

Caring for your collections: digital images

Digital photography has become an important part of daily life. Many of the photographs we take with digital cameras, mobile phones and iPods will, in time, become historical records. Traditional photographic images can be viewed without the use of any equipment, but digital images require current software and hardware to remain accessible and usable. Often files are left on unstable portable devices such as memory cards and CDs. Prints generated from digital files are commonly printed on printers using inks and papers that fade and discolour rapidly.

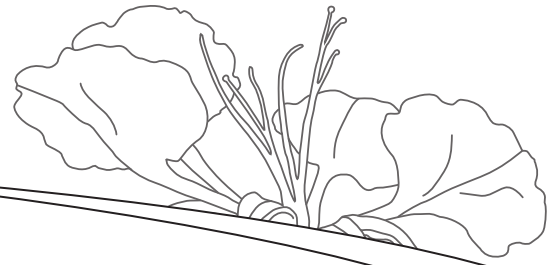
We can minimise the potential risks by following a number of simple steps, some of which are outlined below.

Preserving the digital file

- As digital photography relies on specific hardware and software, it is important to migrate digital files regularly to keep up to date with the latest versions. If this is not done, obsolescence of both hardware and software will occur.
- Promptly download image files from CDs, memory sticks, memory cards, iPods and mobile phones. These devices are not suitable for long term storage as they are vulnerable to damage and content can be lost easily.
- Be selective about which images are worth saving. Some may only be needed for a short time, while others may have long term importance.
- Create “master” copies of images you want to keep permanently and save as an uncompressed file format (e.g. TIFF). If memory capacity is limited, store as a JPEG with minimal compression.
- The “master” copies should be saved on an external hard drive as well as your internal hard drive. Buy an external drive with as much memory capacity as you can afford as digital images take up a lot of memory.
- Set up a backup system so your digital files are copied routinely.
- Label files in a way that is easily recognisable, consistent and meaningful. You could include the location, name of the people in the shot and the date.

Preserving the print

- Creating an archival-quality print is considered to be the best way to preserve a digital image. This means selecting printing inks and paper that are chemically stable and will not deteriorate quickly. As there is an overwhelming array of inks and papers of varying quality available, it is helpful to have a few tips to help you select the most suitable products.
 - Match the paper with the printer. The printer’s manufacturer will recommend specific papers to be used that best suit the ink.
 - If buying a printer, select one that uses pigment-based inks as this type of ink is less likely to fade and discolour than dye-based printers. Do your research before buying. See websites listed below.
 - If you can afford it, invest in printing important images on true photographic paper.
- The way prints are stored and used can greatly affect their long-term stability.
 - Store your prints in a cool, dry environment with good air circulation.
 - Minimise exposure to light to prevent fading. Avoid long-term display if you are unable to print another copy.
 - Place prints in archival boxing to protect the prints from light damage, dust and sudden changes in temperature and humidity.
 - Ideally, prints should be housed vertically in individual sleeves within the box to prevent the prints sticking together.
 - A good paper choice for sleeves is pure cotton cellulose paper, often called “rag” paper in art shops. Polyester (often called “Mylar”) or polypropylene sleeves are the safest plastics to use. Look for enclosures that have passed the “Photographic Activity Test” (PAT) (ISO 18916).
 - Never laminate prints (or any other material) that you wish to keep for a long time as the process can cause irreparable damage as it ages. A process known as encapsulation using polyester sheeting and no adhesive or heat can be used instead (for details please refer to our Infoguide on paper-based collections).



Useful references

Image Permanence Institute: <http://www.imagepermanenceinstitute.org/>
Useful information on digital and traditional print stability and disaster recovery of digital prints. Includes helpful free downloadable leaflets.

Aardenburg Imaging & Archives: <http://www.aardenburg-imaging.com/>
Technical website that includes results of accelerated ageing tests on printer inks and papers.

Jürgens, Martin, *The Digital Print: Identification and Preservation*, Oxford University Press, 2009.

Wilhelm Imaging Research: <http://www.wilhelm-research.com/>
Technical website that includes results of accelerated ageing tests on printer inks and papers.

Standards

ISO 18916 Imaging materials – Processed imaging materials – Photographic activity test for enclosure materials

ISO 18902 Imaging materials – Processed photographic films, plates and papers – Filing enclosures and storage containers

ISO 18927 Imaging materials – Recordable compact disc systems – Method for estimating the life expectancy based on the effects of temperature and relative humidity

ISO 18921 Imaging materials – Compact discs (CD-ROM) – Method for estimating the life expectancy based on the effects of temperature and relative humidity

The procedures described here have been used by the State Library in the care of its collections and are considered suitable by the Library as described; however, the Library will not be responsible for damage to your collections should damage result from the use of these procedures

Need further information? please contact:

Conservation Unit, Collection Preservation
State Library of Queensland,
PO Box 3488
South Brisbane
t (07) 3840 7779
f (07) 3842 9060
e conservation@slq.qld.gov.au
w www.slq.qld.gov.au