

raw photo processing

digital:

Moving from film to digital data has given us significant advantages in photography. We get viewable images instantly, send copies quickly to others and have it all a lot cheaper. We can also alter them.

<file>.jpeg:

The images from our camera, phone or tablet are mostly *.jpg* which we can edit on Gimp. We rotate, crop, expand and deform. We can alter white balance, brightness, contrast, shadow and colour levels. But how do we get these electronic images?

raw:

Firstly, our camera accurately captures the light in the usual way (lens adjustment, shutter timing and aperture settings) all automated (with lots of options).

Secondly, holding a vast amount of digital information in *raw file* format, the machine executes complex algorithms, retaining necessary bits, while processing and compressing data into a *.jpg* - our beautiful picture. Within a second or so, it also discards the 10 times larger raw material - 8,10,12 Megapixels.

<file>.CR2

Most modern digital SLR (single lens reflex) cameras can be set to save the *raw file*. My Canon EOS will save it as *IMG_0xx.CR2*. Other manufacturers have their particular formats. Mine can also save a large *IMG_0xx .jpg* with it. This gives me enough photo storage for a good holiday trip.

On my computer out in the field, or back at home afterwards, I fiddle (recompose) each photo working with the *raw file*. This places a much larger colour palette for my use, than a compressed *.jpg* (using Gimp).

Why (fiddle the record)?

There were times when I messed up. My Wilpena Pound shot was snapped into the sun from the only angle available to me. Resetting the contrast and white balance gave me a pleasing result. I made another shot more interesting when I moved the horizon upwards by cropping.

On my Flinders trip I inadvertently set the camera white balance incorrectly (AWB is best) giving me washed out pictures. With colour adjustment I restored depth and interest.

Weather conditions weren't right. It was overcast, so I added colour to the sky. I compensated for insufficient and too much light. I brought out interesting colours in the mountains. Happily I relived my recent out-of-doors mountains experience. Sunsets can be adjusted to look startling, if they aren't. Digital photography does strange things in artificial light.

I cropped scenic pictures top and bottom, making them panoramic and pulling the observer into the scene. By cutting out a section, I identified the kangaroo I was unable to get close to. I could significantly cut down a *raw image* because of its size without losing resolution.

I become creative with lots of colour to throw around. I make dreamy images, psychedelic images and distort to my heart's content. Alterations can be done to small sections. I can make my own scary underworld. Most travel advertisements have make-overs with colour enrichment. Their waterfall isn't really that good.

I can throw the *raw image* away, but I can't write to (edit) it. My alterations are saved in a side file `<file>.pp3` and then, when I am happy, I export as `<file>.jpg`.

therapee: (The following programs are all available on Linuxmint)

Normal graphics programs will not load *raw images*, but *UFRaw* can be used with Gimp (*gimp-ufraw*) as a plug in to accept `<file>.CR2` and other formats. Or it can also be used standalone.

There is *Darktable* and *Therapee*. I favour the later, because of its layout and two image comparison option. It saves in `.jpg`, `.tiff` and `.png`.

That's it!

We have amazing open-source software. The screen is full of boxes, buttons and selections. Categories include: exposure, detail, color, wavelet, transform - with many choices for adjustment in each. There's so much. It takes a while to find what you want and to know what it does. *White balance* is a key factor in getting things right.

So play around with photos, but work with the ones with the greatest amount of data - (raw).

But you might need another camera.

In the terminal:

```
sudo apt-get update
```

```
sudo apt-get install therapee
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