

Digitisation – “in house”

The process of digitising, saving correctly, applying metadata and managing a digital asset is dependent on a number of factors including “doing it once and doing it right the first time.” Other considerations include:

- allowing adequate time
- the extent of the project / collection
- equipment suited to applying minimum standards - see State Library standards http://www.slq.qld.gov.au/_data/assets/pdf_file/0009/139815/digital_standards_2.pdf
- assessing the materials for handling or fragility,
- cost factor versus significance and value
- technical expertise required and capability

Equipment

Three key pieces of equipment are required for digitisation.

- Digital Camera (DSLR)
Type: DSLR with resolution: 24 mega pixels
Sensor: DX and Lens: 50mm
Saving options - JPEG, TIFF & RAW
RAW is selected initially for processing the image direct from the camera sensor
The addition of a copy stand provides stable support for photographs, books, albums and 3D objects.
- Flatbed Scanner Size A4
Image resolution – minimum 600 pixels per inch (ppi) – 700ppi for flat objects, 2700 ppi for slides
Text based resolution – 300 dpi
24-bit colour
Saved as a TIFF
Scanners are best suited to flat items such as documents and photographs.
- Adequate storage to maintain digital files (see also File Naming – a guide for digital files)

Digital Single Lens Reflex (DSLR) cameras are based on the traditional 35mm film, Single Lens Reflex (SLR) system that utilise a digital sensor instead of film. The image through the lens is projected via a movable mirror to the viewfinder. When the capture is taken, the mirror moves out of the way briefly so that the image through the lens is projected onto the image sensor. The size of the sensor allows a greater amount of detail to be captured. They allow a wide amount of customisation and the lenses can be changed to suit different purposes.



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DSLR cameras usually have two types of sensor, a full frame or cropped. Some manufacturers refer to the full frame as an “FX” while the cropped sensor can also be called a “DX”, “APS-C” or “Micro 4/3”. Full frame sensors are generally better but more expensive. A cropped sensor camera with good resolution generally gives good results.

A 50mm lens gives a reasonably flat image with acceptable depth of field. Smaller lenses (35mm, 24mm, etc.) are wide angle and will distort the image captured. Larger lenses (80mm, 100mm, etc.) are telephoto. They give a flat image, but may limit the ability to focus on close detail.

The image resolution of a scanner is expressed as the number of pixels within an inch (2.54cm) that it is capable of producing. However, many devices have an optical and an interpolated maximum resolution. Optical is the maximum or true resolution of the scanning hardware. Interpolated is the ability of the scanning software to build in extra pixels artificially. Therefore, optical resolution is the only figure that should be looked at when deciding on equipment.

Pixels per inch (ppi) are the number of individual pixels within each inch (2.54 cm) that the scanner is capable of creating to form the digital image. The more pixels, the greater the resolution and the better the clarity and detail in the scan. Some manufacturers use the term dots per inch (dpi). While dpi is specifically a printing resolution, when used to express a scanner's capability, it is referring to the pixels per inch (ppi).

A **Megapixel** is equivalent to 1 million pixels. Most digital cameras will have a resolution expressed in Megapixels calculated by the size of the sensor and the number of pixels within the sensor. A camera sensor 6000 pixels wide by 4000 pixels high (6000 x 4000) = 24 million or 24 megapixels.



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