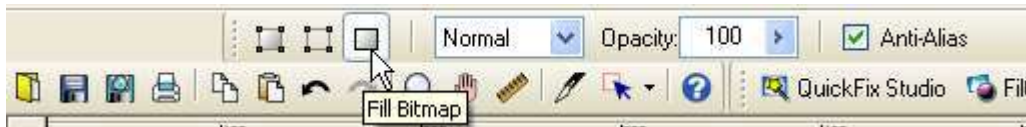➤ In the context menu, make sure the **Fill Bitmap** option is selected (Figure 32).

Figure 32 – Context Toolbar for Rectangle Tool with Fill Bitmap option selected

➤ Set the foreground colour by clicking the **Foreground colour** icon (see task 1.2) choosing a pale colour from the palette.

➤ Working on the layer you have just created, place the cursor below the text you have already created, hold down the left-hand mouse button, and draw a rectangle, large enough to accommodate your text.

Note Hold down the alt key when dragging, to achieve a perfect square

➤ Resize and move the text box if necessary using the Deform Tool (see task 4.4)

➤ If you wish to reposition the text , select the text layer in the **Layers** palette and use the **Move Tool**.

8.6 Add a drop-shadow:

➤ In the **Layers** palette, make sure the text box layer is selected and click the **Add Layer Effects** icon at the bottom.

➢ From the pop-up menu, select **Drop Shadow**. This will launch the **Drop Shadow** options palette, adding a default shadow to the text.

➢ Experiment with the options **Opacity, Blur, Distance Intensity and Angle** and click the **OK** button when you are happy (Figure 33)

Note Layer styles are applied to every object within a layer. For example, two shapes on one layer will both acquire a drop shadow.

You may wish to link or merge the two layers (see task 7.6)

Figure 33 - Text box

Further text editing is possible via the **Paragraph** and **Character** palettes (open by clicking the **Toggle the Character and Paragraph** palettes icon on the **Text Tool Options** bar. The **Paragraph** palette enables line spacing, alignment and so on to be set. The **Character** palette provides a shortcut to several formatting elements also found elsewhere (anti-aliasing, font colour, font size etc.)

You can also warp text in many different ways by using the **Create warped text** option. Feel free to experiment with these.

➢ Save the image as *textbox*, selecting the **.Spp** file extension to preserve layers for future editing.

Appendix 1 **Resolution and image size for printing**

Pixel size	Megapixels	RGB size (MB)	CMYK size (MB)	Print size at: 150 ppi	300 ppi
1600 x 1200	2	6	7.5	11 x 8 inch (28 x 20 cm)	5.5 x 4 inch (14 x 10 cm)
2400 x 1800	4.3	12.5	16.5	16 x 12 inch (40 x 30 cm)	8 x 6 inch (20 x 15 cm)
3000 x 2000	6	17.5	23.5	20 x 13 inch (51 x 33 cm)	10 x 6.5 inch (25 x 16.5 cm)
3500 x 2500	8.75	25	33.5	23 x 17 inch (58.5 x 43 cm)	11.5 x 8.5 inch (29 x 21.5 cm)

Table 1 - comparison of pixel resolution, megapixels, megabyte file size and print output dimensions at different resolutions in inches (and centimetres)

Output use	Screen ruling	x 1.5 Standard quality output resolution	x 2 High quality output resolution
Newspaper	65 – 100 lpi	97 – 150 ppi	130 – 200 ppi
Books	120 – 150 lpi	160 – 225 ppi	240 – 300 ppi
Colour magazine	150 – 175 lpi	225 – 262 ppi	300 – 350 ppi
Art book/magazine	175 – 250 lpi	262 – 375 ppi	300 – 500 ppi
Photo quality inkjet printer	150 – 300 lpi	225 – 450 ppi	300 – 600 ppi

Table 2 - rule of thumb screen resolutions for common print devices at lpi x 1.5 and x 2 quality factors

Example

Say you want to print a high quality A4 photograph on an inkjet printer:

A4 size = Width 8.268 x Length 11.693 inches (21 x 29.7 cm)

Printer resolution = 200 lpi

Quality factor = x 1.5

Print length x Printer resolution x Quality factor = number of pixels required in length

11.693 x 200 x 1.5 ≈ 3500 pixels in length

Print width x printer resolution x Quality factor = number of pixels required in width

8.268 x 200 x 1.5 ≈ 2480 pixels in width

Appendix 2 **Further resources**

Web Photo Resizer

This is a free online tool for resizing and optimising images for the Web. Features include cropping, rotating, sharpening and contast/brightness adjustment:

http://www.webresizer.com/

PIXLR

PIXLR's image editor offers online layers-based image creation. Features include text, cloning, filters and adjustment layers:

http://www.pixlr.com/editor/

Serif PhotoPlus on Remote Desktops

Serif PhotoPlus is available to use on both Staff and Student Remote Destops:

http://www.bristol.ac.uk/is/computing/advice/homeusers/remote/staffdesktop/

http://www.bristol.ac.uk/is/computing/advice/homeusers/remote/studentdesktop/