How do I …?

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with help from Phil Moorhouse

FORMAT FOR TONIGHT

- This is our second on line workshop - feedback on how it went would be welcome
- Questions have been invited from members which have been grouped into 4 topic areas
- Each topic will have brief introduction followed by short demonstration and questions
- Aim for no more than 20 minutes each topic with short break between
- Copies of slides/notes available after
- Follow up questions/comments welcome

Don’t forget to check member’s area for more workshop notes

TOPIC AREAS

1. File storage and retrieval

   How to better manage large numbers of images

2. Tonal corrections

   Managing light, contrast and colour using various tools

3. Selective enhancements, filters and composite images
   1. Basic use of layers and layer masks
   2. Selective adjustments to image
   3. Making “pastel” images
   4. Composite images

4. Colour profiles

   Matching colour between computer, print and projection

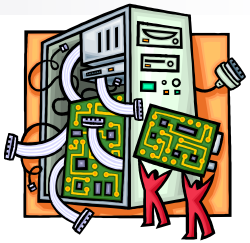
A NOTE ABOUT SOFTWARE

- There are now many different software options for processing your images
- Each often has similar features, but the tools, tool names and how they operate vary between the software package and even software versions
- And within each package there are often different ways to achieve the same outcome
- This talk will use
  - Capture One Pro
  - Photoshop CS3
- If in doubt check on line how equivalent tools in your software operate

File storage and retrieval

How to store thousands of images covering different subjects?

COMPUTERS FOR PHOTOGRAPHY

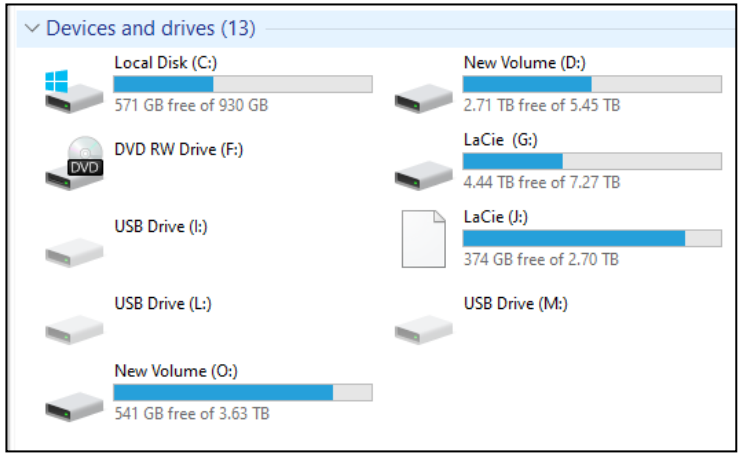


- Photography generates a growing volume of large files
  - You can never have enough storage in terms of hard disc capacity
  - And also external back up storage
  - Solid state drives (SSD) are getting larger and cheaper. They are more reliable and allow faster to access files
- Processing power
  - Large image files and modern software require lots of processing power
  - Good quality multicore processor
  - Large RAM – the more the better (at least 8Gb or more)
  - Decent graphics card (the part of the computer that handles images)
- Peripheral devices
  - External hard drive(s)
  - Printer, scanner, card reader etc.
  - Think about high speed ports for rapid file transfer (USB3.1)

BACK UP, BACK UP

Golden rule- have all your key files stored on at least 2 separate media

- In the field
  - Have plenty of cards with you
  - For big trips if you can, take a laptop or equivalent to back up on the go
- Back up at home
  - To external hard drive(s)
  - Ideally more than one drive
  - Back up routinely and consider auto back up
- Recovery of files from damaged media is possible but very expensive and not guaranteed



Storage media are getting cheaper by the day - Ignore back up at your peril

STORAGE

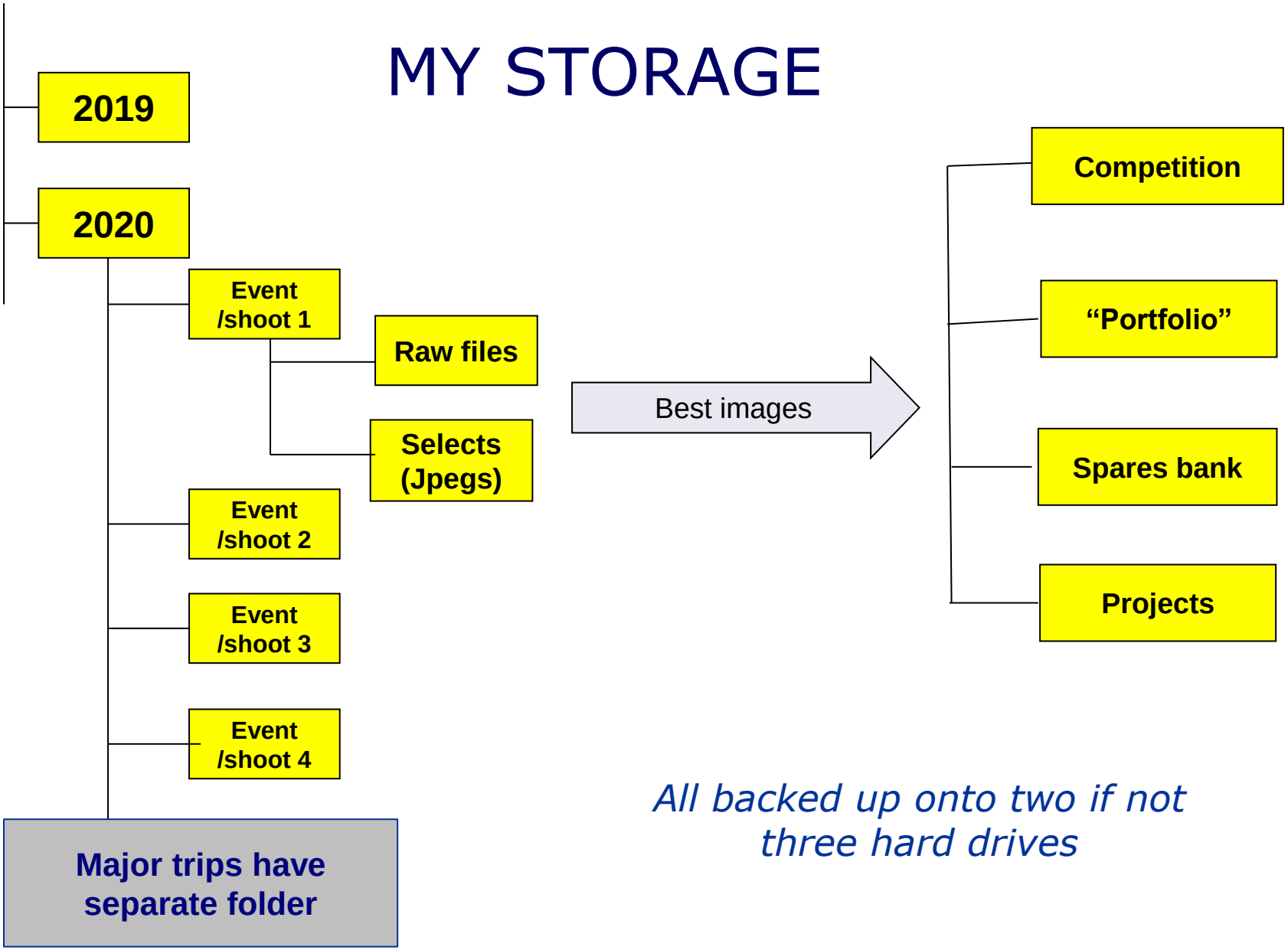
- File storage is very much a personal thing
- Depends on
  - Number and size of images
  - Power of computer and transfer speed between different hard drives
  - Preferred workflow
- There are a number of commercial programmes for image management
  - Some processing software now includes file management
  - Other dedicated software aimed mainly at commercial photographers
- Some people like to tag or rename their images for easier searching
- My personal preference is a simple file storage arrangement- but you must decide

INITIAL IMAGE SORTING AND PROCESSING

My raw file workflow

- Scroll through raw images and delete rubbish pictures
- For the rest tag or rate picture as “selects”
- Process “selects”
  - Majority as medium resolution jpegs for personal use
  - Output best images into separate folder normally as TIFFS for competitions, projects or other external use
- For “best” images- further image manipulation in PS if necessary and then print (TIFFs)or use for DPI/AV (jpeg)

MY STORAGE

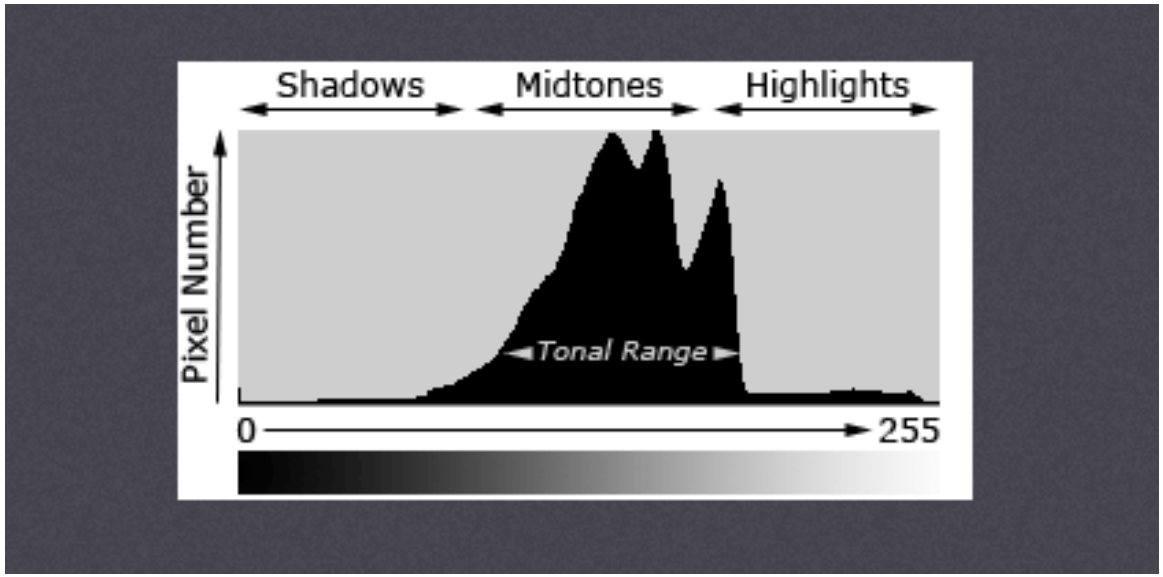


All backed up onto two if not three hard drives

Tonal corrections and selective enhancements

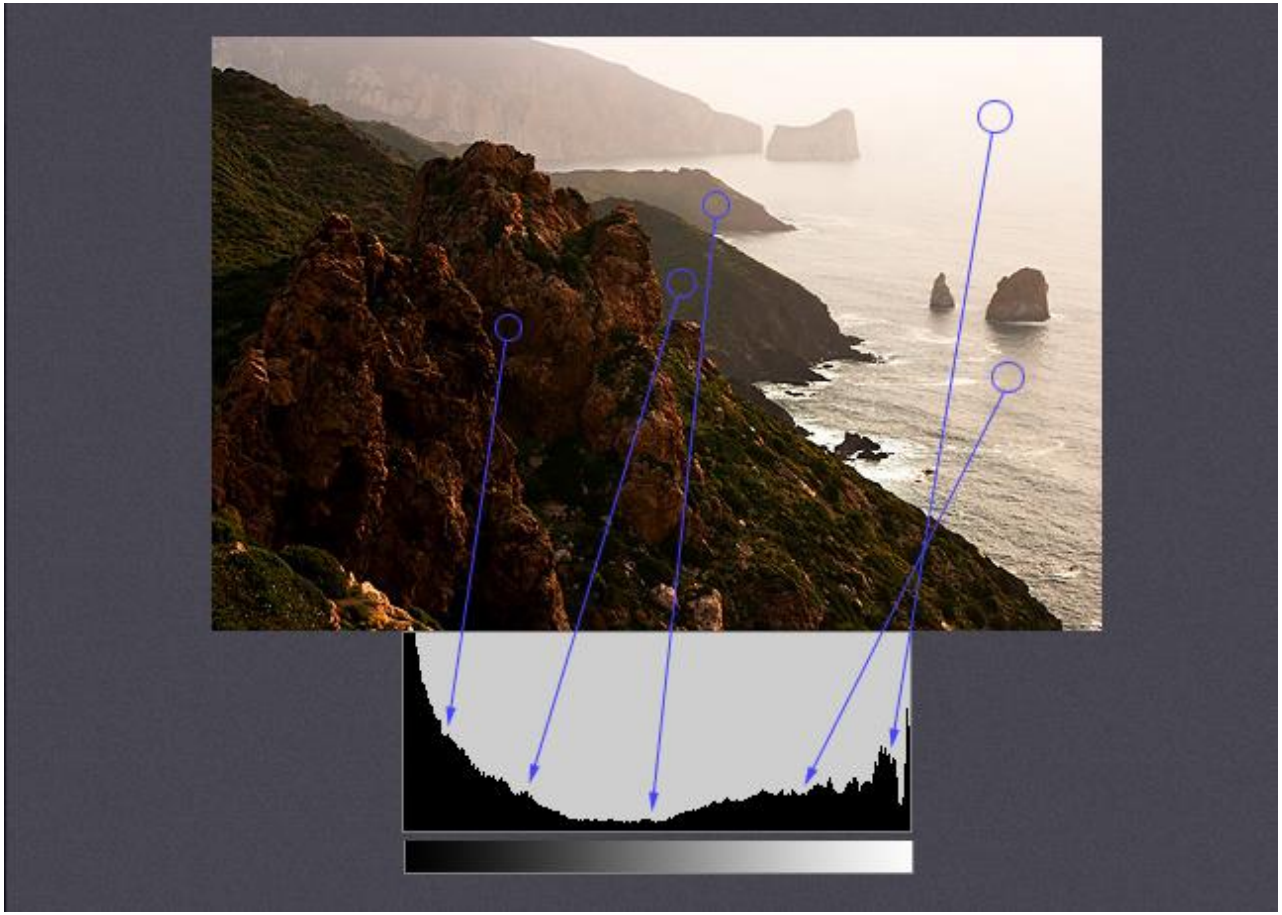
- *How to deal with a bright/cluttered background ?*
- *How to change the brightness/contrast/colour of parts of images?*
- *Use of layers in Elements when correcting and enhancing images?*

IT'S ALL ABOUT THE HISTOGRAM



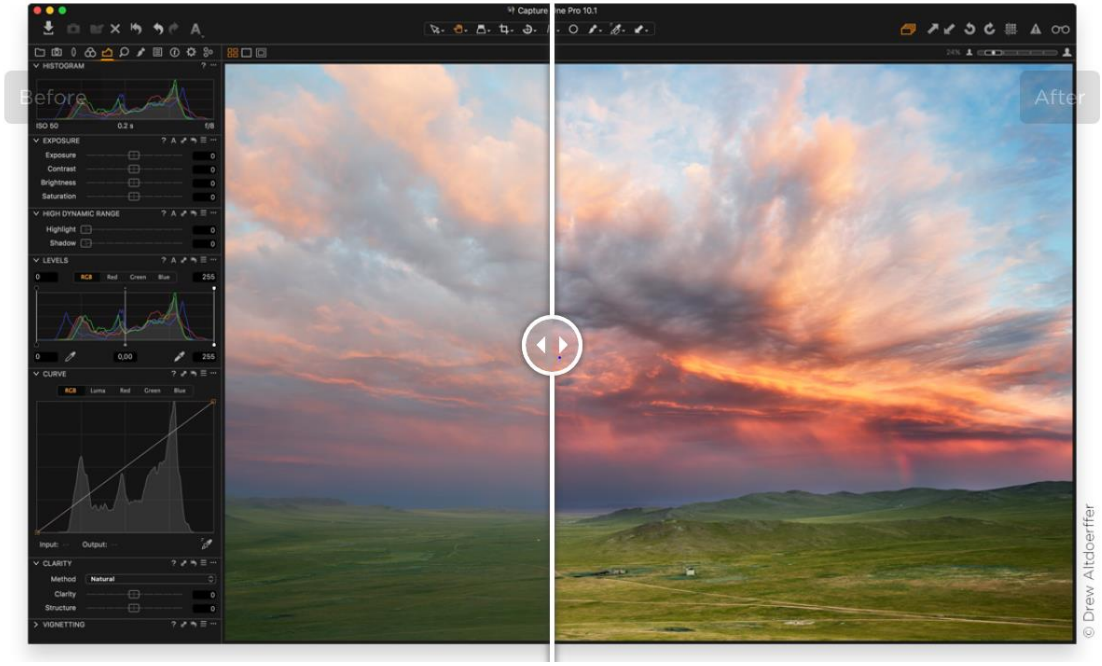
- The histogram helps you understand your image
- Shows distribution of light and dark pixels
- Each pixel has a brightness level from 0 (pure black) to 255 (pure white)
- Useful in making post production changes

HISTOGRAM ILLUSTRATION



Example showing how the tonal values of each part of the image match to the histogram

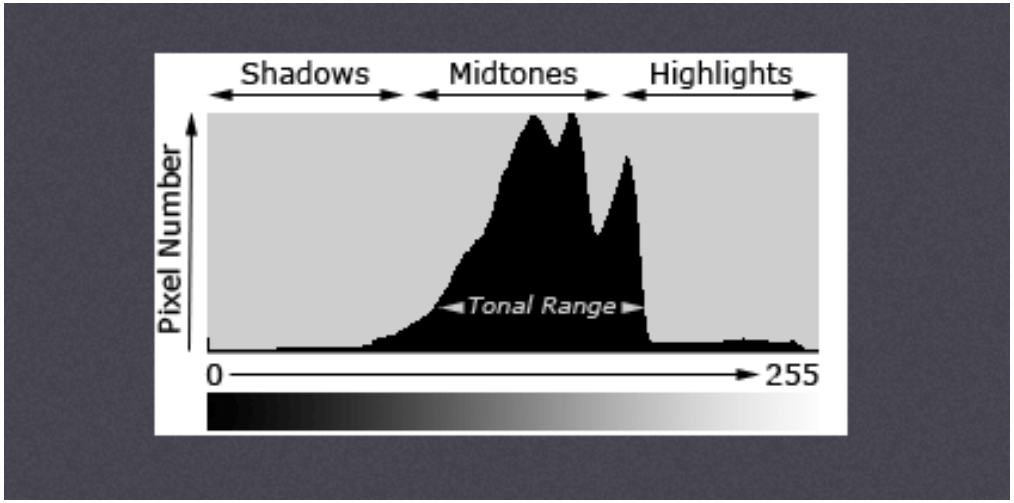
ALL ADJUSTMENTS MUCH BETTER/EASIER IN RAW



- The available tools will vary between software and the names may be different but essentially do the same thing
- Check what is available in your software and understand what each does

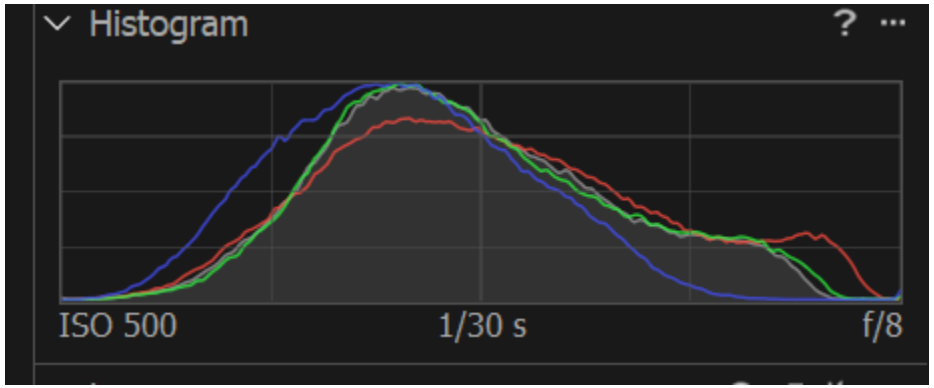
THE TONAL TOOLS ALL INTERACT

Exposure/ Brightness ⟺ Levels ⟺ Curves



Highlights/ shadows ⟺ Contrast/ Clarity

EXPOSURE/BRIGHTNESS ADJUSTMENT



- Exposure slider essentially mimics what happens in camera. It scales the settings up and down by a constant factor
- Brightness adjusts mainly the midtones but preserves the highlights better than simply changing the exposure. It tends to improve the midtones better compared to just changing the exposure
- If image taken in bright sunlight reducing “brightness” allows better overall tonal adjustments

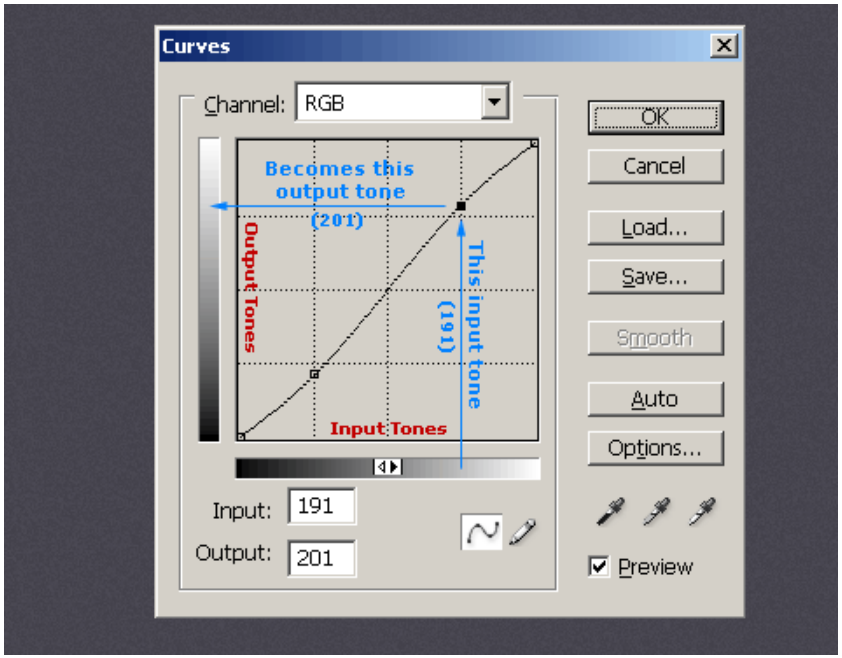
LEVELS ADJUSTMENT

Using the Levels Tool

The left image is straight out of the camera and shows both lens flare and some degree of underexposure. The right image is after correction in the Levels Tool.

- The levels tool allows you to “stretch” the histogram thus gaining a whole range of tones from pure black to pure white
- Can also change the midtones
- Creates a more dynamic/contrasty image
- In some software called simply “white/black” tools

CURVES ADJUSTMENT



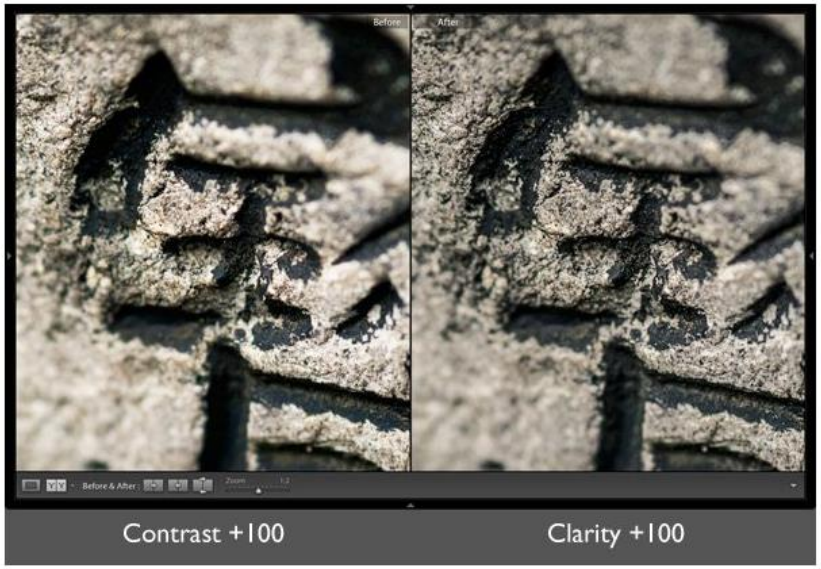
- The levels tool only allows changes to:
  - Black point
  - White point
  - Mid tone (grey)
- The curves tool allows you to selectively brighten or darken any particular pixel brightness value
- An S shaped curve can give added contrast to the image
- Or can brighten/darken mid tones

HIGHLIGHTS AND SHADOWS

- Often has different names in different software e.g. fill light/recovery
- Tool only works for RAW but allows you recover details in
  - Burnt out highlights
  - Deep shadows
- Most software has option which allows you to show burnt out areas of image
- Noise can be an issue in shadow areas
  - Depending on camera sensor and shooting conditions, shadow recovery can reveal lots of digital noise
  - If subject dark relative to background ideally use exposure compensation when shooting to deliberately overexpose.
  - Easier to recover highlight detail than shadow

CONTRAST AND CLARITY

- Contrast
  - Contrast darkens the shadow areas and brightens the highlights
  - Images taken in bright conditions often benefit from reducing contrast
- Clarity
  - Clarity is a more subtle increase in micro-contrast by working more on mid tonal values
  - Different names in other software e.g. vibrance
- If +ve both can increase drama and mood or if –ve can be used to “soften” an image



Use contrast with care

Clarity tool can often bring out texture better than contrast

DEALING WITH POORLY EXPOSED SUBJECT IN RAW

A demo using typical problem - bird in flight against bright sky

Exposure compensation +1.3

Auto exposure

Correction in raw with no layer masks

WHOLE IMAGE OR SELECTIVE MODIFICATION

- All software allows you to make tonal corrections on the whole image
- But better effects can often achieved by making selective adjustments to only part of the image
- In some software this can be done on the raw file in others it has to be done on a Jpeg/Tiff file
- The way to do this varies between software
  - Some software (e.g. Capture one, Lightroom) allow selective changes to image by “painting” masks to highlight certain areas and then applying the adjustment just to this part of the image
  - The approach in PS is to create a new layer to which the correction is made to the whole image and then using a mask to selectively change which bits of the image the adjustment applies to

FURTHER IMPROVED WITH LAYER MAKS

Correction in raw with no layer masks

Correction in raw with layer masks

SELECTIVE MODIFICATION USING PS

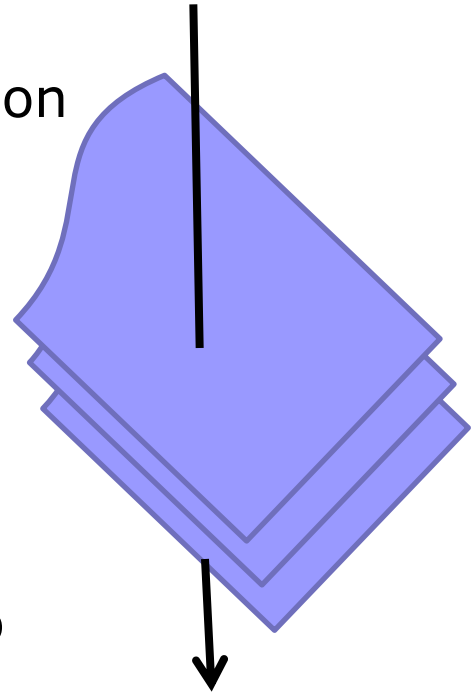
- The approach in PS is the inverse of C One/Lightroom
- Creating a new layer to which the correction is made and then using a mask to selectively change which bits of the image the adjustment applies to

But first a quick reminder about layers in PS

Layers and layer masks in PS
The basics

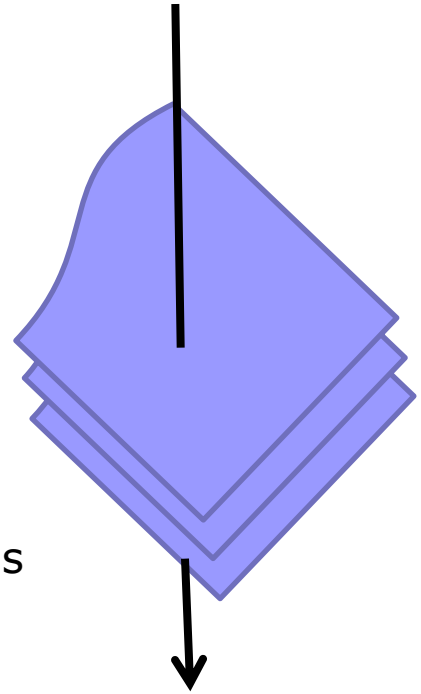
HOW DO PS LAYERS* WORK

- Imagine a series of clear acetate sheets (layers) stacked on top of each other
- As you look down through the stack the images on each layer "combines" to form the overall image
- Each layer can be:
  - The background layer (the starting image)
  - A copy of the background layer – possibly with cloning
  - A layer with a filter effect applied e.g. blur
  - An adjustment layer (e.g., saturation, hue, levels, etc.)
  - A solid coloured layer
- At the end the layers can be merged together to form a final image



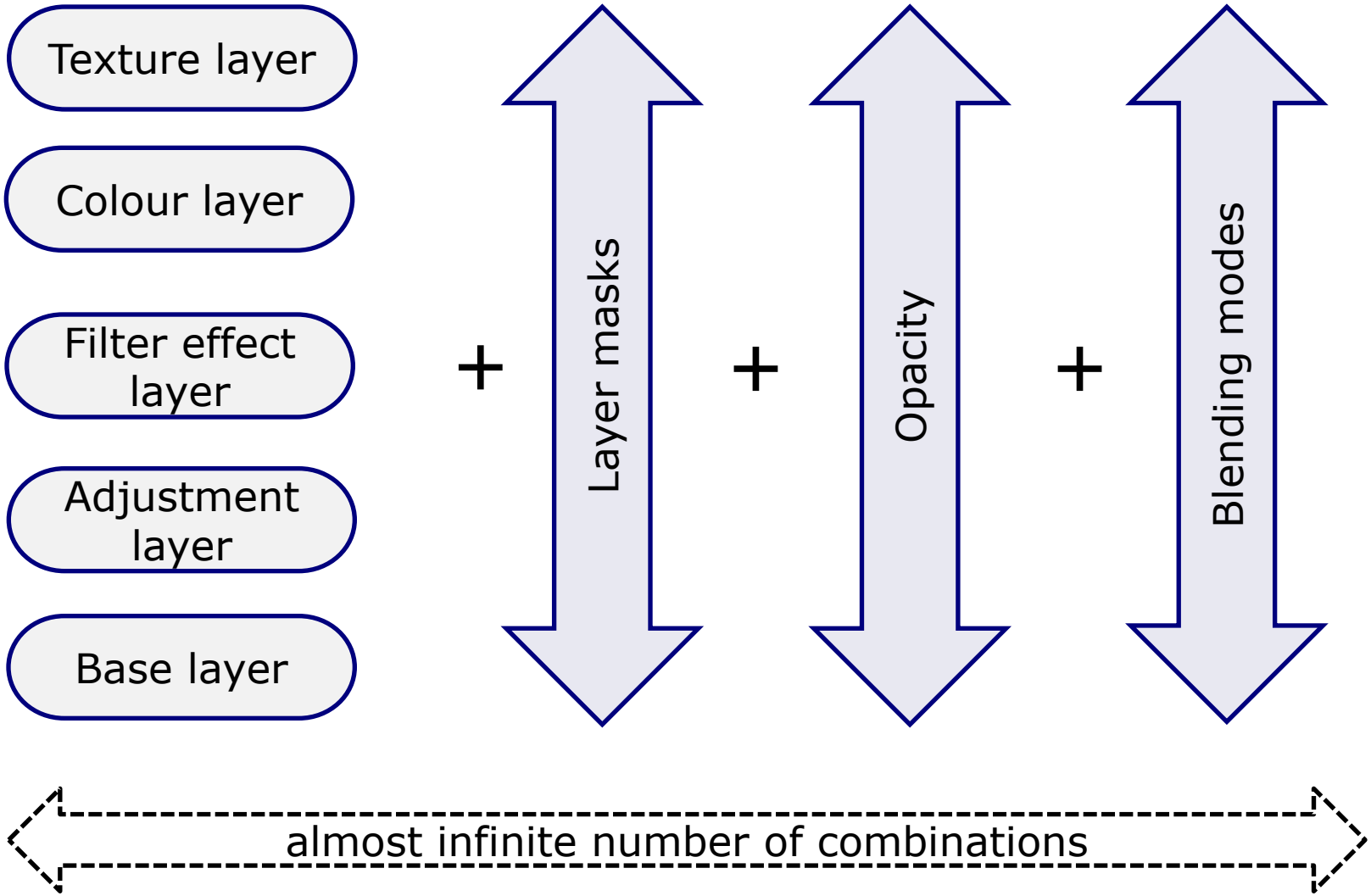
WHAT CAN YOU DO WITH LAYERS?

- Each layer can be:
  - Switched on or off
  - Faded by reducing opacity
  - Copied or deleted
  - Have the order changed
  - Worked on by selecting
  - Used for complex cloning
  - Blended in various ways
- For each layer a “mask” can be applied*
  - This allows all or only a part of the layer to be seen
  - Changed by using brush tool: white reveals, black conceals
- Layers can be linked – this allows an adjustment layer to only affect linked layers



* Make sure that the mask is highlighted when modifying the mask

LAYER COMBINATIONS



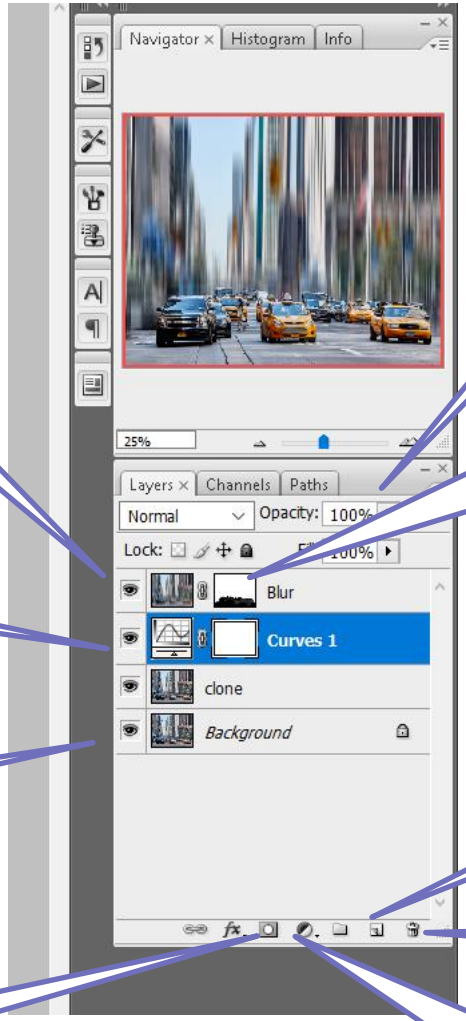
LAYER TIPS

- Easiest to move around image and expand/contract using "navigator" tab
- Carry out any adjustment
  - On new layer <u>not</u> on "background"
  - For multiple adjustments or complex cloning use separate layers
  - In both cases easier to go back one stage if mistake rather than losing all corrections
- Can save work in progress on image (including layers) but only as large PSD (or TIFF) file
- Only when happy with final image should you "flatten" image and save for final output as TIFF or JPEG file

SELECTIVE MODIFICATION USING PS

Demonstration of selective adjustment tools in PS

LAYER CONTROLS



Opacity

Click to switch layer visibility

Layer mask: "paint" to define area of mask which applies to adjustment layer

Adjustment layer

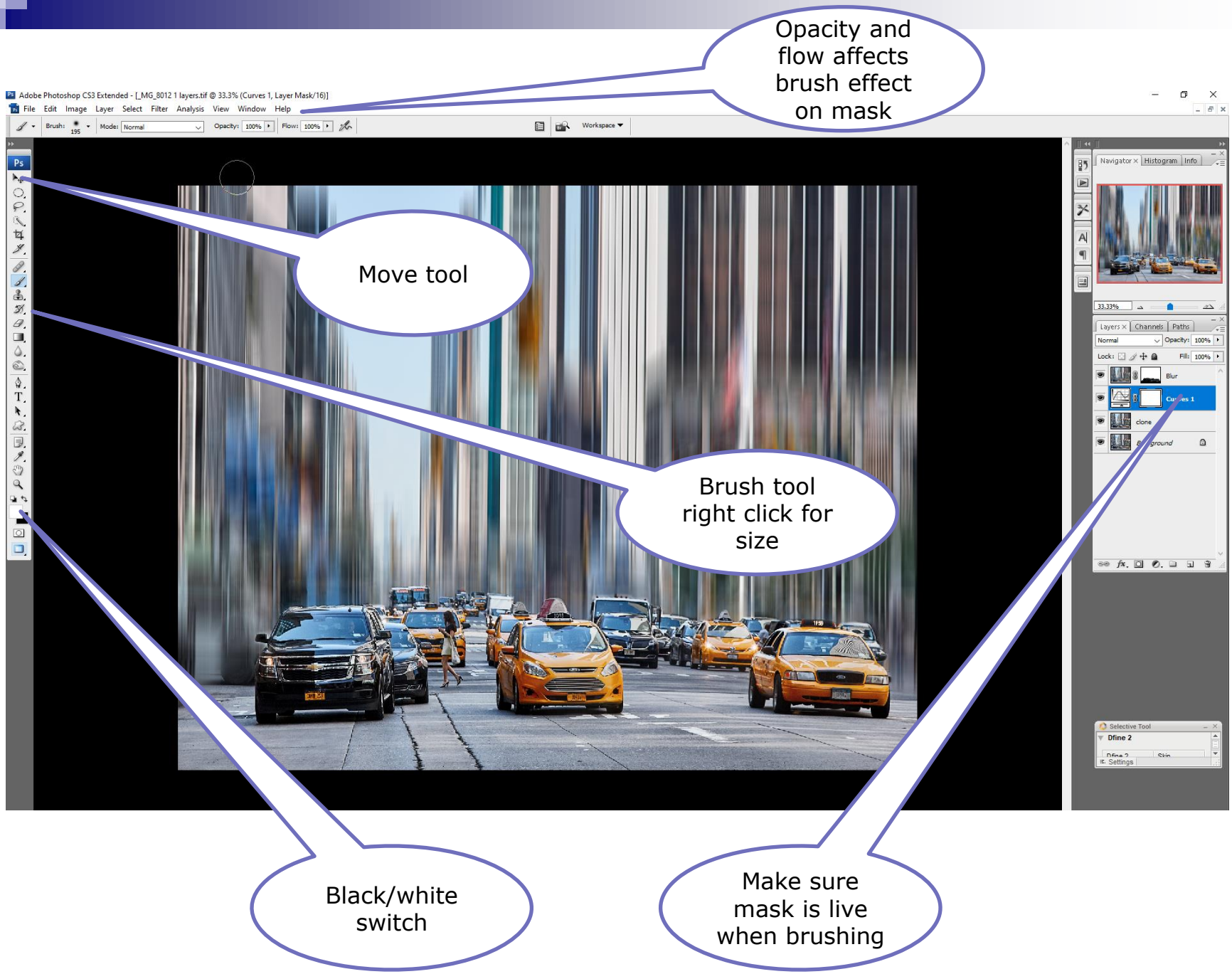
Duplicate layer: drag and drop

Background layer

Delete layer: drag and drop

Add mask

Adjustments


Opacity and flow affects brush effect on mask
Move tool
Brush tool right click for size
Black/white switch
Make sure mask is live when brushing

SELECTIVE MODIFICATION USING PS

- The approach in PS is the inverse of C One/Lightroom
- Creating a new layer to which the correction is made and then using a mask to selectively change which bits of the image the adjustment applies to

Demonstration of selective tonal adjustment in PS

Making “pastel” images

MAKING PASTEL IMAGES

- This type of image has been particularly developed by Irene Froy in the UK
- And some of our members!
- Typified by soft pastel images covering a range of people, landscape and other subjects

BASIC APPROACH IN PS

- Duplicate the background layer
- Apply ‘Gaussian Blur’ to copy layer
- Reduce opacity, or use ‘Multiply’ blend mode and adjustment layer to lighten overall tones
- Create top empty layer and fill with white. Use ‘Soft Light’ blend mode. Adjust opacity to suit.

Demonstration of pastel images

Composite images

COMPOSITE IMAGES

- Many images in national/international competitions are composites
- Can be used as a creative tool
- Can use composite images to:
  - Put people in better backgrounds
  - Improve high dynamic range by blending two different exposures of same image
  - Put in a “better” sky to enhance image
  - Or whatever your creative imagination thinks of

COMPOSITE IMAGES

- Open two (or more)source images - minimise each for easier viewing
- Make rough selection of element to be copied
- Copy and paste, or drag and drop, the selection into background layer
- Place roughly in right place and resize to suit (edit>transform>scale and hold shift key to keep proportions constant)
- Can move new layer around using move tool
- Create layer mask
  - Click on mask and choose brush (adjust size/softness as necessary)
  - Use black/white brush to isolate figure by painting around edge
  - Use opacity/flow to soften edges or difficult areas like hair
- Inspect closely at high magnification. Adjust mask further if necessary. Can also add shadows (see David Eaves notes)

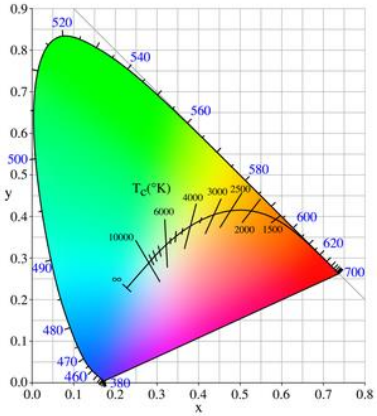
Note - ensure direction of light is similar to background image.
Check shadows if bright

Colour Profiling

ACCURATE COLOUR OUTPUT REQUIRES CORRECT PROFILES

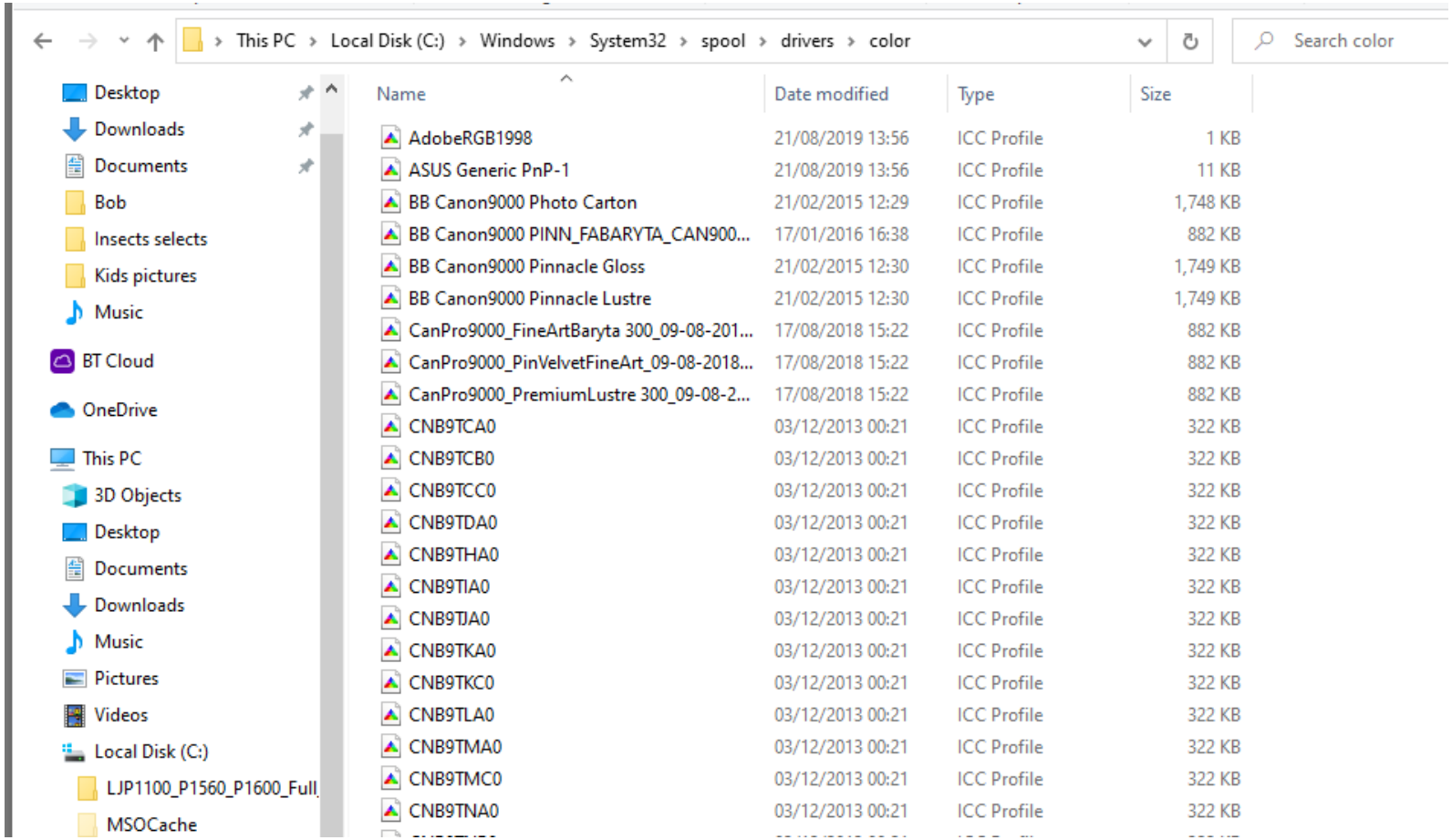
- The underlying basis of colour profiling is very complex, but in practice is easy to manage
- Each piece of kit can reproduce colour slightly differently
- Ideally camera, monitor, printer and each paper type, and projector should be colour calibrated so that they match

- Thus minimum colour matching necessary
  - Monitor
    - Borrow SPS calibration equipment
    - Make sure monitor position and lighting good
  - Printer/paper
    - Can usually get free “standard” profiles
    - Better to use specialist service



- Make sure the profiles are set up properly in your software and changed when you use different paper

WHAT ARE ICC PROFILES



COLOUR ICC PROFILES

Monitor profile sets "standard" colour reproduction

(but will be influenced by lighting and monitor position)

Print profile 1

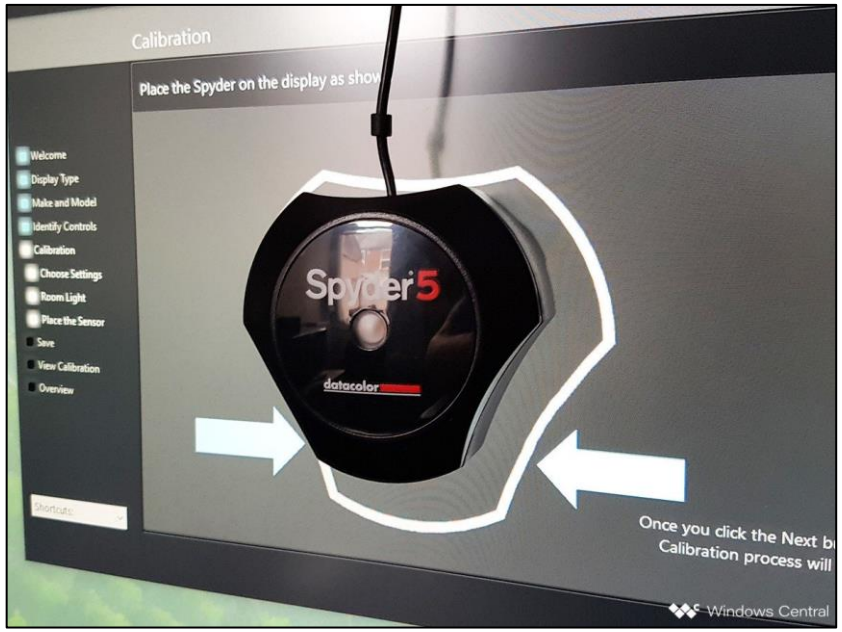
Print profile "matches" monitor colour to printer/paper combination

Print profile 2

Projector profile

COLOUR PROFILING SCREEN

- Spyder profiling gadget available to borrow for members
- Install software and run following on screen instructions
- Creates accurate colour profile for screen
- Make sure that lighting in room is optimum and use same conditions each time



COLOUR IMAGE OUTPUT

- Each output format has different requirements

High quality jpegs or TIFFS	→ Adobe RGB →	Large prints for competition or display
Jpegs at screen resolution	→ s-RGB →	Projected image/slide show

- For printing most important that you use the correct settings for the printer and paper profile
  - Make sure that the right dialogue box is ticked for the printer software to manage colour
  - Use the same paper settings as when the paper profile was prepared
  - Use Adobe RGB colour space

General questions and discussion ?