

# Capturing and optimising digital images for research

## Practical workbook

### Aims and Learning Objectives

The aim of this course is to explore the procedures of image capture using a scanner and to optimise the resulting digital images using Serif PhotoPlus (or similar image editing package).

On completion of the course, you will be able to:

- understand colour rendition issues;
- understand the digitisation process;
- set scanning parameters adequately for the intended output;
- capture images using a scanner;
- crop images;
- correct perspective problems;
- adjust the tone and colours of images;
- sharpen images;
- scale images;
- use four different graphic file formats for the right purpose.

## Document information

### Course files

When working in the Computer Centre training rooms save your personal filestore (go to **Start \ Computer** and under **Network Location** look for your username and double click on it).

### Related documentation

Other related documents are available from the web at:

<http://www.bristol.ac.uk/is/learning/resources/resources-by-topic-all.html#images>



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## **Introduction**

There is little doubt that the use of digital images in learning, teaching and research projects is growing. Typical uses include: supporting lectures and other presentations; creating web-based instruction and creating digital image archives. Another aspect of digital images is that they can be delivered on a variety of supports: PowerPoint, web, image database, CD-ROM and print. It is therefore important to be familiar with image digitisation processes in order to obtain images that are 'fit for purpose'.

Scanners provides a means for converting analogue images to digital, allowing them to be manipulated and enhanced on a computer using a graphics package such as Adobe Photoshop or Serif PhotoPlus.

This course shows you how to make better use of your scanner and apply image enhancement techniques using Serif PhotoPlus, an image editor for which the University has a site licence.

## **Prerequisites**

This course assumes that you are familiar with the use of a computer keyboard and mouse, and with the Windows environment.

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# Task 1 Scanning an image

**Objectives** To obtain a scan from a traditional film image.

**Comments** It is important to set the scanning parameters adequately for the intended image output. For example if you want to make an A4 print, you will need to scan the original at a setting that provides enough information for a good print at that size. Conversely if you scan an image for a website less information will be required.

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## Preparing to scan

**1.1** Prepare the scanner:

- Connect the USB cable from the scanner to a free USB slot on the front panel of your computer.

**Note** The Canon CanoScan Lide 200 gets its power from the computer via the supplied USB cable.

**1.2** Prepare the original:

- Check the condition of the photograph handed out to you, handle it with care, by its sides (avoid touching the surface with your fingers) and check that it is clean – gently blow off any obvious dust or hair-like particles if necessary.

**Note** This is the first step towards a quality scan. The more you keep the original image in good condition and clean, the better the digital image and the less retouching it will need.

**1.3** Place the image in the scanner:

- Lift the scanner lid and place the photograph facing down on the glass, at least 1 cm away from the edges and upside down.
- Close the lid.

## Starting the scanning process

**1.4** Open PhotoPlus X5 and the scanning software:

- Press the **Start** button (bottom left of the screen) select **All Programs / Serif PhotoPlus / PhotoPlus X5**.
- In the Startup Wizard, in the **Create** column, select **Import From Twain**, then choose **CanoScan LiDE 200 14.0 (32-32)** and click **Select**.

**Note** Alternatively, if you can't see the Wizard Startup, open the **File** menu and choose **Import / Acquire**.

You should now see the **ScanGear** scanner driver, showing the scanner 'bed' (where you can preview your scan) on the left and the settings options on the right (Figure 1).

**1.5** Preview your scan:

The scanning software that comes with your scanner usually provides a number of adjustable settings. By default ScanGear opens in **Basic Mode** which offers limited features. However, in order to obtain better results it is recommended to switch to **Advanced Mode**.

- In the settings pane on the right, select the **Advanced Mode** tab and click **OK** when prompted.
- Next click on the blue **Preview** button at the bottom of the settings pane.

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