



SLIDE 1

- Digital preservation is a series of processes necessary to ensure continued access to digital materials for as long as they are needed.



Here's a video that you'll relate to

- These examples show how important this is to everyone including you as we all live in a digital world.



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Born digital

- Files that are created natively on electronic devices, like computers, smart phones, digital cameras etc.

Digitized

- Analog objects that are transferred to a digital format through conversion processes.

Let's look at you personally.

- How many of you have digital photos?
- Are these born or digitized?
- Throughout this presentation we'll focus on common files you have and what digital preservation means to you.



SLIDE 3



Snow white et al

Terms

Obsolescence – technology that's now out-of-date as a new version has been released and may not be 'backwardly compatible'

Storage media – any technology used to place, keep, and retrieve data.

Inaccessible files – file data can become corrupt which can cause inaccessibility. Obsolescence can also cause inaccessibility.

Replication – multiple copies of files and store on multiple devices

Migration – converting files into robust formats

Emulation – keeps data in original format and recreate operating environment.

Metadata schema – a labeling, tagging or coding system used for recording cataloging information or structuring descriptive records.

Data mining – is sifting through large amounts of data for useful information.

Proprietary file format – can only be opened by compatible programs like Microsoft (.doc).

Open source – where the source code's freely available for anyone to view, edit, and redistribute

XML wrapper of metadata – is data that precedes or frames the main data so it can run successfully.



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- Identify: What do you want to save? Locate the files and identify EVERYTHING.
- Decide: What's most important. It's not practical to save everything.
- Organise: Content and file formats to save in.
- Save copies: Save in different places.
- Create migration strategy: Helps maintain your files and identify when upgrades are necessary.
- Review content cycle: Do you still need backup? Is the backups okay or need refreshing?

Let's look at your photo and video files.

- Think
 - Where your digital photos/videos stored now?
 - Do you need ALL copies of the photos of your new car or can you pick just one?
 - Where will you save them?



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- It's important to keep files in non-proprietary formats.
- If you file-share with others it's wise to choose file formats that are supported by a wide range of software across a variety of platforms.

Back to your photo and video files:

- What file format does your video camera save? Does it save as a .vod? When you share the video of your new car with anyone they may not be able to view it as it's not a file format that works on all devices. Save as an mp4 then it's interoperable.



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- Online storage: materials stored on file servers or other hardware that's immediately accessible to the user via PC's or smart devices with internet connection. Free storage, sufficient for personal files such as your videos or photos, is available eg Dropbox.
- Offline and near-line storage: materials stored on devices not continuously connected to the computer network or internet. With your photos or videos save locally and on a backup device, then move that to another place for safe storage.
- Removable media: USB drives, discs are removed from the network and stored locally for availability. Perfect for backing up your photos and videos, but are also portable.

Tips for storage

- Conduct regular integrity checks of your digital resources to avoid deterioration or data loss.
- Refresh your storage devices because of obsolescence.
- Store storage devices in appropriate locations, such as somewhere low in dust and humidity with minimal temperature variation, not on top of the fridge or microwave.

Standards around digital preservation

- The OAIS (Open Archival Information System reference model), is an international standard in digital preservation. It provides a common framework and language while outlining the functional requirements of a digital archive system.



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- **Metadata** – is data about data.
- **Checksums** are the digital 'fingerprint' of the file. If files become corrupted the 'fingerprint' will change.

With your photos or videos you can access free checksum software to test them.

KRyLack is a free tool that you simply drag and drop files into for checking.



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- **Think and plan before you start.**
 - What users will access and use the data? This will help identify the kind of metadata and content needed.

Schemas

- A Metadata schema is a plan for your metadata, which describes how your metadata is set up.
 - dates;
 - places;
 - common file formats;
 - processes.
- PREMIS data dictionary schema is a simple data model based on five area's key of digital preservation.
 - Intellectual Entity
 - Object
 - Event
 - Agent
 - Rights
- Dublin Core's an extremely generic schema. Dublin Core's at least better than having no metadata at all.

Let's look at your photos and how Adobe Photoshop handles metadata.

- You can see when you create an image there's a large amount of fields you can complete. This information is stored with the image for its digital life.



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National Library of New Zealand's metadata extraction tool extracts metadata from digital files. It examines file formats and extracts the preservation data, with the output being an xml format.

There are other automated extraction tools which you can search for and are simple to use. One free tool is DROID – UK National Archives



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Internet Archive project



- Who would like to see the Wayback machine in action?



Domesday Book



- One of the best known digital archaeology projects was the recovery of the 1986 Digital Domesday Book. It took a considerable effort by an international group to recover data and create a package that runs on modern computers and emulates the look and feel of the original.



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- Institutional support. Making sure everyone's singing from the same page.
- Human intervention. Keep offsite backups, if someone does something wrong you can restore a previous version.
- File corruption. Data files are fragile and things happen. Backups are your friend.
- Computer failure. Save to a 'network' if you can rather than a desktop – networks are backed up. On your computer backup to an external device or the cloud, to keep your photos and video's safe.
- Misplaced metadata. Make sure your metadata travels with files you are saving, for example an image can have a wealth of metadata embedded into it and stored.
- Natural disaster. Store backup's offsite.
- Format obsolescence. Limit file types you're storing, use open source formats, create a migration strategy.



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If you follow these steps your videos, photos or any other files will be safe and will hopefully last the test of time.

- Any questions?