

DIGIT

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The Royal Photographic Society
Digital Imaging Group



"A Search for Knowledge" This is part of a wall - all in colour - from an inner city youth club. The whole was turned into Grayscale with the exception of the eye, and the word KNOWLEDGE which was originally painted just once, was cloned a number of times to assist with my title. A Pentium 200 with Photoshop 4 was used, with the original transparency from Kodak Photo CD.



"Spanish Graffiti" Two images from slides input to a Pentium 200 with Kodak Photo CD. The original transparency was from Mojacar in Spain, the graffiti came from the wall of an inner city youth club, inserted with a layer on Photoshop 4.



"Jazz-Man" A street performer in Bath against an uninteresting grey stone wall. The Jazzman was selected and the remainder of the image had small blobs of colour dropped on the wall - Noise and Motion Blur filters used. Photoshop 4, original image from a transparency on Kodak Photo CD.

"Awen" Scanned from a 6" x 4" snap taken at a redundant flour mill in Portmadog. Very little manipulation apart from the use of the Unsharp mask filter and soft edges added for presentation.



John Long ARPS APAGB

Look "No Computer"

My initial encounter with photography led me to believe that it was too complicated, "f numbers were an apt description I thought then. Originally handed a twin lens reflex at art school, I promptly went out and over exposed the film although the results held an interest for me. Later, owning a Yashica Mat, I recall dawn train journeys from the suburbs into the London markets - The Borough (Fruit & Veg.), Billingsgate, Smithfield. The Derby, of course, was another event for character studies.

I felt limited by the format of 12 exposures on 120 B&W film, each frame became too precious. Around this time the camera was "half-inched" when travelling by bicycle through France. I felt that I had had my use from it and that it had become merely a possession. The next camera, sometime later, was a pinhole (cocoa tin) and the next a Praktica from a local second hand shop. They all recorded what I saw. They served me. They all had their place in their time.

I have now owned a Nikkormat since 1985. My equipment has not changed apart from the addition of a skylight filter and a no. 3 close up lens. What has changed is how I see things. No longer being satisfied with recording what my eye can see faithfully as possible, I now want to create from what my eye sees and what my imagination sees too.

I was queuing for a colour photo copy one day (Monash University, Melbourne), when I overheard a student (graphics) ask for a positive/negative of his art work. A shutter



in my brain creaked and an infinitesimal ray of light pierced through. The machine used at the university was a Canon 600. At the time I was working on a series of small collages, some of which I later enlarged and altered using the positive/negative effect. Turning a corridor in the windowless tower block which passed for an art school, a noticed a fly leaf announcing

two half day work shops on the "artistic uses" of laser printers. That was for me!

One thing that I had noticed was that this enlightened state was proving very interesting, if not exciting, but that it was costing me a small fortune.

I was now beginning a portfolio of prints. There was no doubt about it, Canon were ahead of their rivals. They delivered prints with a photographic clarity. During a temporary fit of self-assurance, I contacted Canon Copiers Inc, Melbourne and eventually spoke with the right person. It took some time, and several cancelled appointments but a time was made to meet. This resulted in me being given a sponsorship entitling me to 200 A3 full colour copies on their CLC 700 and CLC 800 machines plus 5 B1 A1 copies. Yes, I was lucky with the right person on the right day!

I was fortunate enough to gain access to training facilities and was given time to play with the equipment. I had an A1 B1 print selected for the Shell, Fremantle Print Award. From the material that I had amassed I found I could swap and change things around. Nothing was precious. I took scissors and cut images out and then reassembled them. Bringing different images together created new images which you

could not find anywhere else but that was not important. What was important was the strength of impact of these new images. Does it work or doesn't it? Does it say something?

Malcolm Deering

Historical Re-enactments



A photograph of a re-enactor from the "English Civil War society". By altering the levels, increasing the contrast of the eyes and dodging and burning I was able to match the print with the image in my mind. This picture has been published several times now.



A black and white photograph of the re-enactment group "The Great War Society" at their trench system in Essex. The levels were adjusted along with the brightness and contrast in particular areas. Dodging and burning improved the effect.



The original picture of Le Haye Saint was a lantern slide (circa. 1890) of a scene from the battle of Waterloo. I photographed each figure separately and inserted them via layers into Photoshop. The building was changed to look the correct period of 1815.

Another scene from the same trench system with the trees and foliage removed from the background. The manipulation included dodging and burning, plus filling out highlights with noise and gaussian blur.

Paul Isemonger



A manipulated image from two colour transparencies of the "Britannia" re-enactment society. It was necessary to move the eyes apart using a flopped copy of the right eye as the original left eye was partly obscured by the nasal bar of the helmet and gave a rather crossed eye look. The colour balance was also adjusted.



Glenys Taylor ARPS

I like simple pictures, the picture of the orchids and moth has no hidden depths and requires no work from the viewer to understand it. Having said that, the picture should satisfy the mind and the eye, if only for a second or two. After all life is short.

This picture is made up of six layers, I like to keep the layers separate as I often go back to a picture and change one layer. There is only one blossom, it has been duplicated, darkened made slightly smaller and rotated to look right (I am a great believer in if it looks right it is right). The insect was added to give balance. The most important element to any digital picture is the shadow, there are so many digital pictures that look as if the selections have been stuck on, like in old fashioned scrap books. This picture has been given the appearance of light just glancing across the flowers, touching the insect and giving soft shadows.

Jack Casement ARPS

An easy way of giving a shadow is to duplicate the layer of the object you wish to give a shadow to. Use the lower layer of the object, click on preserve transparency, fill with black, click off preserve transparency, move the shadow to the position you want, use gaussian blur so the edges of the black shadow become soft, then lower the opacity of that layer.



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This photograph is of one of the prettiest fishing villages in the Costa Brava, Calella de Plafrugell. Unfortunately, one cannot escape the construction crane on the horizon. To improve this aspect of the photograph the author has applied a minimum amount of digital manipulation. Initially the image has been adjusted using auto-levels and adjustments to match the printer to the image on the screen. The crane was then removed using the rubber stamp tool (a favourite of mine) using the surrounding sky to substitute for the crane., and finally the image was cropped to remove some of the messy foreground and an excess of sky. The result is a more acceptable record of an idyllic shot.

Cliff Davies LRPS



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Graphics Files

Do you know the difference between information and data? The two are often confused but perhaps the following example will make the difference clear.

Here is some fascinating data:

081265300478811256090876230867060854010101271182

The data does not become information until you are provided with the structure and the context. The straight list of numbers means nothing to anyone. (OK so far?) Now to convert the data to information I will need to tell you that the data structure uses groups of six digits. The first two digits represent the day, the second two the month and the last two the year. The context is dates of birth. ie. 3rd December 1965, 30th April 1978 etc. Of course by using just two digits for the year we have created the infamous "millennium problem". Just two digits does not enable us to include information about the century and this is not just a millennium problem. In fact by compressing the data from four digit dates to two digit dates we have lost some information. I have encountered the difficulties when trying to use a spreadsheet to contain data from a survey of gravestones in a church yard. The standard two digit date format does not permit any other than 20th century dates. Therefore this data structure has resulted in the loss of some information ie. 87 = 1687 or 1987 or 2087? (Note: on the Mac you can enter the full four digit date format and then all is well again. In fact it will automatically calculate the name of day of the week and check that the date is possible eg. 30th February will be rejected.)

(What is the relevance of this to graphics?) All data on the computer is held as a long list of digits. To interpret the data a text, numbers, sound, graphics etc. etc. the structure and context need to be known. There is nothing stopping you opening your picture as a text document but the resulting text will be incomprehensible rubbish. At worst you will translate some data as computer control commands which will corrupt or crash your computer. Most

programs will check the context of the data and refuse to open the wrong file type but this requires the file type to be recorded with the data. This may involve saving your file with the correct name eg. piccy.JPG (The Mac files contain a 'header' which stores information about the program which created the file and its type.) Having said this there are some very intelligent programs which are designed to open any file type and to provide useful information. (Dataviz on the Mac has translators for many file types and enables you to open files for which you do not have the original program whether that was on a Mac or a PC compatible.)

Graphic files are stored using a number of different structures. These include PICT, TIFF and JPEG. The choice of structure determines which other programs will be able to interpret your file, how large the file will be and how much information is lost from the original graphic.

If you intend to use your graphic in a Desk Top Publishing program such as PageMaker or Quark Express it is necessary to ensure that your file is recognised by that program and that it gives the desired quality of output. It will also be necessary to match to the final method of printing (check with your print bureau). Photoshop and other programs enable you to convert from one file format to another.

The size of a graphics file is determined by the following factors: Picture size (eg. 20 x 15 cm), Image mode (eg. RGB colour, CMYK colour, grayscale or black & white), pixel depth (eg. 8, 16 or 24 bits) and the resolution (eg. 200 dots per inch).

A popular file format for graphics where it is necessary to reduce the file size is JPEG. (Joint Photographers Expert Group) The data is compressed by eliminating some information and modifying the data structure used. It is possible to choose from a range of compression values but the greater the compression the more information is lost. The trick is to know how much information you can afford to lose before your chosen method of output is adversely affected. Pictures destined for publication via Internet will be displayed on computer screens where the quality required is quite low whereas a picture for publication in a printed journal will require a higher quality. (Note that repeatedly saving a file in a compressed format will involve a cumulative

loss of information so work with the uncompressed format and only compress when finished.)

A full understanding of compression techniques involves some very advanced maths (Fourier transforms ! ? !) and physics. However, you may be interested in a very much simplified explanation.

A file may contain information which repeats data. For example instead of writing a list of birthdays which are exactly the same you may write that the next fifty dates are each 120385. The data structure will need to be amended and the interpreting program must be able to interpret it (eg. 509999120385). This is much shorter than listing all the fifty dates and relies upon the fact that the code 9999 could never occur in any date. Areas of the same colour may be similarly encoded rather than listing the colour of each and every matching pixel. In these instances no information need be lost.

Now for the more difficult part - stay with it! Colour monitors display images using the three primary colours for projected light which are Red, Green and Blue (RGB). Combined with equal intensity the light produced from these three colours is pure white. Varying the intensities of each produces a range of other colours. The JPEG compaction scheme requires that the data is transformed from RGB to a different video based encoding scheme. In this scheme there are two parts; the gray scale image (luminance) and the colour information (chrominance) and each part is compacted separately. This enables the colour information to be treated separately from



the gray scale. The latter is in fact far more important to the human brain when interpreting the final picture because the eye uses the gray scale edges to indicate the boundaries within the picture. Therefore

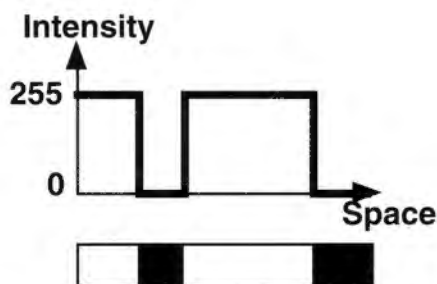


Note the importance of the boundary lines when interpreting an image. This is an approximate model for the luminance and chrominance information in a JPEG file.

the colour data may be reduced to half that for the grayscale brightness values without unacceptable loss of image information.

Let us look at just the grayscale data. If a line is drawn across a section of the grayscale image along that line there will be a range of intensities of light from pure black to pure white. If each colour intensity is given a number from zero for black and 255 for pure white then this range of intensities may be represented by a list of numbers (just like the list of birth dates).

These numbers may be plotted on a graph. Now lets just consider the extreme case where there are bars of black and white with no other intensity present. The graph will be a square wave graph (zeros & 255s).

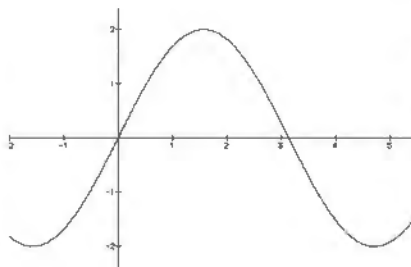


Now the interesting fact (well I find it interesting) is that any shape of wave, including the square wave, may be constructed by combining lots and lots of different frequency sine waves. These waves will range from low to high frequencies. Transforming from the square wave to a collection of sine waves is called a Fourier transform and is named after the mathematician Fred Transform.

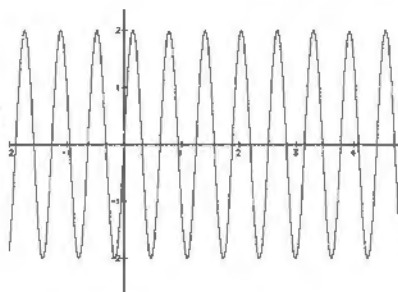
(Yes, the Brunel Bridge in Bristol was designed by Fred Bridge!) To compress the data you throw away some of the high frequency waves. The effect of this is that when you convert the remaining collection of sine waves back to a single wave it is now no longer a sharp cornered square wave. In addition to the numbers zero and 255 for black and white there will now be some other numbers between the zeros and 255s. Visually this means that the sharp edge becomes fuzzy and this is the penalty paid for compressing the data (lossy compression).

Compressions in excess of 100: 1 are possible but with 10:1 being more normal. The information loss is in some detail and sharpness but this may be difficult to detect by eye.

The nature of the picture is important in judging the comparative quality of compressed and restored images. The human brain responds differently to the parts of an image depending upon contrast, brightness and even context. Human faces are analysed very critically whereas changes in an area of vegetation may not have much significance.



Low frequency sine wave



High frequency sine wave

(Note the "stepped" curves indicating that the waves were copied from a low resolution computer monitor. The pixels are showing and some information has been lost.)

File compression is a very important issue for the production of web pages because of the time needed to download images over the Internet. MPEG files (Moving Pictures Expert Group) are used to make the transmission of videos possible. The Apple Quicktime system is widely used by CD ROM and web designers with other systems being developed. The combination of new faster and efficient compression techniques with faster processors and large amounts of memory is making possible full screen realtime video technologies.

Pictures submitted for publication in the DIGIT may be submitted in JPEG format as computer files on disk or attached to emails. Colour or monochrome pictures of normal enprint size (6 x 4 in) with a resolution of 200 dpi are acceptable. Images placed on the web site will be reduced to 75 dpi JPEG files or saved as low resolution GIFF files.

To summarise the effects of compression:

Graphics files are stored as a long list of numbers. The manner of storing these numbers may be improved to reduce the length of the list without any loss of quality. It is also possible to omit some of the numbers but this loses information and reduces the image quality.



The original scanned image.



The above image was saved as a lowest quality, compressed JPEG file with a resultant decrease in detail

Bill Henley LRPS

Comment

I don't think I've mentioned before, but I am part of a small "Internet Digital Imaging Group", (IDIG), (though so far the only RPS member !?), there are just four of us at the moment myself, two Londoners and one young lady in the USA we are, what I think you might call 'prolific' workers, producing at least ONE new image each every day of the week --EACH !! -- and these get sent out, each day, to each of the other members in the group, along with comments / remarks / and general chitter-chatter in accordance with the contents (and images) of the previous days communications.

The stimulation and excitement that comes from such a group is incredible, and bears little comparison to what we all know best, the more conventional 'Camera-Club' weekly meet as for a start off, this is all done on a daily basis !? We share experiments show 'part-finished' work discuss / suggest / and comment on each others work ('suggested' improvements are often 'carried out' on the image in question, by the person making the comments, and then sent back around the group for further comment)-(much like as if a 'club-judge' were able to bring his comments' to life' at a club meeting !?) -- this has brought about a whole new dimension to 'photography' as we know it. The level of friendship / trust and good humour that abounds within the group is like a breath of fresh air long gone are the petty niggles and quibbles of society meetings and the willingness to share ideas, take on-board the views of others, and PRODUCE new images, is very rewarding. Much more akin to what I remember 'photographic-societies' USED to be like, many years ago, but now on a daily basis rather than a weekly one. We intend to allow our group to grow, (a little) and we will be inviting new membership from all over the world -- the only requirements for membership being:- that the person should be prepared to be 'prolific', and produce, more or less, one new image every day -- this does not require the image to be an 'end-result' or of 'exhibition' standard, far from it, most of our images could be regarded as 'general-communication' and can take the form of a

'part-finished' work, the 'seed' of an idea, the result of an 'experiment', even 'snapshots' of potential interest to other members of the group. The only other requirement being that the worker should be 'creative', 'imaginative' and 'positive' about imaging in general. This 'invitation' to join our group is extended (with great gusto !!) to all RPS members (of course !?), and in particular, to the members of the various area groups of the DIG. We will not however, be allowing the group to grow TOO large, as this will put too greater burden on the commitment to 'respond' on a daily basis to everything that comes in 'from the others' --so we envisage only two or three new members for the time being - - to see how that works out -- however, if we get a larger response than we anticipate, then we'll just have to play-it-by-ear !?

I am more than surprised to notice how seldom, if ever, one of the most significant benefits of 'digital-imaging' is emphasized in the magazines (yours included) and that (for me) is the unparalleled opportunity to both view and evaluate an image, under 'construction', during each of it's 'stages-of-development' -- whether it be an 'elaborate-manipulation' or just a simple 'photo-retouching' exercise -- without ever actually having to commit it to paper !? As you are constantly being given a 'visual' update as to the progress being made you can therefore decide at which stage the image is 'complete' and whether or not to continue down a particular route of manipulation, depending on the level of success (or lack of it) being achieved. There really is no darkroom equivalent to this phenomena, not in real terms, as it's not until you make 'the print' that you know, with darkroom work, whether or not you've managed to achieve the 'end-result' you've been seeking and even then, sometimes, a successful outcome is only achieved by virtue of a little luck along the way. Furthermore and in my case this is MORE than true I find that there is no 'need' to produce 'a print' at all, (within digital-imaging) -- 99% of all my creative-imaging 'enjoyment' comes from the on-screen development of an image and seeing the 'end-result' up on the screen in front of me these images can then be shared with others over the Internet entered into competition all over the world and even sent for magazine publication without ever having to go

'into-print' I would think that as little as 1% of the images I create EVER get 'printed-out' and even then, for the most part, it's more often than not, to provide for a 'photographic-society' competition, rather than just for personal pleasure alone -- all the pleasures and enjoyment of 'photography' can be gained, and much MUCH more, without having to lay-out on expensive papers and chemicals (paper and ink!?) by adopting the 'digital' route -- even less expense is incurred by going '100% digital' !! Why is it then, that the 'wets' (wet-photographers) shy away from such intense enjoyment ?? Surely the object of the exercise is the enjoyment of your chosen hobby, be it 'photography' or whatever and NOT simply the 'preservation' of established techniques for time immemorial leave that to those, whose hobby it is, specifically, to 'preserve' established techniques for time immemorial' (?)-(and there's seldom a shortage of THEM !?) but now photography has entered the 'Digital-Age' -- the level of enjoyment has been increased one-hundred fold the opportunity to produce, exhibit, SEE and share photography has increased by an equal amount -- so why all the resistance ?? Are we 'condemned' by tradition to suffer the 'limitations' of darkroom-technology or are we free, as individuals, to seek-out new and more pleasurable methods of producing images digital or otherwise!?!?

Barry Colquhoun ARPS

bjc.albaco@cyberscape.net

First Faltering Steps in PhotoShop

Those first tentative steps were taken early in 1997 when Photoshop 3 was installed onto my (then) 486 computer. The computer had been used extensively over the years for word processing as I am active both in the Western Counties Photographic Federation and as Secretary of my own photographic society. Whilst I have been a serious monochrome print worker for many years, I have never made a colour print in my life and the idea of



Roy Rainford ARPS

Taken early morning on the Mont Blanc range. It was a colour transparency scanned onto Kodak Photo CD. Changed to grayscale in Photoshop 4.0 & enhanced using 'levels', 'rubber stamp' & dodge/burn tools. Clouds were imported from another early morning shot & positioned using layers.

producing colour images was very appealing. I bought a Hewlett Packard 609C colour printer, read one of the many instruction books available and practised with some royalty-free images from one of the C.Ds which can be found on computer magazines.

Barrie Thomas led a workshop in Taunton which I attended and this encouraged me to get a mixture of colour slides and colour negatives put onto a Kodak Photo CD - and I was away! At about this time I made a very rash statement at my club (Kingswood P.S) - Yes, it is interesting, but I'm not taking it seriously - that remark has since come to haunt me!

March of 1997 saw my first 3-layer image entered into our Quarterly Competition at the club and to my amazement - and delight - the judge placed it first and afterwards said he was unaware it was a digital image. I am sure most of you can imagine the outcome - me, a serious monochrome worker - a digital image - a colour print - placed FIRST!! Encouraged by this early success, I delved deeper into Photoshop by buying a book recommended by Glenys Taylor 'FUNDAMENTAL PHOTOSHOP' which resulted in many restless nights with bezier curves, unsharp masks, defringing, channels and quick masks going around in my head.

Being retired and living alone, I neglected the decorating, the car cleaning, the hoovering and dusting etc and spent even more hours battling with the complexities of the computer and Photoshop, but learning some important things in the process. About this time Derek Dorsett FRPS visited my society and stayed

overnight with me. I showed him my limited collection of images and received some encouragement from his remarks, but strongly suggested that I should be using Photoshop 4. I decided to crack open the piggy-bank and upgraded to Pentium 90, a 17in monitor, 64 Mg of RAM a flat-bed A4 scanner and Photoshop 4 - then had to learn some of the processes all over again after the upgrade. I wanted to see what others were doing, so I was already a member of a UPP monochrome circle, I joined the newly formed UPP DI.2 circle which consists of 20+ members of mixed ability, so we are able to help each other with advice and tips. Glenys encouraged me to join the DI Group (I am already a member of the Creative Group where we see lots of digital images), I attended several more workshops and regional DI meetings - and gradually progressed with a selection of reasonable prints which saw the light of day in competitions and exhibitions; I was even invited to talk to the South Wales DI Group! Modest success in the form of six DI images in one exhibition, including a PAGB Ribbon has encouraged me to upgrade once again to Pentium 200 with 128 Mg of Ram, a 4Mg Graphics Card and trading in the HP printer for an Epson 600.

So here we are in April 1998, just over a year since I was bitten by the bug, and even been talked into being elected to the committee of this group. Does this mean I have arrived - or am I just another struggling pixelographer?

John A Long ARPS APAGB

Split Toning

Recently, an article was published in the popular photographic press about obtaining split toned images using PhotoShop. This works by first desaturating the image to remove all colour (do NOT convert to grey scale or you will have to convert back to RGB!). Adjust, curves; select the blue channel and by bending the top half of the line downwards, a yellowing of the highlights is seen; raising the bottom half of the line gives blue shadows. Accept if liked. Save etc.

This works well enough and if recorded as an "action" can be repeated easily.

In Picture Publisher, it is just as easy and the following method adds both red and yellow (giving a kind of sepia) to the highlights, and a subtle coldness to the shadows:-

Hue Shift, Saturation shift -100 (desaturates). OK.

Map, Colour Balance (Joystick), Channel Blue, Tonal range Highlights Balance -10 (=10 yellow). OK.

Map, Colour Balance (Joystick), Channel Red, " " + 7 OK.

Map, Colour Balance (Joystick), Channel Master " Shadows " -3 (to darken). OK

Map, Colour Balance (Joystick), Channel Blue " " " +10 OK.

By invoking Edit, Command List, Edit, and Save, a macro can be created and saved for easy repeating. If later, using notebook, the ".clm" macro file to be found in c:\Picture Publisher\Macros is loaded, the macro can be edited manually if desired.

A similar method is also possible in Photo Shop using Image, Adjust, Colour Balance etc.

Now do a test print to make sure that the print colours are exactly the same as you saw on the screen I bet they are not!

**John Wigmore FRPS AFIAP
DPAGB APAGB**

Digital Portfolio



Boat

This is from a slide taken some 14 years ago in Tenerife. I recently purchased a book entitled "The Photo Shop 4 WOW Book" which includes a CD ROM with a very interesting set of preprogrammed "Actions" which are available in Photoshop Version 4. There are dozens of different Action which you just click on the play button to start a sequence of operations including various filters and other operation. The one used on the Boat image is called Wow Painting/Canvas/Lite which includes the following operations / filters: Levels, Hue & Saturation, Dry Brush filter, Create new layer, Emboss Filter, Gaussian Blur Filter, Create new layer, Texturizer/Canvas Filter, and Layer options. Following all that which took only a few minutes I then flattened the layers and did a layer copy before applying a Gaussian Blur to the background image the reduced the opacity on the top/copy layer to let the unblurred image show through WOW!! The result as shown printed up quite well.
PS I am not on commission for the WOW Book.

Graham Blackwell ARPS

Clive would like to hear from any members who would like to join the Digital Portfolio circle. The portfolio disk is circulated with each contributor removing their previous image and adding another before sending the disk on. Or, it may be that you would prefer to share your images using prints, especially as some members are concerned about the possibility of importing a virus. Please let Clive know if you would be interested in contributing to either a disk or print portfolio.

**Clive Davies LRPS
Folio Secretary
39 Wigan Terrace
Bryncethin
Bridgend
Mid Glamorgan
CF32 9YE**



Windows

The original image was taken on Fuji Slide Film at Lake Garda. I have done little work on this picture except correcting the verticals, removing some road signs from the bottom right of the image and then applying a cutout filter.

David Burgess LRPS



The Yellow Boat

Part of a slide taken in Fraserburgh harbour and fairly heavily cropped. To emphasise the harbour wall I superimposed a "find edges" layer and posterised and then superimposed another layer of just the boat in almost original form to preserve the flowing lines.

Tom Ashcroft,

Do you have a suggestion for a regional or national digital imaging event?

Could you host a meeting?

Do you have ideas that could enable members to share their experiences, display their prints and build upon their enthusiasms?

The secretary and regional organiser would be delighted to hear from you.

See the back page for contact details.

When I put this panorama together I had intended to do it seamlessly, but as the shots were taken on a snap camera, hand held at sunset and I only had a week to do it for a Christmas present I realised it was an immense task. I emphasised the higgledy piggledy outline and liked the effect.



Pauline Johnson



Golden Ball.

This is one of my Bryce 2 images that I enjoy doing. I find this type of work more challenging because, unlike Photoshop where one manipulates an existing image, with Bryce all you start with is a blank screen, and an imagination. It also helps if, like Dali, you are a bit round the twist as well. I have created about 300 of these images of which 150 have bitten the dust and disappeared into the ether. Hope you like it. I should mention that this is imagery, not photography. No photographic content.



Pram

The original image of the pram pusher is a monochrome. The streaky background, believe it or not, is a medium format colour trannie of the tulip fields of Kukkenhof, Holland turned through 90 degrees. The barrier was computer drawn and then the finished image was treated with a Photoshop Filter, accented edges.

Jack Casement ARPS

An LRPS Digital Panel

At the March 1998 RPS Northwest Event at Lancaster I had an panel of digitally produced prints accepted for a LRPS. I had been working on two panels for submission, one of 12 x 16 colour prints from my trip to Nepal, the quality was good but I was never entirely happy with it as I felt it contained too many people pictures. The other panel was a series of digital inkjet prints, that originated from my own photographs mainly slides, that I saw as having potential if digitally manipulated and printed. In the panel I tried to show a range of subject matter, and styles of photography as well as demonstrating an understanding of the use of different levels or amounts of manipulation to achieve a final image.



Lonesome Tree

This was a monochrome negative taken near Malam that I scanned into the computer, it has been laterally reversed. Contrast and brightness levels have been manipulated similar to normal burning in etc., but often on smaller areas of the picture.



Brother and Sister

This started as a slide taken in Kathmandu which was spoilt by a row of bright highlights along the top of the frame. The slide was transferred to CD, and the highlights masked out.



Venician Canal

This started as a colour slide transferred to CD. The sky area and the buildings at the far end of the canal had their colour saturation and contrast increased, the canal in the foreground was lightened and the brick/stone work enhanced by the use of 'find edges'



The Placca

This was a colour slide of Dubrovnik, which I had accepted in couple of Exhibitions and then transferred to CD. The result has been achieved by a combination of 'finding edges' and posterisation.



Girl and Taj

The girl was part of colour print taken in Jodphur and the Taj was a slide transferred to CD. The Taj was converted to monochrome and the contrast on the building increased, and the foreground lightened. The girl was 'cut out' and reversed (as the lighting was crossed and I needed her on the right hand side of the picture) before combining the images.



Memories

This started as 2 6 x 4 colour prints on of a girl in the Good Friday procession in Benidorm and the other of the now destroyed bridge at Mostar. The girl was 'cut out' and placed onto the picture of Mostar, some adjustment was made to the shadow detail on the right-hand bridge buttress.

My digital imaging started in December 1996 but I have been involved with computers since the days of the Sinclair ZX8, BBC Bs, Masters, Archimedes, PCWs and PCs. I do not possess a copy of Photoshop but have done all my manipulation using Photo Deluxe version 1. My prints were produced with an Epson Photo Stylus printer and Jessops A4 matt inkjet paper.

Jon Allanson LRPS



The Hut



The Express



Hvar Town



Bring on the Clown

Submissions of images and text for DIGIT are very welcome. Please submit them on disk or by email if possible, although both can be scanned in if necessary.

Tips on Photoshop 4 for Photographers

This article is intended for those acquainted with Photoshop 4 and using Windows; it is not for novices. For beginners I would like to suggest two books. The first one is the Visual Quickstart Guide, Photoshop 4 for Windows by Elaine Weinman and Peter Lourekas, Published by Peachpit Press ISBN 0/201/68842/5. In my opinion it is the best book for beginners. The second book, which is more detailed and good for reference, is Photoshop 4 for Windows 95 Bible by Deke McClelland IDG Books World Wide Incorporated ISBN 0-7645-4032-7.

This article, as the title suggests, contains hints and tips on what I found to be useful and important in digital manipulation of photographs. It is not a fully researched and authoritative guide for Photographers, and neither is it comprehensive. It is based largely on my opinion of what I considered to be important and useful in my process of learning Photoshop 4. I am sure others would have different views and opinions on what is dealt with here. They might consider other things more important, and have better ways of dealing with the same aspects of Photoshop 4 that I have dealt with, and I would welcome their contributions.

Before you start

1. From the outset decide to use shortcuts (using keyboard instead of the mouse). It is not only easier and quicker but it saves a lot of strain on the hand operating the mouse. I shall, throughout the article, give the most useful shortcuts.

2. It is best not to have more than one or two palettes on the monitor screen at any time, this avoids clutter and makes as much space as possible for the image which is worked upon. This is particularly so if you have a small screen. How you personalize your palettes depends on the way you work. I use two palettes, one for Layers, Channels and Info, and the other for Brushes, Navigator and Options. To have the former palette on and off the screen press F7 and for the latter F5. If you use two palettes regularly you can create a third palette of Colour, Swatches and Paths, and use F6 for it to be on and off the screen. If your screen is less than 17" and you want to manage with only one palette, compile one for Layers, Brushes and Options and that can be switched on and off by pressing either F7 or F5.

3. To set the Preferences you can refer to the two books recommended. It might be best to leave most things to the default settings except for three of them. GO into File > Preferences > General > and then click Next twice to bring the Display and Cursors Dialog Box up in Preferences. Set Brush Size in Painting and Cursors and Precise in Other Cursors. When the Brush Size is selected, you will see the actual size of the brushes up to 300 pixels if you are using any paint or editing tools. If the brush size is larger than 300 pixels the Standard Cursor will appear on the screen. I cannot imagine how one can use brushes properly without this facility.

Then click Next five times to bring up the Memory and Image Cache Dialog Box and set 100% in Physical Memory Usage.

Background versus layers

The difference between a Layer and a Background is that the former has a transparent base and the latter a white base. We photographers using negatives or slides are more familiar with the transparent base. There are considerable limitations in editing a Background compared to a Layer.

The most glaring ones are the inability to use a layer mask, to change the position of the background in a multilayer document, to apply a blending mode or to change the opacity. In many circumstances it is best to convert a background into a layer. To do this double click the "Background" in the Layers Palette and a Dialog Box will appear. You could either keep the name "Layer Zero" as it appears or give a name of your choice. Leave the opacity to 100% and Mode to Normal and click OK and the Background will become a layer. It is now possible to use all the editing procedures available for layers which are not for the backgrounds.

Rarely is it necessary to change a layer back into a Background. To do that activate the layer you want to make into Background on the Layers Palette, Alt click New Layers button in the Layers Palette and a New Layers dialog box appears. Keep opacity to 100% and in the mode drop down list choose Background, Click OK and a white background will appear at the bottom of the Layers Palette. Make visible only the Layer you want to make into a Background and the new white Background which you have just created, and then from the drop down list choose Merge Visible and the layer will be made into a background.

Selections

To select an entire layer use Ctrl + A, to deselect Ctrl + D, to inverse a selection Ctrl + Shift + I (letter I not 1), and to hide or show a selection Ctrl + H.

To select an image (pixels only) on a transparent layer Ctrl click the layers name on the Layers Palette.

When using a Rectangular or Elliptical Marquee Tool to drag from the centre, hold down Alt and drag. You must release the mouse first before the Alt key.

Hold down Shift key while dragging to create a circle or a square, and to draw them from the centre hold down Shift and Alt and again release the mouse before Shift and Alt. When using the Polygon Lasso tool, anchor points are created each time you click. If mistakes are made in the positioning of the anchor point, any number of anchor points can be undone by repeatedly pressing delete. This is most useful and surprisingly it is not given in the Manual or any other book. At times open ends prematurely join

accidentally (usually by inadvertently double clicking). If that happens, save as a New Channel whatever has been selected up to that stage by using the Save Selection command in the Selection Menu. Deselect what has been saved. Continue to make a second selection of the remaining area which was missed, then from the Select Menu choose Load Selection. In the Channel will appear #4 indicating the previously saved selection. Click Add to Selection button and click OK. The two selections will become one which was the initial intention. It may prove necessary to refine the selection by either adding or subtracting from it as given below.

To add to a selection or make an additional selection, Shift Drag any selection tool other than the Polygon Lasso or the Magic Wand. With the Polygon Lasso instead of dragging, it is necessary to click to mark out an area to be added to the selection, and for the Magic Wand click on the unselected area. To subtract from a selection press Alt instead of Shift, and in the case of the Magic Wand click the selected areas you wish to subtract. When working with the Lasso Tool if you press Alt this stops a Lasso selection from closing if the Mouse is released, it also changes the Lasso to a Polygon Lasso tool until Alt is released.

If you have Feathered a selection and you don't like the look of the feathered area there is nothing you can do but select again. However, if you make the selection with no Feather and when finished go into Select> Feather and then choose the radius you want, you can change the Feather to your hearts content by going backwards and forwards into Edit> Undo.

The Colour Range is best used when a uniform area of colour or tone has to be selected, and once the selection is done it could be made Greyscale (Mono chrome) by desaturation or the colour can be changed by using Hue and Saturation Command. This is particularly useful in studio portrait or similar images where the background is a uniform colour or tone.

When using Magic Wand you find numerous islands of selections. They can be joined by Shift clicking the unselected areas between them which can be quite tedious.

An alternative is to go to Select> Modif~> Expand and enter in the Dialog Box which appears, a number for the pixels (as to what number to enter you will learn from experience) and click OK. Then repeat the process but on this occasion choose Select> Modify> Contract instead of Expand and enter the same number of pixels that you entered when you expanded. This either eliminates or reduces the islands of selection. The only way to learn to use this method is by experimentation and at the end you might need to modify the selection in other ways.

Refining selections

This section refers only to selections made to cut out an image to put on a layer, and not to selections made in an image for the purpose of editing that area or applying a filter to it. Most workers, after making a selection by any of the selection methods, would refine it by using Quick Mask. As the area masked with this method is covered with 50% red colour, it proves in the case of some images, very difficult to see clearly to refine the image. I think a much better way of doing it is by using a Layer Mask.

To cut out a part of our image to put on a layer, roughly select that area by any method of selection you choose. If selecting the background proves easier, by all means do that and then invert the selection. Copy the selection and paste it on a New transparent document. As now the image is not on a Background you can apply a Layer Mask by choosing Layer> Add Layer Mask> Reveal All (Hide All is rarely useful). You will see on the Layers Palette to the right of the Eye a small circle which means that the Layer Mask is active. If you click on the thumbnail of the image on the layer in the Layers Palette a small brush will appear indicating that the image on that layer is active. When you want to work on the Layer Mask or the image on the layer, first make sure that the one you want to work on is activated. This is important as otherwise by mistake you will paint the image instead of the Layer Mask.

By painting the Layer Mask with Black (the default foreground Colour) you make the layer transparent (mask it), but if you want to restore part of the image you mistakenly masked (made transparent) you paint it with white (default background Colour). If you want an area only partially transparent (masked) paint it with gray by reducing the opacity of black by the appropriate amount in the Paint Brush Palette. You can toggle between black and white while painting by pressing the letter X key. Masking partially (by painting with gray) is not possible by the Quick Mask method.

Once the cut out image on the layer is just as you want it, it is best to Apply the Layer Mask. To do that choose Layer Menu, then> (paradoxically) Remove Layer Mask, a dialog box appears which gives the option of Apply, Remove or Cancel, click Apply. You can apply Layer Mask as often as you wish and create a new Layer Mask to continue the task. I apply Layer Mask from time to time just as I would Save at various stages when working on an image. Layer Mask can be used to make what I call Gradient Selections.

Scanning the quality of the output

This and the following section are difficult to explain and would be much easier to demonstrate with the computer. Serious photographers want the digital output (prints) to be comparable in quality to those produced photographically. Affordable digital cameras as of now cannot give as good a quality image as by scanning a negative or a slide. Therefore, the best method at present for inputting (bringing the photographic image into the computer) is by scanning the negative or the slide.

To get photographic quality output, it is essential to take into consideration at the scanning stage the size and resolution at which you will print.

**These notes have been extracted from a booklet written by
Dr Eddy Sethna FRPS
(Vice Chairman of the Digital Imaging Group).**

**If you would like a copy of the complete document please
contact him at the address given on the back page.**

The Digital Imaging Group consists of members of the Royal Photographic Society who have elected to pay an extra subscription to receive the group's journal DIGIT and to work together via meetings and a circulated portfolio to promote digital imaging. Submissions for inclusion in DIGIT are very welcome. Please note that the editor will assume that all persons submitting material have ensured that they own the full copyright of all the images and text submitted, and that any legal infringements will be the responsibility of the submitter. Copyright of all the material published is reserved in all countries on behalf of the RPS and the authors. Any views expressed are not necessarily those of the Royal Photographic Society nor of the Digital Imaging Group.

Internet: <http://www.wycliffe.co.uk/rps-digroup>

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Digital Imaging Group 'Members' Day

on Sunday 28th June 1998 at 10am

at the Octagon, Milsom Street, BATH

with Barrie Thomas FRPS FBIPP

and Adrian Davies ARPS

Your chance to see and hear two of the leading exponents of Digital Imaging plus a chance to see the Digital Imaging Exhibition.

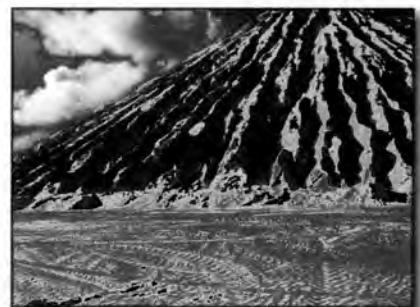
Tickets are available from:

Glenys Taylor ARPS, 10 Shoreditch Road, Taunton, Somerset, TA1 3BU
Please enclose a stamped addressed envelope for the return of the tickets.

Tickets £4.00 for DI group members and £5.50 for non-members.

Visit the Digital Group's Members exhibition at the Octagon from 24th June to 7th July 1998.

The AGM for 1999 is to be held in the Sunley Theatre at the RPS Headquarters in Bath on Saturday 3rd April 1999 at 10am. Members may bring prints for the members exhibition. Those who bring prints will be asked if they would like to take part in the selection, names to be drawn from a hat. At least one print per person will be selected. There will be a number of speakers to give mini-presentations.



Bill Henley LRPS