

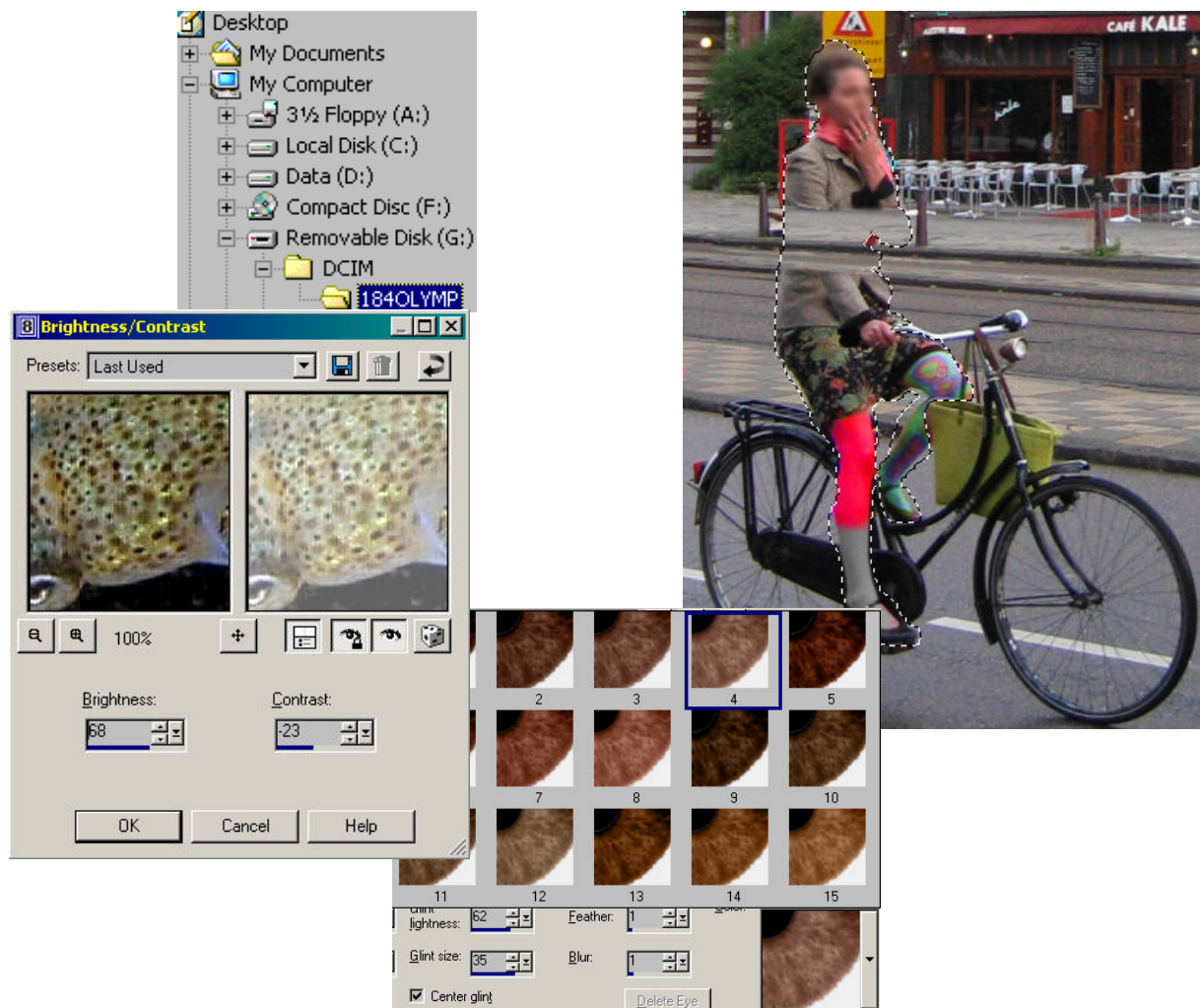
Making the most of your digital camera



Making the Most of your Digital Camera

Rob Spray

Demystifying digital photography and putting you in charge of your pictures



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1. Introduction

So how did I get started with digital cameras?

My introduction to digital cameras was in 1999 when choosing a method for getting still pictures back from ocean racing yachts. Digital cameras made it easy to get the pictures home over a satellite link. The compact digital cameras also came with tough waterproof housings which I was able to take diving...

...which is where my interest took off and, once I'd got more confident underwater, so did the photography. Since 2001 I have been taking pictures in earnest and whilst there's some way to go before I'd rate myself as more than competent or at all artistic, I've enjoyed it much more than I did waiting for my pictures to be developed in the old days.

What's the big idea?

A new digital camera won't make you a great photographer, photography is an art and you may or may not be an artist, yet! But digital cameras do make it easier to get good results since you can see your results straightaway and correct mistakes. It doesn't cost any more to take 1, 10 or even 100 pictures you can afford to keep going until you get the one you want.

Using a film camera I bought in 1983 I used about 70 films - about 2500 pictures in 18 years. Now I take more and more pictures every year, since 2001 I have taken roughly 100,000.

Digital pictures make new things possible too, especially new ways to share pictures, and this means you can get pictures to the people you want to see them. To unlock all this great stuff you really do need access to a PC and that's usually where things start to get tricky. The aim of these workshop notes is to help you become aware of what is possible with digital imaging in general and aware of the advantages and pitfalls of using a PC. Hopefully this will help you on the way to getting the results you hoped for when you first bought your camera.

This workshop is a taster for the full course which now runs for a total of 15 weeks in three parts. The beginners, intermediate and advanced sections each lasts for 5 weeks and cover common problems and useful techniques in much more detail than we can in the workshop.

My get out clause...

The information in this package is a summary for digital photography and not an in-depth computer literacy or photography course. I hope it's useful and appropriate, in some cases a single situation is presented as a de facto method to avoid extensive explanation during this short workshop. This is not intended to patronise and if you feel any area has been glossed over please ask for more information.

This course is PC based using Paintshop Pro and Picasa software— the latest versions available at the time of writing. The principles shown are the same in other versions and similar programs.

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2. Computer basics

Getting used to mice

Trying to move a mouse at arms length is usually imprecise. Most experienced users plant the heel of their hand and make small mouse movements with their fingers, only lifting their whole hand when they need to make bigger movements. This usually allows improved control for subtle changes and even makes clicking more accurate.

Species of mice

There are two common types of mice; mechanical and optical. When new, they both work pretty well but the mechanical ones fill with dirt, hair and mystery crud that has to be removed periodically. Optical ones don't clog and work on uneven surfaces. Cordless things have become much cheaper and a wireless keyboard and mouse can clear clutter from your desk – rechargeable ones are worthwhile as it can be confusing when your mouse goes flat!

Tablets

People who do a lot of work with pictures often use graphics tablets, flat plastic palletes where you use a pen-like 'stylus' instead of a mouse. People are used to pens and brushes for precise work and so these can be more pleasant to use. While they allow fine control they aren't so intuitive for menus. They are usually wireless and can coexist with your mouse.

Hard Discs

There is just one rule when buying hard discs – buy the biggest you can. Whatever you do will fill any disc so having more space than you need is a problem that rarely lasts long. It is very easy, though slightly more costly, to add extra external discs via USB2 ports. A nice feature of external drives is that they can be moved from PC to PC when you upgrade or travel.

CD (and DVD) burners

Hard discs are great for huge storage but are mechanical and don't last forever, a back up store that doesn't wear is vital. CDs have been around since 1983 and are versatile and tough. Store CDRs (writeable CDs) somewhere dark. USB ones are easier to fit.

Memory

When working with large pictures memory is more important than the processor speed of your computer, if you can fit 1GB (or more) to your PC it will help.

Screens

If you spend a long while at a computer nice, flat LCD screens are more restful than the old style but need to be adjusted carefully. Usually people have the contrast and brightness both up too high. To see your pictures properly make sure that while white is bright and black is dark you can still see the subtle shades between. Set black with the brightness control, then set contrast so that white is comfortably bright.

Windows

With Windows newest isn't always best, Vista and XP can be slow on old PCs, Windows 98 is past it now. Windows 2000 is a good compromise as it runs reasonably fast on old machines.

3. Picasa

I used to cover downloading in much greater detail but life is now much simpler than it used to be and newer versions of Windows will even volunteer to extract your pictures from your camera. Even better than this there are excellent free programs which will take most of the stress out of the important, basic bits of digital photography. The best program I have used is called Picasa and is worth every penny! It's free!

Picasa isn't hard to get to grips with so this isn't a manual, just some pointers to get you started. The best way to learn is to experiment, which is safe with Picasa – as you'll see in a few pages time.

Downloading

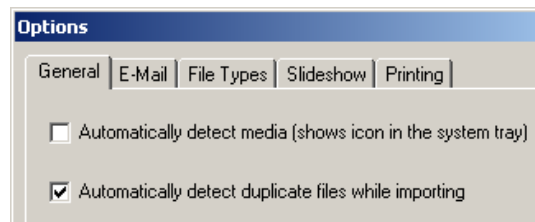
Once it is downloaded and installed (from picasa.google.com N.B. No www) it should spring up whenever you connect a camera or some storage which has pictures on (including CDs) and offer to download them. Not only that it will keep track of the ones you have already removed from the card if you are the kind of person who doesn't wipe the card every time – like me.

Windows XP and Vista have a camera download wizard which does a similar thing, though not as well and not as simply.

Although Picasa is very good there are a few things to keep an eye out for to make sure all goes smoothly.

Detecting 'media'

The default setting for Picasa allows it to keep an eye out for new pictures arriving on your computer. Your camera's own download software and windows might be trying to do this as well. Usually the last program takes precedence but this can be upset and if Picasa isn't responding then you should check the settings.

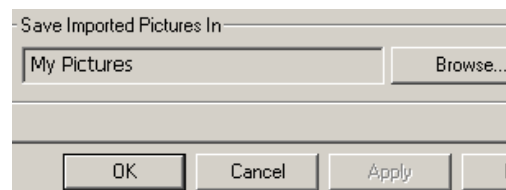


Tools > Options > General tab

If there is no tick in the boxes for
Automatically detect media and
Automatically detect duplicate files when importing
then click on them so that a tick appears

Set your picture store

Deciding where you want your pictures to go means you'll know where they are when you want work on them. Picasa allows you to set the folder where new pictures are stored, a new sub-folder is created for each download.



Making the most of your digital camera

The default for Picasa (and Windows) is a folder on the system hard drive called **My Pictures**. This is OK but a very big collection of pictures could clog and slow your system so it is better to store them on another partition or drive.

Tools > Options > General tab

At the bottom of the box) is the setting

Save Imported Pictures In

Which allows you to browse to the folder you would prefer

Your system drive is almost always called the C: drive, if you have another it will probably be called the D: drive. There may not be another hard drive area. You will also have a CD or DVD drive with a letter of its own, which may be D: if there is no other hard drive.

Index Scanning

Picasa scans your PC for pictures, but only where it has been told to look. Downloaded files will be included in its index but sometimes pictures won't appear. To add folders to the index needs another sortie into Picasa's menus.

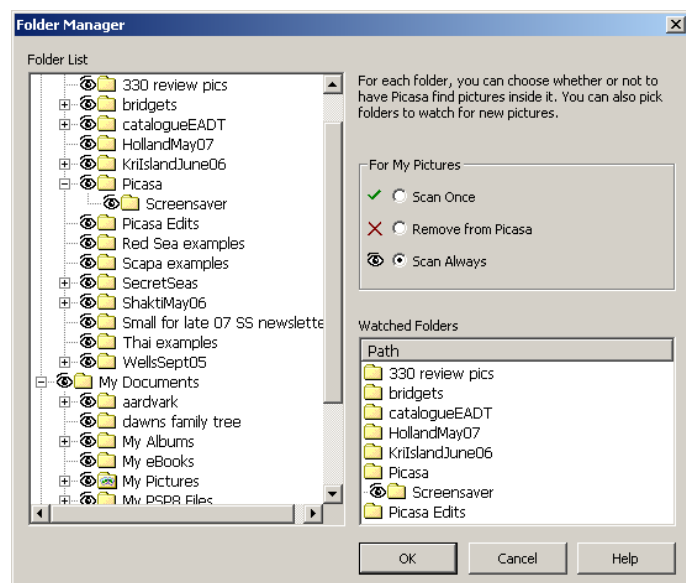
File > Add folders to Picasa

This takes you to the folder manager where you can select which folders are scanned and indexed. They can be indexed **Always**, **Once** or **Never**. Choose **Never** for folders which don't interest you.

These pictures are not 'in Picasa' it is just indexing them so you can view them. It will not upset any other program which can see them.

Patience

The indexing process runs in the background to avoid slowing your computer too severely. This means that pictures do not always appear instantly. Sometimes it can take quite while. Either wait patiently or set the folder to **Never** and then back to **Always** and it should turn up quite soon. Stopping and restarting Picasa can also give it a kick to index new pictures.



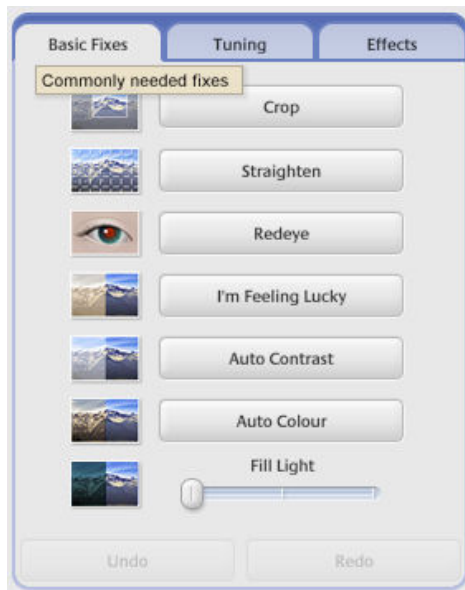
a

Don't panic and download everything again – all of them will turn up eventually.

4. Playing with pictures in Picasa

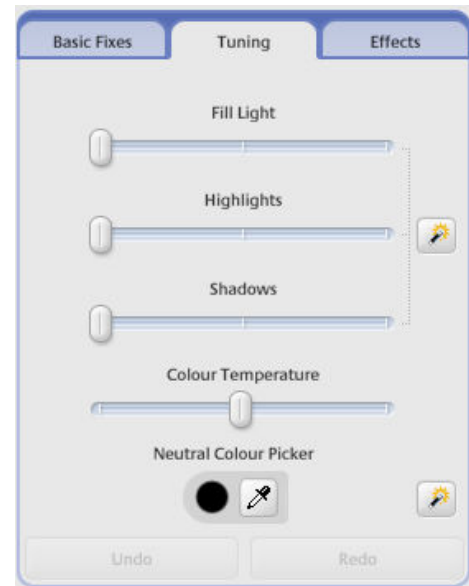
Repeated note: Picasa isn't hard to get to grips with so this isn't a manual, just some pointers to get you started. The best way to learn is to experiment, which is safe with Picasa.

Once downloaded Picasa's picture handling is broken down into three areas. These show once you have selected a single picture - by double clicking on it. Each set of tools is selected by tabs high on the lefthand side. These allow you to make basic improvements, fine tune the picture or add some fun effects.



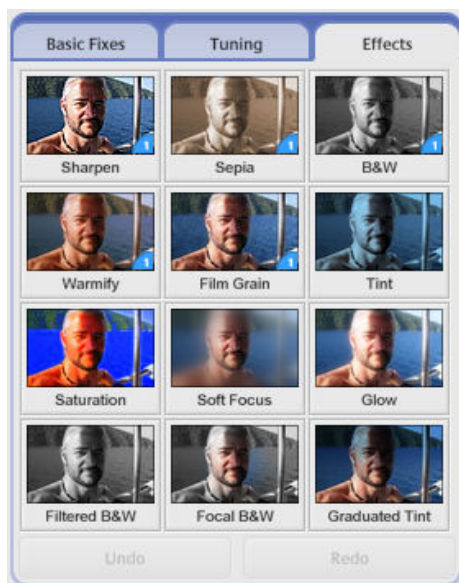
Basic fixes

The basic fixes are all the most useful things that all photographers whether amateur or professional will find their pictures benefit from. It is perfectly acceptable to crop or straighten a photo – professionals do it all the time.



Tuning

This set of tools allows you to 'tune' the appearance of the picture. It doesn't offer the complete control of a more complicated program like Paint Shop Pro or Photoshop but copes with most jobs.



Effects

The effects are a varied set of useful and fun ways to change your pictures. The names are pretty self explanatory so the advice is to try them out. The **Soft Focus** effect is very good for portraits and the **Black and White** or **Sepia** ones can add a bit of atmosphere. The **Sharpen** effect isn't so good and can make pictures look quite grainy.

5. Don't go changing

One of the most important aspects of Picasa's behaviour is that none of the changes it makes actually change your original file... I know you can see the change in Picasa but you'll find that other programs don't see any difference if you view the same pictures with them. You can also undo any changes made in Picasa, all the way back to the original version.

This is both good and bad... your pictures are safe but you can't see your work on them anywhere else... until you export them.

Export or die

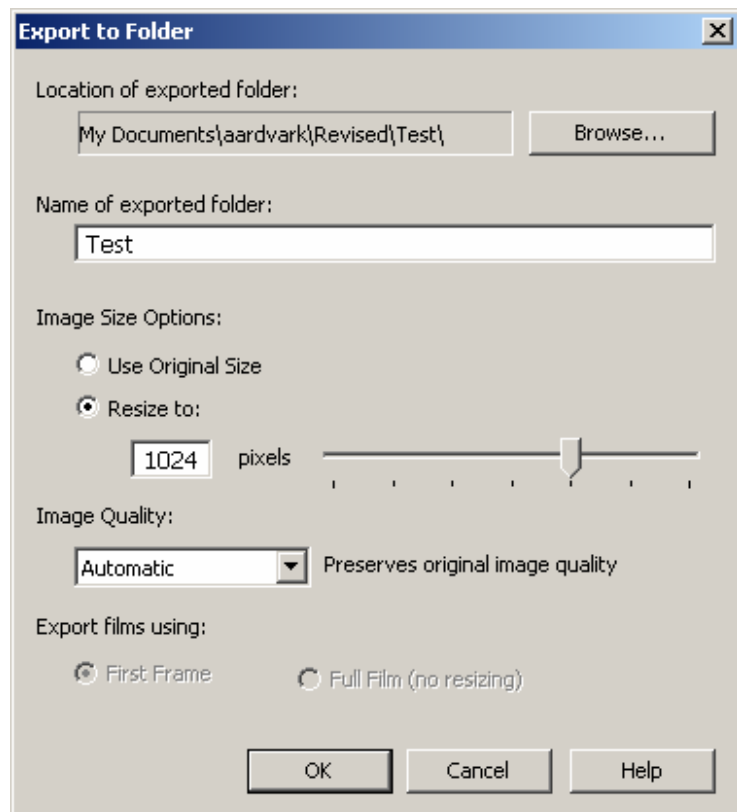
Picasa can export its pictures in a number of ways... it can make small versions and put them into an e-mail ready to send, create slideshows and of course it can produce new, changed versions of your pictures.

You'll find the **Export** button down at the bottom right,



clicking it will produce a new folder containing changed versions of any pictures you have selected – so it can do 10s or 100s in one go.

The new files are produced to the settings chosen in box which pops up (see right) and also asks you where to put them.



The settings for E-mail and slideshows are accessible through appropriately named tabs in Picasa's **Tools > Options** menu (again). Using the e-mail facility does require that Outlook Express is set to be your default e-mail program in Windows control panel and does not work with Hotmail or most other webmail services.

Playing with Picasa can be great fun and very quickly make a big difference to your pictures. It has its limits but for the price you can't complain ☺

Making the most of your digital camera

6. Mastering file wrangling!

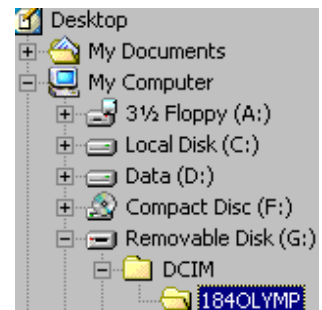
The biggest problem with 'digital cameras' is not the cameras themselves but the computers that are needed to make the most of them. Most people have some trouble transferring, copying and managing the files that their pictures have become.

The first step to getting a grip on your photos is to keep track of where they are. Many of the 'free' programs which come with cameras are quite sneaky and hide your files away in virtual albums – this can make them difficult to find when you want to use other programs to improve your pictures.

I don't use the free software that comes with cameras for transferring pictures and unless you find it does everything you need I'd recommend you don't either – a good reason is that most hide your files away in 'albums' which make them hard to find when you want to use them.

So what can you do?

Transferring pictures from cameras is usually very easy. When connected many cameras will appear as an extra 'removable' disc drive on your computer, a card reader certainly will. There are a couple of 'layers' of folders on camera cards, you will find the pictures in one or more numbered folders inside the DCIM folder. These folders are named with a number and an abbreviated version of your camera maker's name – in this case OLYMP = Olympus.



Put a shortcut to the DCIM folder on your desktop, call it something useful. (DCIM is short for Digital Camera IMages). Don't make a shortcut to the number folder - your camera make different ones regularly.



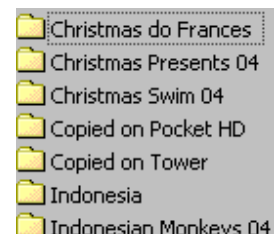
Choose an easy to find area of your computer (preferably not on your C: drive), create a folder, label it clearly and put a shortcut to it on your desktop.



With both folders open (double click the shortcuts) drag the numbered folder you want from your camera folder into your pictures folder and drop it there. The default action is that it will copy across (a small + sign will be shown on your cursor).

The mysterious numbered folder is now in your pictures folder. You can rename it so that it is less enigmatic and so easy to identify.

You might want to gather your renamed folders together in further folders for years or themes, this will help sort them once you have a large collection.



To do all this magic you just need to know a few things...

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7. Basic File Fighting

In the various versions of windows there are nearly always several ways to do any particular task and people vary as to which one they prefer (or can remember). With the recent versions of Windows there is a fairly simple rule which will help you access the tools to perform the basic tasks.

‘The left button is for actions, the right button will list what they are’

So in many cases if you want to do something right click on the place or thing you would like it to happen to and you may be offered the chance...

N.B. Some of these options are shown under the ‘File’ menu of many programs

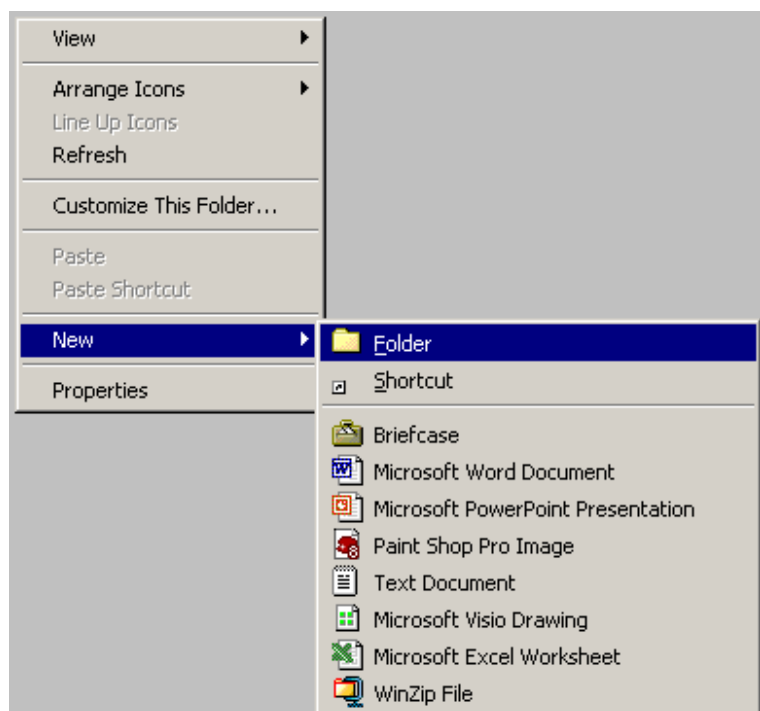
Making new folders

In a folder (this includes the desktop which is a special folder) right click in some blank space and you will be offered a list of options, ‘mouse’ over to new and you will get a choice of all the new things you can create. The first on the list is a folder! Left click on that choice.

A new folder will appear and the label ‘new folder’ will be already selected (dark) – just type the name you want and press return. You will have a new, usefully named folder ready to fill.

Creating short cuts

As you can see from the last picture the second option is to create a shortcut so just right click on the thing you want to make a short cut to and left click on create shortcut. A new shortcut will appear, drag it to the place you want it and drop it there.



Warning: Shortcuts can look much like folders but are just labels and can be moved very quickly – make sure you have moved the shortcut not the original!

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Renaming files and folders

Again right click on the file or folder you would like to rename and you will be offered the chance to rename it. The old label will be selected (dark) – just type the name you want and press return.

Dragging and dropping

This is the simplest way to move and copy things. To 'drag', left click an item, keep the button held down and move it to the folder window where you want it to be, then 'drop' the item there by releasing the mouse button.

Dragging and dropping can work in a number of ways. If there is no additional symbol by the dragged icon the action will move the file, if an arrow appears it will make a shortcut. Which action it chooses is dependant on what you are moving and to where – it is trying to help.

You can force it to do what you want by holding down the following keys while you drag and drop...

The **Ctrl** (control) key to make it copy

The **Alt** (Alternate) key to make a shortcut

Shortcuts - Copying and Pasting

You may have seen that right clicking offers you the option to copy and paste, an even easier way to do this is with 'shortcut keys'.

For example to copy a file:

Left click on it

Press and hold '**Ctrl**' and then press '**C**'

Left click on the place you want the copy to go

Press and hold '**Ctrl**' and then press '**V**'

One of the most useful shortcuts is Undo

Press and hold '**Ctrl**' and then press '**Z**'

This will (usually) undo the last thing you did

N.B. These shortcut options can often be found in the 'Edit' menu of programs and are often described as '**Ctrl-C**' etc - you may see other options in manuals.

Worth remembering

Many programs allow you to use the right click option list in this way, drag and drop things from place to place and also use shortcut keys for copying and pasting.

Bear in mind that these options are 'context sensitive' and the options, and ways that they work, may change depending on which program you are using.

Most actions can be undone, either with **Ctrl-Z**, or just by not saving the result. Another good idea when you are working with precious pictures is to make a copy and never work on the original.

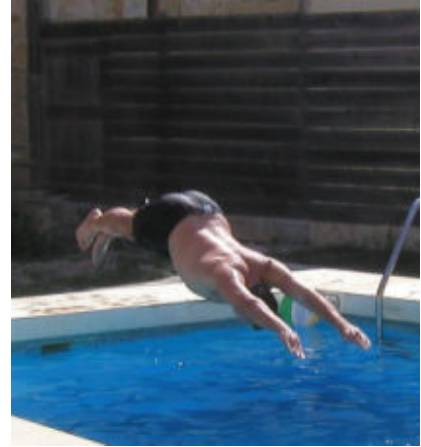
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8. Why is it so slow?

Most people find digital cameras are slow to take pictures. The bulk of the delay is due to the time the camera takes to focus, a little due to it measuring exposure and there is a pause before the next picture can be taken.

Pre Focus

Almost all cameras allow you to 'pre-focus'. When the shutter button is half pressed the camera will focus (slowly as usual) then it waits whilst the button is held there. When it is fully pressed the camera will take a picture almost instantly. This needs a bit of planning but it is quite possible to catch split second actions.



Exposure Lock

A side effect of half pressing the shutter to pre focus is to also fix the exposure to suit the view when the button was half pressed. This can be used to your advantage too. If your subject is in silhouette, pre-focus the camera on something else the same distance away (their feet?) and then frame them in the viewfinder and fully press the shutter.

If your camera allows manual exposure this can save a little time but this usually complicates snap shooting and is best practiced on something less important.

Manual Focus

If your camera allows manual focus you won't have to repeatedly pre-focus once you have set it and the shutter will be as fast for each shot

Shot-to-shot delay

The camera stores each picture on a memory card and doing this may delay taking the next picture, more megapixels take longer to save too! Most cameras have a memory buffer which allows several pictures to be taken quite rapidly but they will still slow once this is full.

Flash cycling

Another contributor to the delay between shots can be the time taken for the flash to recharge, this will get longer when the batteries start to run down. Cameras with more or bigger batteries will be faster.

Lighting

The camera's autofocus will be faster in strong light, like you it needs to see to focus. Some cameras are hopeless in the dark whilst others are just slow. Some have lights to help them focus in the dark – these have limited range.

9. Pictures and pixels

Picture size

When we discuss the size of digital camera pictures, in megapixels of course, we are not talking about their physical size. As they are digital, and don't have a physical size, we are describing the potential detail in their equivalent of a negative. In fact with film this was what people always discussed when they were talking about 35mm, 110, 126 and APS cameras. Far from being confusing, megapixels are a very simple rating of how sharp digital pictures **could** be, but a blurred picture is blurred no matter how many pixels it has.

How many pixels do you have?

This is important. Not only for boasting, but to determine how large you can print your pictures and how much space it takes to store them. It also affects how aggressively you can crop and alter your pictures.

How many do you need?

More pixels are potentially better but whether you need 'better' depends on what you want to do with your pictures. Most cameras of 2 megapixels and over can make good standard size (6"x4") prints. It's best to buy a camera suitable for the most demanding thing you hope to do – then it should be fine for the less critical jobs you have. The 'most demanding thing' is usually the largest print you would like.

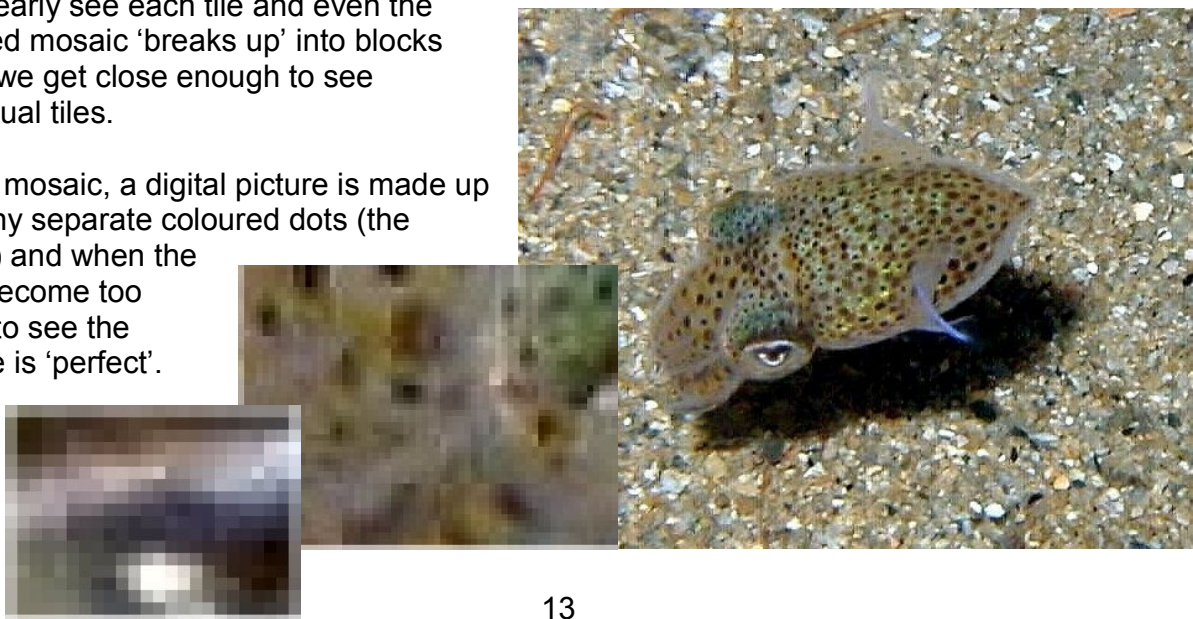
Megapixels (nominal)	Picture size		Megapixels (real)
	Width	Height	
1.3	1280	960	1,228,800
2	1600	1200	1,920,000
3.2	2048	1536	3,145,728
4	2288	1712	3,917,056
5.1	2592	1944	5,038,848
7	3072	2304	7,077,888
8	3264	2448	7,990,272

Pixels

'Pixel' is a contraction of 'picture element', with an 'x' rather than a 'c' just to make sure everyone would say it the same way.

A picture made of pixels is rather like a mosaic. A good mosaic uses lots of small tiles to create a detailed, lifelike image. In comparison, a simple mosaic appears coarse because you can clearly see each tile and even the detailed mosaic 'breaks up' into blocks when we get close enough to see individual tiles.

Like a mosaic, a digital picture is made up of many separate coloured dots (the pixels) and when the dots become too small to see the picture is 'perfect'.



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The point where the pixels 'blend' is the appropriate viewing distance for that print or display. This property means that there are various informal 'agreed pixel densities' in use, most people don't notice them at all – which is the whole point!

Resizing

Sending huge pictures to people without warning can make you quite unpopular and will continue to do so until everyone has broadband. It's worth making your pictures small enough to send quickly and view within a normal screen. Most people can more easily cope with pictures which are about 640x480 pixels (only 0.3 megapixels) without the need for a program like Paintshop Pro.

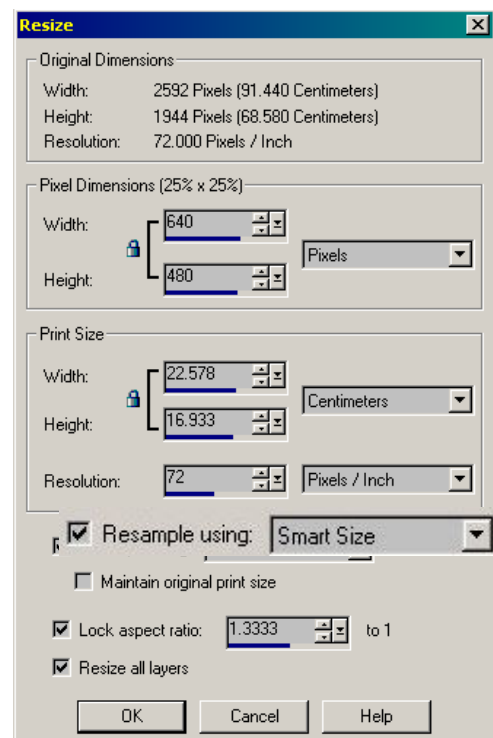
Resize is found under **Image > Resize**

This opens a sizeable box of options. At the top there's a summary of the picture's properties. You can see that it has been given the 'standard' screen 'Resolution' of 72 PPI. This low value results in the vast size in brackets. This is the size that the picture would be on a screen big enough to view the whole thing at '100%'.

There are several ways to change the size of the picture. The easiest is to change a value in one of the 'Pixel Dimensions' boxes. If 'Lock aspect ratio' is left ticked then the other box will change too – to maintain the proportions (aspect ratio) of the picture.

The other controls which affect the 'print size' are more confusing and best avoided until you find your feet with this jargon – they do the same thing in a different way.

Nestling at the bottom of the box is one of the most important controls. It may seem strange that there is a choice of ways to scale the picture up and down but there is and some of the choices can make quite a mess of your picture. The resample box should be ticked and the 'Smart Size' method is the most generally useful option here.



10. Picture tools

There are many tools to modify your picture, some which can alter large areas and others for delicate changes. Although we discuss Paint Shop Pro here most programs use similar symbols and terminology for a similar range of tools. Some are more useful than others...

Each tool shown is actually one option from several choices, the others can be seen by clicking on the small arrow to the right of the icon (Version 8) or right clicking on it (Version 7 and earlier), have a look at them all.



The pointer (arrow) is less useful than its companion - zoom (the magnifying glass). Left click to zoom in and right click to zoom out. Working zoomed it is usually easier to be more precise. (If you have a wheeled mouse that will zoom you in and out too!)



The crop tool is very handy, use it to trim the picture for best effect.



The select tool can be used in many ways. There are several variants which allow you to select different shaped areas either to move, remove, copy or alter.



The paintbrush isn't as useful as you may think, it's very hard to be subtle.



Clone – **THE** tool for correcting mistakes and removing blemishes/relatives



Photo tools - this selection is vital for blending changes back in. Blur is one of the options, it sounds awful but is actually very useful. This selection also includes Sharpen, Dodge/burn (photographic jargon for lighten and darken) and Smudge (an often messy way to blend in changes)



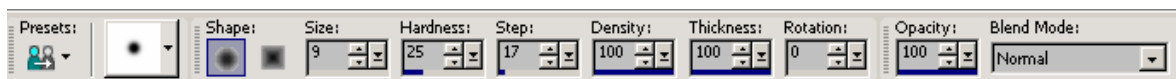
Adjustments – has some similarity to the photo tools, includes...
Lighten/darken – is useful for lifting people out of shadows or flattening highlights.
This selection also includes Saturation (which adjusts the strength of colours)



Text – useful for adding labels and captions.

Caution! Can ruin your picture if placed badly without using layers (a subject in itself)

Brush controls



Each of the tools has a number of adjustments to modify the way it works.

Size and shape are the most obvious but all can be useful. Its best to experiment with each to see the effect they have. Opacity (transparency) and hardness (sharpness of the outer edge of the brush area) can be useful for softening the action of tools when blending in new parts of a picture.

11. Selection

On computers, whether you are working with files, words or pictures the concept of selection is very important. For file wrangling we selected folders, files or groups of files and then acted on them. Likewise words and letters, whether in e-mails, documents or file names can be selected and moved about in similar ways - usually with the same controls and shortcuts.

When working with pictures selection can be used to control the way changes are made and is closely related to cropping where we trim the picture for better effect.

Cropping



We'll start with cropping, as it is slightly simpler. To crop is to cut away unwanted outer parts to change the framing and composition of the picture. This could be to change emphasis or remove distracting detail, most pictures can be improved in this way.

Once the crop tool is selected the first step is to select the first corner of a new outline for your picture. The first corner is left clicked and then the button is held until the cursor reaches the desired opposite corner. This 'drag and drop' produces an outline of the potential crop. The edges of the outline can be adjusted by moving the cursor over them until arrows appear, these can be clicked and dragged. The whole crop outline can be dragged and dropped if you have the cursor in the middle of the outline. If the outline is in completely the wrong place click well outside your desired area and then simply start again.

When you are happy double click inside the outline and the section cropped from your picture will replace the original view. (If it's not right you can undo the crop). A common use for cropping is to 'square up' a picture after straightening the horizon.

Aspect ratio (picture shape)

Before you finalise your crop consider what you want to do with the picture afterwards. Paper, monitors and TVs come in standard shapes so if you choose odd proportions it may not be easy to print or view your picture properly.

Selection



By default the selection tool works in a very similar way to the crop tool, a rectangular outline is dragged and dropped. Once this is done you could, in effect, make a crop by copying the selected part to a new picture but there are a lot of other options too. Different modes (such as freehand) are selected by clicking on the down arrow beside the tool icon.

The selection doesn't have to be rectangular, irregular selections can be made using the freehand mode to cut out details or precisely localise changes. The selection of an area limits operations to that region of the picture. We'll explore those changes elsewhere.

One of the prime uses for making a selection is to copy part of a picture into another picture, a fresh picture or to paste it into another programme – such as a document. The easiest way to 'copy and paste' is with 'shortcut keys'.

12. Picture tools - examples

Dedicated picture editing programs such as Paint Shop Pro tend to have a lot more options than the ones which come free with cameras. The number of things that are possible can be bewildering, a few of the main ones are covered here. Try any you find intriguing – you can always undo the results! This section offers a few examples to get you started, it isn't a full manual for Paintshop Pro – sorry!

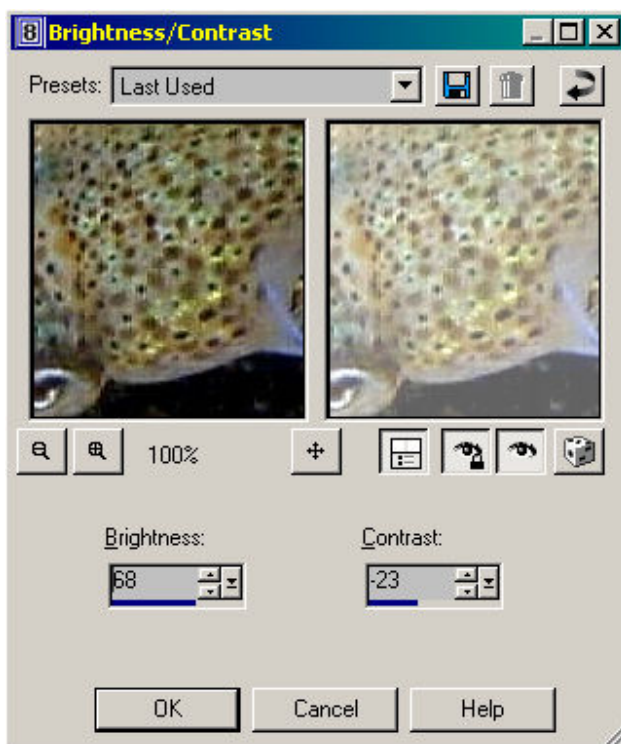
With a picture opened extra menus become available along the top of the program window. They each offer a lot of options, most operate using similar controls and preview windows.

The Colours> Adjust menu

Most tool options here can subtly adjust the properties of the picture. They are accessed by first selecting a category, then a particular tool. The most popular are:

Colours> brightness/contrast

Selecting this (and most other options) brings up a preview window.



The – or + magnifying glass to zoom the views in or out



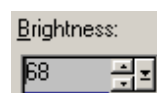
The 'crosshair' can be dragged and dropped over a popup of the selection to move the views



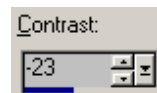
The 'eye' button previews your changes in the main picture window.



The brightness control adjusts the black level of the picture. Set it so the darkest parts of the picture are black, or nearly black.



The contrast control does what it says, use it sparingly or your picture will begin to look artificial.



Most of the controls have a range of +/-100%. In general a 5-10% adjustment will be subtle,

25-30% will be dramatic and approaching 100% will ruin your picture.

The changes won't be made for real until you press the OK button, and can still be undone after that. Cancel will stop any changes and close the preview window.

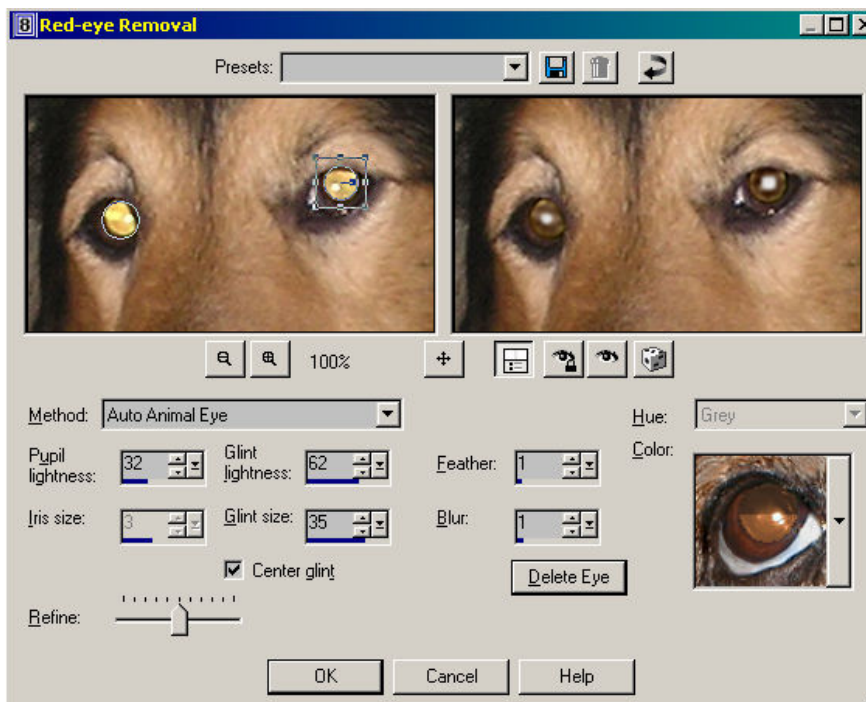
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The Effects menu

The most useful 'effects' are those for sharpening and repairing photos. The simple sharpening tools are easy but rather blunt and do either too much or too little – they tend not to work well on high resolution pictures as the details they effect can be too small to see!

Effects > Enhance Photo > Red-eye Removal

'Red-eye' it is quite easy to remove manually but there are automatic tools to help you



When you move the cursor over the picture it becomes a crosshair, find the centre of the eye and left click. You will see how well the replacement has worked in the right hand preview window.

You can select the colour and then the shade of replacement eye that is used and then finely adjust how well it fits and matches.

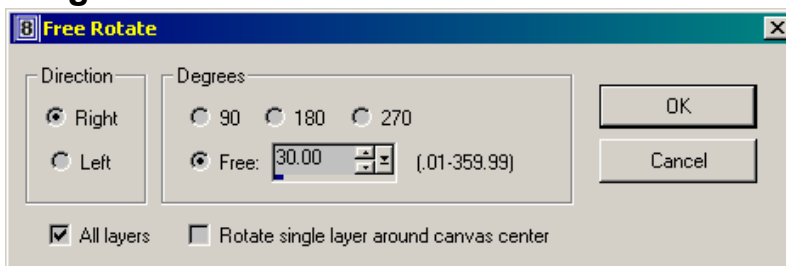
Blending these new eyes in using the 'refine', 'feather' and other controls so that they look natural can take a little practice - they will be

less obvious when the picture is back to its normal size. The 'Delete Eye' option lets you start again.

The Image menu

The image menu includes some very useful options and luckily they are some of the easiest to use and understand. 'Flip' and 'Mirror' do exactly what they say, try them anyway!

Image > Rotate > Free Rotate



This can be handy for straightening horizons which are slightly askew. Just enter the correction you require – usually much less than you think, often around 2°.

It is easier see if the horizon is level if you turn on the option to place a grid over your picture. Use **View > Grid** to turn this on. Unfortunately the rotate tool does not have a preview option so you usually have to make several attempts, undoing each guess until you get it right.

13. Magic with pictures

Most of the tools do predictable and reasonable things – until you turn them up to maximum and things become psychedelic. However there are other tools which can do the kind of magic that which no one can detect.

Cloning

Whether it's erasing an ugly relative, clearing the cars from an Italian square or just removing a spot from a sensitive teenager, the Clone tool is your friend. It allows you to replace one part of a picture with another.



After the clone button has been left clicked the next step is to select the area which you will use to replace the part of the picture you don't want. For example some grass could be used to remove an unwanted something or someone on your lawn. Right click on your 'donor' area, give yourself enough room around the donor point to cover your target.



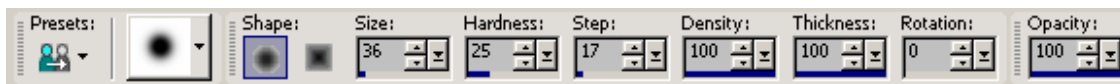
Unfortunately this is difficult to show on paper. In the example on the left I have started to remove a cyclist from the front of a Dutch shop.

You can see that parts of him appear transparent – that is where other parts of the picture have been copied to replace the parts he was obscuring. You can only do this if you have enough suitable donor material.

Once you have selected your donor area (by right clicking on it) you carefully paint over the unwanted areas by dragging the cursor with the left button across it, an 'X' marks the area you are copying from.

It takes time to do this well and when you have finished you may want to use the Blend or Blur tools to soften the edges of your rebuilt picture. When you are replacing something large it is common to run out of 'spare' picture and have to reuse the same part many times – which can look odd. Smaller areas, like spots, closed eyes or wild hair or much simpler.

'Brushes' have a lots of options, size is the most important but the others can be useful. It is usually necessary to reduce the size of the 'brush' to finish fine details and the boundaries between copied areas.



Shape: a round brush is usual but square ones are good for finishing corner details
Hardness: whether the brush edge is sharp or soft – sharp can look unnatural
Opacity: sets whether the brush completely covers the old picture at its centre

14. Case study 1 – Fixing a backlit face.

It's not always possible to take the perfect picture, even with a brand new digital camera to make all the clever adjustments for you!



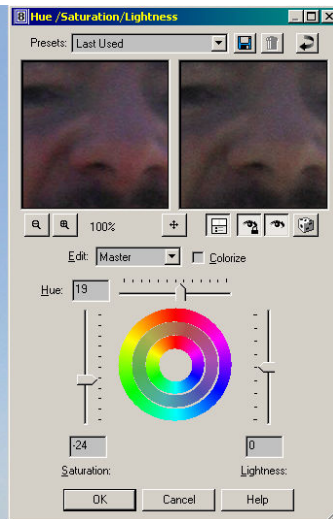
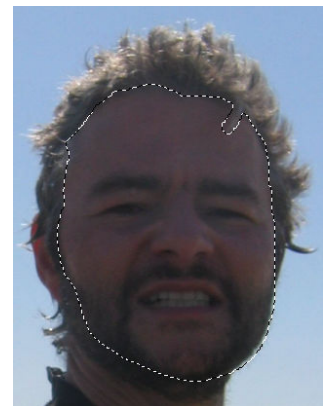
One common problem is that the camera's automatic systems are fooled by strong backlight. They often do not understand that while on average the picture is well balanced the point of interest has been underexposed.

In fact many cameras have a mode which will help with this and forcing the flash on to use it in 'fill' mode would too. Unfortunately the need is often only apparent after the moment has passed.

In this unsightly example the sun is behind the subject so the face is in shadow. I want to lighten the face slightly to better centre the composition.

The first step, since I want to limit my changes to the face, is to make a freehand selection of just that area.

Deciding the edge of the select is difficult as the beard is not a clearly defined border – it is however a 'fuzzy' area where blending between new and old should be quite easy.



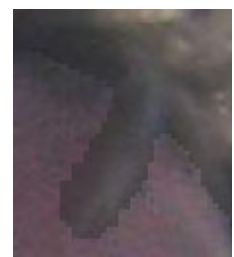
The second and third steps are to try to get the face lighter while keeping it a good match for the rest of the picture. I first used **Colours > Adjust > Brightness/Contrast** to increase both the brightness and contrast of the face. This has left our victim looking a bit red in the face.

I left that stage out as the next is more subtle, so more interesting.

We can use the similar looking **Colors>Adjust>Hue/Saturation/Lightness** tool to fine tune the colour match of the selection. Darker areas often hold stronger

colour, the first thing I did was to turn down the saturation to get a more neutral skin tone. Then I used the Hue control to select a yellower skin tone (by trial and error) – more summery and less alcoholic!

At a distance it may look as though the work is now done but the selection will leave a transition border which would be apparent on close examination.



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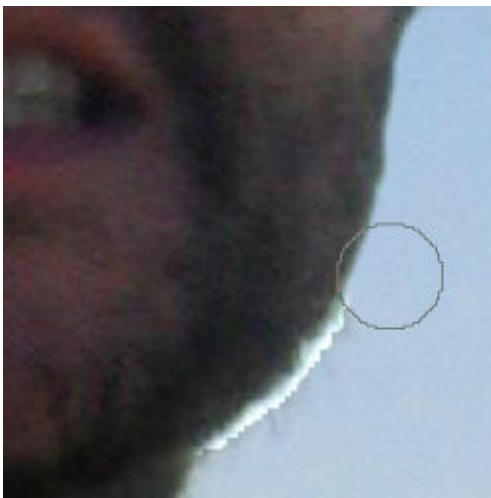
A combination of first 'smudge' (left) and then additional 'blur' (right) have been used to soften the transition edge at the hairline.

For a small print this doesn't need to be perfect, just unobtrusive.

Similar methods can be used to blend the line across the beard, using lots of small strokes instead of large sweeps will break up the edge.



There is a different problem where the selection has accidentally included a small piece of sky. This sliver has been brightened and desaturated so it is very obvious.



Using the clone tool I can paint away the bright area. Select a clone source point at the same height as the start of the sliver as in most pictures the sky has at least a very slight gradient (it is lighter blue at the horizon and darker higher up).

The clone brush has a soft edge so I overlap the edge of the face until the blue of the sky replaces the bright sliver and slightly blurs the beard.

Again this is a small detail which just needs to be tidied enough to be invisible from distance.

At the end of the process the picture looks quite natural but perhaps a bigger improvement would have been to replace the face completely!

If you decided to replace the face with something more appealing it's worth knowing that it's possible to clone from one picture to another in Paintshop Pro. Thus if you have a picture of Aunt Doris smiling from one social gathering, you can use it to replace her scowl at her least favourite niece's wedding.

We cover cloning in the next section. In fact the cloning is the easy bit. The hardest part is getting the scale of both pictures identical – but perhaps if you don't like Aunt Doris she'd look better with a shrunken head!



15. Case study 2 – Removing innocent bystanders

Whether or not you are a brilliant photographer you can't always control the public, especially around tourist attractions. Many pictures are spoilt by inconvenient bodies, but luckily they are often easy to remove.



This picture of the Aldeburgh scallop has a spare person sprouting out of the beach.

She is easy to remove. She is clear of the detail of the main subject of the picture and she is covering easy to match natural detail – sky, sea and gravel.

That wouldn't be much of an example would it?



It is much more difficult to replace areas which are important. In the second picture an awkward chap is obscuring an edge of the sculpture. To be honest if this happened I'd wait and take another picture but for the sake of demonstration let's say that 200 peace protesters occupied the beach and this was the best I could get.

To do this we will use the clone tool to replace our art lover and rebuild the shell.

The most difficult part will be to successfully finish the edge of the new shell so that it appears natural and is actually true to the original. This is going to be tricky.

Let's start with something simple, the hand on the front of the shell. By using the clone tool several times to 'stamp' small areas of clone the edge can be rebuilt.



In the snapshot on the left 'X' marks the clone source and as you see the edge has aligned well, but I also have a trace of the weld. That's easy to remove by cloning a nearby part of the shell.

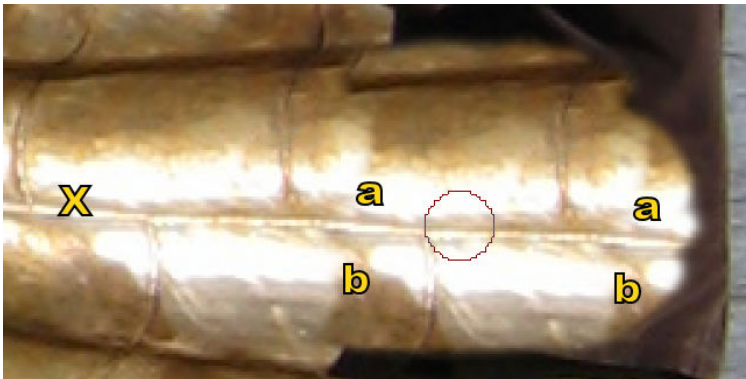
Choose a part with the same contours and lighting (right).

That was easy... now for the difficult bit.



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To recreate the rear shell we will have to use the limited parts we have and extend them to cover our nemesis. This is best done along some form of reference since we hope to maintain the flutes of the shell. Picking a clone source on a weld I can click further down it and paint a repeat of the clear area of the shell.



This works well but the problem is that I have so much to replace that I have to repeat the clone area twice (points a and b) which may be obvious later unless we blend them away.

Producing the replacement shell is just repetition of this process, running

the clone brush along each seam in turn and then blending in any obvious cock-ups where cloned areas meet.

We use the seams since if we right click to select the clone source on a seam and then start to 'paint' with the clone brush further along the same seam it will appear continuous.



Once you have enough shell we can use a clone brush starting at a clear part of the sea/beach or sea/sky line to cut back the edge of the shell.

It would help if you knew what the edge of the shell looked like but away from the original few people will quibble.

Tidying away the remains of our intruder and his dog walking friends will be a piece of cake in comparison. They just need to be replaced with areas of beach, sea and sky. These are natural textures and clone in easily and seamlessly.

Even without working on the repetition from the cloning to rebuild the shell the result looks quite convincing as the welding has a certain regularity to it in any case.



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16. Appendix - A short Digest of useful information

Cameras

www.cameradepot.co.uk and www.digitalcameras.com are good on some accessories

Jessops (www.jessops.co.uk) will sometimes match web prices from UK companies

www.ebay.co.uk has some amazing offers but can attract tax and risk.

Camera Reviews

These offer comprehensive reviews of most cameras, read with care as they may not be looking for the same features as you and tend to discuss American prices..

www.imaging-resource.com - www.dpreview.com - www.steves-digicams.com

Cheap memory cards etc

www.7dayshop.co.uk are very good for general supplies – particularly batteries, paper and ink

www.digitaldepot.co.uk are very good on memory cards and particularly Olympus cameras

Ideas

www.webphotoschool.com This is one of several collections of tutorials on the web.

Price comparison sites

All have rather selective coverage, best to try them all

www.dealtime.co.uk - www.pricerunner.co.uk - www.kelkoo.co.uk

Searching on www.google.co.uk or www.ebay.co.uk can often turn up better deals

Printing

www.jessops.com Have do it yourself print systems in store and offer online printing (with 10 free 7x5" on your first order). Only offer traditional print sizes – often offer 50 prints for £5

www.boots.com Have 'do it yourself' and 'bulk' systems in store – Only offer traditional print sizes – often offer 50 prints for £5

www.photobox.co.uk One of the best online printers, they often have offers on large prints

Free Software

www.irfanview.com A free program that will quickly view pictures, create slideshows and screensavers as well as resizing and converting files.

picasa.google.com (N.B. No www.) A free program from the Google people which offers useful editing and some extras like webpage, screensaver and slideshow making

Web galleries

fotopic.net These people (based in the UK) offer 250Mbytes of space for pictures on a site which will automatically produce attractive galleries. The site is free.