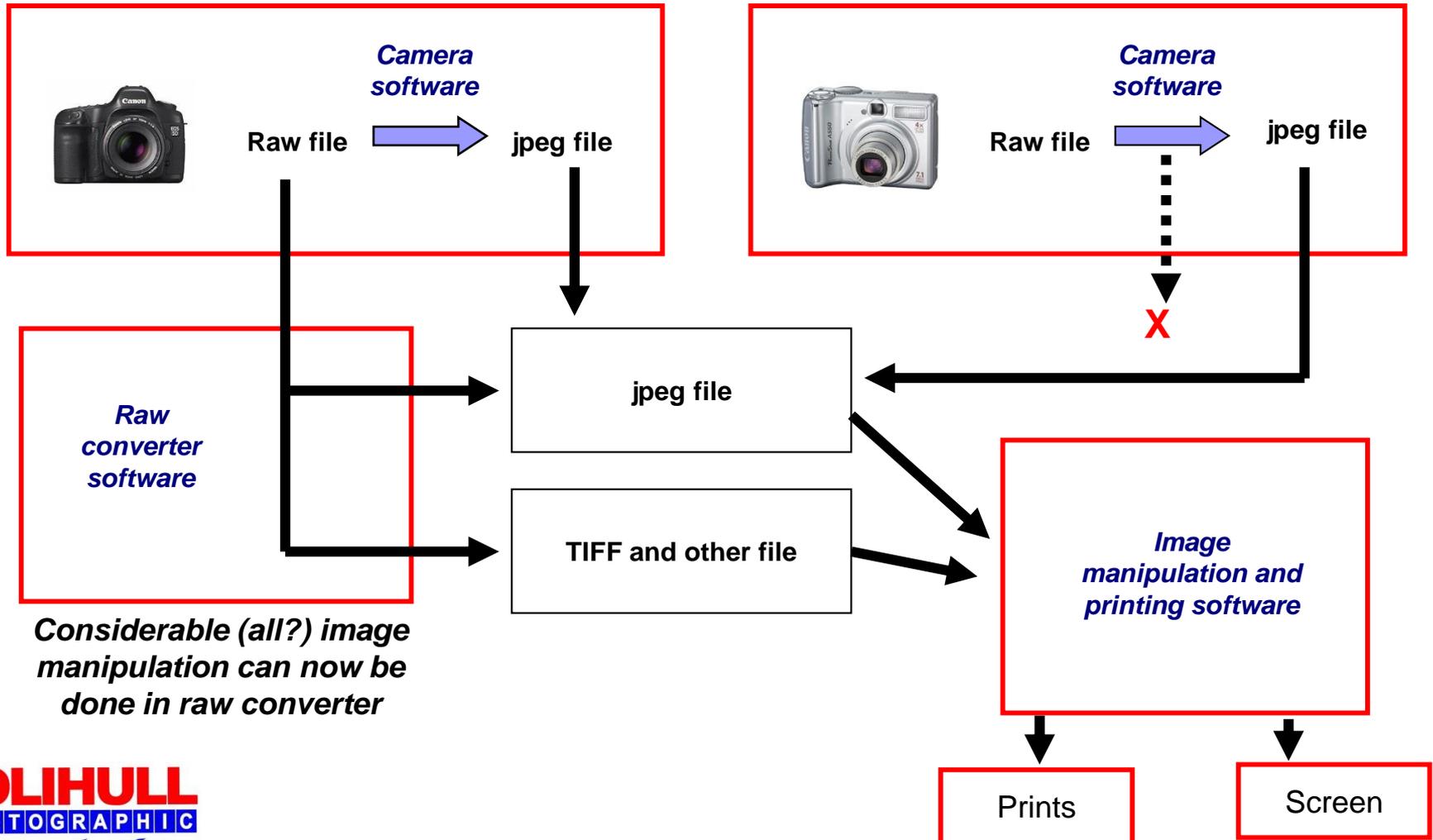


Optimised digital post production

Bob Breach

FILE TYPES AND POST PRODUCTION

Always use the largest file size your camera can create



WHY RAW- a digital negative

■ Benefits

- Better quality with no image degradation
- Better control over image e.g. shadow and highlight detail
- Easier image enhancements
- Flexibility to adjust image settings post capture

■ Disbenefits

- Write time to card
- File size
- Extra processing step

Most professional digital photographers use raw unless fast processing and transmission needed for press or similar

IN- CAMERA JPEG ADJUSTMENT

For those that want to shoot jpegs:

- Many cameras allow you to define the way that the raw image is processed
 - E.g. Colour/saturation/sharpness etc.
- Sometimes called “styles” or equivalent
- Effectively you provide instructions to camera for internal processing of raw image to output jpegs in different ways

But much better to control each image the way you want to

OPTIMISED WORKFLOW

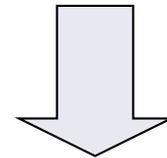
- Any activity involves a series of processes with inputs and outputs - workflow
- Workflow and process analysis used a lot in business to improve quality and efficiency
- Analyse workflow to see where delays or quality can be impacted
- Photography is no different
- Improving your photographic workflow can
 - Reduce wasted effort
 - Improve image quality
 - Allow more time for creating images

BE CLEAR WHAT YOU WANT FROM YOUR WORKFLOW

- Speed?
- Quality?
- Low cost?
- Simplicity?



Analyse your existing workflow and equipment to obtain the process that is right for you



Work out the rate limiting step to see where improvements to process or equipment give you the best return

Image uploading,
storage and retrieval

BACK UP, BACK UP

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

- In the field have plenty of cards, but for safety
 - Back up onto portable hard drive (s)
 - Or to a laptop
- Regularly back up at home
 - To cloud and/or external hard drive(s)
 - Ideally have at least one drive kept in a different place
- 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 of images
 - Power of computer etc.
 - Preferred workflow
- There are a number of commercial programmes for image management
- My personal preference is a simple file storage arrangement- but you must decide

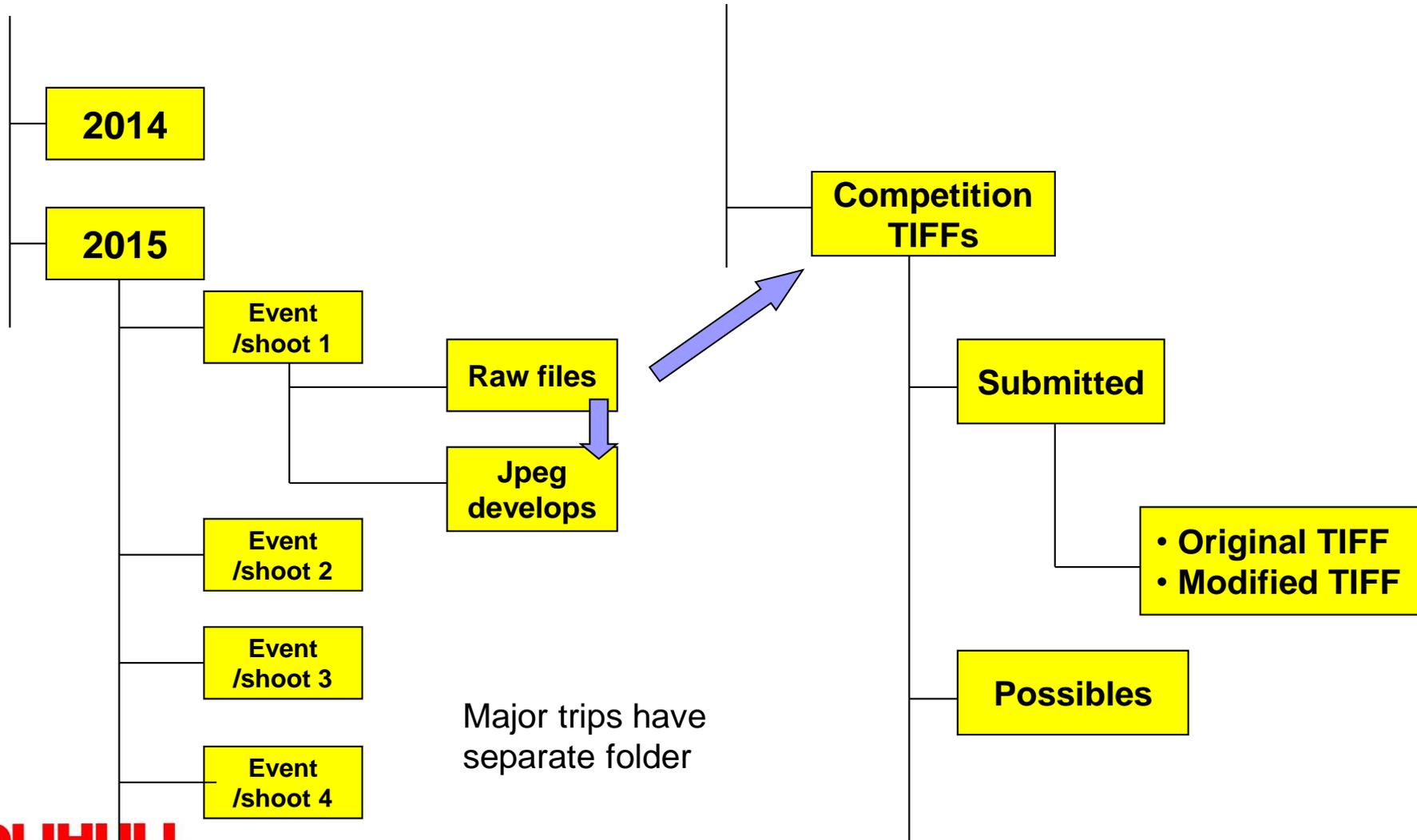
The notes from John William's workshop give lots of information about image storage, tagging and retrieval

INITIAL IMAGE SORTING AND PROCESSING

■ My raw file workflow

- Examine in raw viewer
- Delete rubbish pictures
- Tag or rate picture (range 1-5)
- Process best in raw converter
 - Output majority as medium resolution jpegs mostly without any further image manipulation in PS
 - Additionally output best images for competition as TIFFS into separate folder
- Further image manipulation in PS if necessary

MY STORAGE



Basic post production

BASICS OF POST PRODUCTION

- Can use either raw or jpeg files - but raw better:
 - General editing software e.g. Lightroom, Adobe Elements or CS (more recent versions include raw converter)
 - Specialist raw converter e.g. Nikon NX, Canon Raw, Capture One
- Develop your own workflow so it becomes second nature
 - Same basic approach for all images
 - But may have some differences depending on type of output required

TYPICAL POST PRODUCTION SEQUENCE

Always think about image composition (see separate notes)

1. Crop and (if necessary rotate/flip) image to **improve composition** –
(Note the tighter the crop the lower the quality)
2. Adjust **basic exposure**, contrast, brightness
3. Use levels and curves or clarity/vibrance if necessary to either add **balance or punch** or alternatively **soften an image**
4. Adjust or remove **highlights** to avoid distracting bright areas and where necessary ensure adequate **shadow** detail
5. Adjust **saturation** up or down as necessary to adjust **depth of colour**
6. Adjust **colour temp/colour tone** if required
7. **Mono** conversion if required
8. Minor cloning/spot removal to **remove distracting elements**
9. **Darkening corners (vignette)** if necessary to “hold” picture
10. Final sharpening and **preparation for image output**

Global adjustments

(affects all pixels to the same extent)

Or local adjustments

(affects only selected pixels identified in different layers)

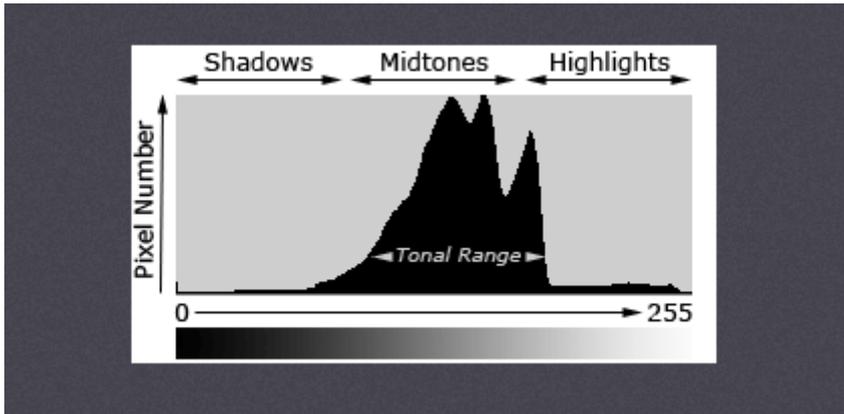
More complex techniques (covered in other workshops)

e.g. Moving pixels around through cloning or merging elements from different images, filters, specialist software etc.

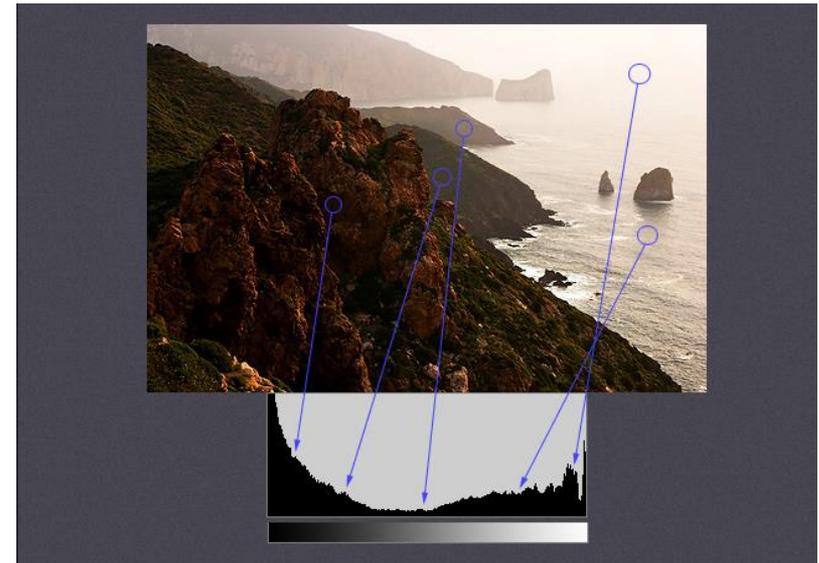
CROPPING AND BASIC CORRECTIONS

- Make sure horizon is **straight**
- Crop image to **improve composition**
 - Note the tighter the crop the lower the quality
 - Think about best place for the main subject (rule of thirds?)
 - Where the horizon should be (not centre of image?) or do you need the sky at all?
 - Will image rotation help?
 - Would the image be better reversed (assuming no writing)
- Adjust **basic exposure** so that overall not too bright or dark (*unless this is the effect required*)
 - Use Levels/Brightness in PS or “exposure” in raw
 - But see also “adding punch” section

EXPOSURE/BRIGHTNESS/LEVELS



- Each pixel has a brightness level from 0 (pure black) to 255 (pure white)
- The histogram plots the number of pixels in each brightness value
 - Exposure slider changes distribution of all pixels
 - Brightness is similar but can have different effects
 - Levels allow you to change histogram shape to improve contrast and tonal range



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

POST CAPTURE RAW 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.

Before

After

HIGHLIGHTS AND SHADOWS

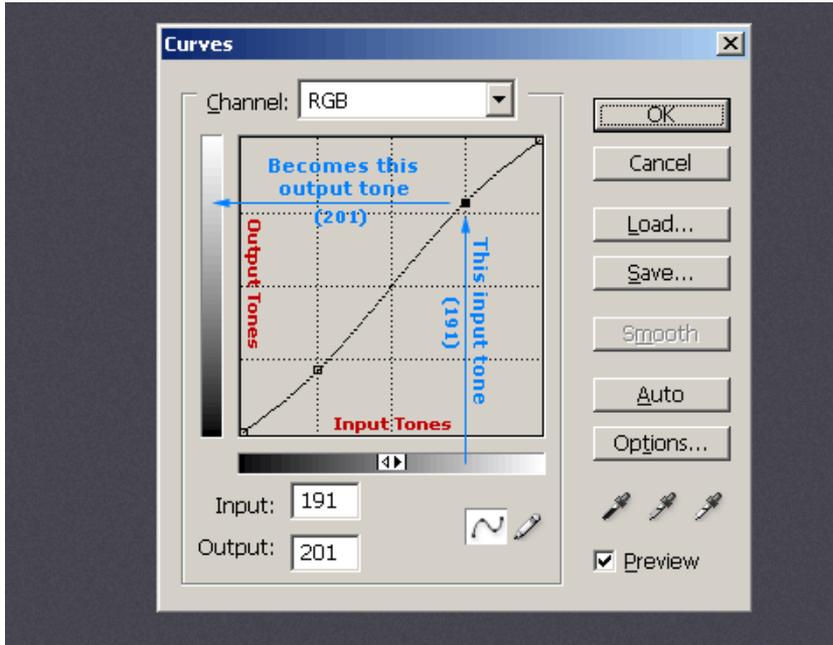
- Need to avoid
 - Completely burnt out areas(unless intentional)
 - Bright areas that take the eye away from the main subject, particularly at the edge
 - Blocked out shadow areas (i.e. solid black) again unless intentional silhouette effect
- Use:
 - Highlight/shadow tool in raw
 - Masked layer with less exposure
 - Clone out highlight areas (see later)
 - Dodge and burn tool
- Sometimes helps to add small dark vignette to help focus on main subject

ADDING PUNCH

Check the histogram to see how the image can be enhanced through

- Levels to:
 - Use whole range of tones from black to white
 - Modify mid tones
- Curves (*not in all software*) or layers/layer masks to:
 - Selectively brighten or darken certain tones within image
 - Add contrast with S curve

CURVES



The levels tool only allows changes to:

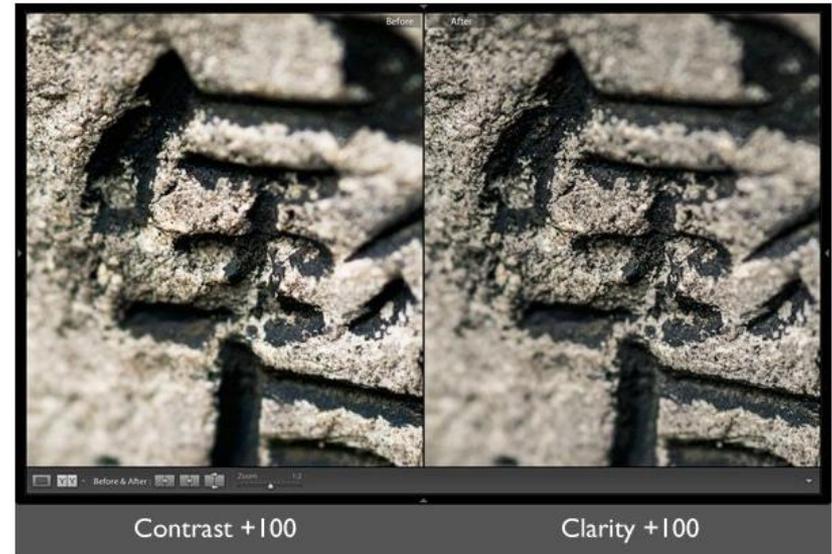
- Black point
- White point
- Mid tone (grey)

The curves tool allows you to selectively brighten or darken any particular pixel brightness value

Can adjust tonality of all colours (RGB) or selective colour channels

CONTRAST AND CLARITY

- Contrast darkens the shadow areas and brightens the highlights
- Clarity is a more subtle increase in micro-contrast by working more on mid tonal values
- Both can increase drama and mood and be a creative tool at extreme values
- Negative clarity can sometimes soften an image



Clarity tool can bring out texture better than contrast

SATURATION

- Saturation changes the colour intensity
- Use to change the mood of an image
- At zero the image is effectively mono (grey tones only)
- At maximum setting the image has extremely strong colours

Note that sometimes desaturation can create a different mood in the image

COLOUR TEMPERATURE & WHITE BALANCE

- The colour temperature of the image reflects the warmth or coolness
- Outside varies with time of day/cloud cover
- Inside depends on type of lighting
- Camera can be adjusted for different white balance settings but can be adjusted later in raw converter



COLOUR/MONO CONVERSION ?

- If a colour image - would it help to change colour temp (*raw only*) or modify hue to remove colour cast?
- Would the image look better in mono?
 - If so use B/W converter in PS or channel mixer
 - Adjust sliders to modify the lightness of the different colour channels

REMOVING DISTRACTIONS

- Use clone tool to remove small distracting elements or dust spots
- Larger areas can be covered by cutting and pasting a new layer from another part of the image

Care – Cloning not allowed in most Nature competitions

FINISHING TOUCHES

- Use sharpening if necessary (but sparingly)
- Raw can be converted into various outputs from same raw file
- For print
 - Decide on which paper is best for image
 - Make sure you use the correct colour profile
 - Make sure the image is resized properly
 - Do a small test print before the final version
- For DPI
 - Make sure that the image is in sRGB colour space
 - Add border if required
 - Resize to correct dimensions (1400x1050 pixels)
 - Fill "spare" area in canvas using black

TIFF v JPEG

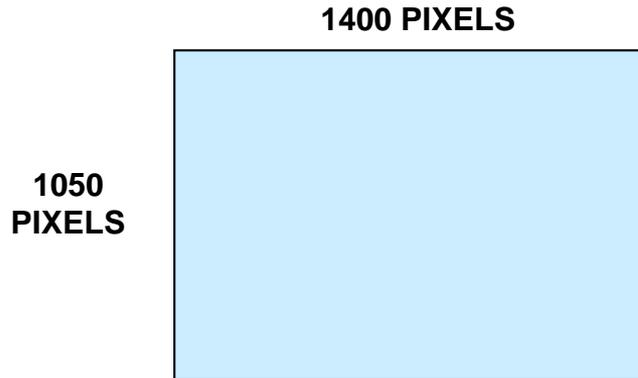
■ TIFF

- Better quality with no image degradation
- Larger files
- Choice of 8bit or 16 bit
 - 16 bit much better (65000 grey tones compared to 256)
 - Not all Photoshop filters work with full 16bit TIFF
- Ideal for
 - larger quality prints
 - competitions or commercial purposes
 - Where lots of adjustment planned

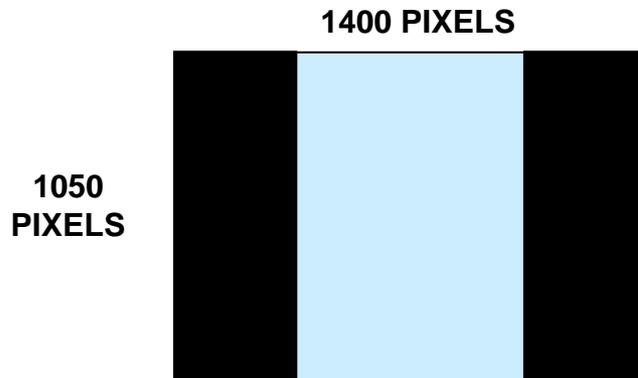
■ JPEG

- Smaller file for which size can be varied
- Quality degrades the more manipulation that takes place
- Ideal for
 - Smaller prints
 - Web
 - Slide shows

PIXELS FOR PROJECTION (4x3 SCREEN)



- Full frame images
 - Image/image size/pixel dimensions



- Cropped images
 - Set background to black
 - Set image size as above using maximum dimension first eg 768 for portrait
 - Image/canvas size/size/pixel dimensions



When you think you have finished

Put the image aside for a few days and
then come back and look at it again
with a critical eye



NOW IT'S YOUR TURN