Preserving your Digital Memories

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Lá Domhanda um chaomhnú digiteach
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The 'Bit List' of Digitally Endangered Species

- Born Digital Photographs and Video shared via Social Media or Uploaded to Cloud Services
- Family or Personal Records
- Born Digital Images Held Offline on Portable Storage Devices

https://www.dpconline.org/our-work/bit-list
Digital Preservation refers to the series of managed activities necessary to ensure continued access to digital materials for as long as necessary.
“... the digital record we save is the memory we’ll pass down to the next generations, so it’s worth it to take the time and make sure we give them something of value, and that we have something to give them at all.”
Threats

- Files are lost or deleted
- Natural/human disasters
  - Theft, fires etc.
  - Attacks on service providers
- Service providers go out of business
- Rapid evolution of technology
  - Obsolescence
  - Bit rot
5 stages

1. Find
2. Select
3. Organise
4. Store
5. Manage

Illustration by Jørgen Stamp [digitalbevaring.dk](http://digitalbevaring.dk) CC BY 2.5 Denmark

Adapted from [Personal Digital Archiving Strategies, MIT Libraries Institute Archives & Special Collections](http://mitlibraries.mit.edu/.../.../...)
1. Find

www.digitalbevaring.dk
Digital ‘stuff’

- Financial spreadsheets
- Bank statements
- Tax records
- Professional CV or Portfolio
- Emails
- Whatsapp messages
- Family photos
- Photos on Instagram or Facebook
- Wedding video
- Digitized (scanned) analogue photos
- ...

https://www.dpconline.org/our-work/bit-list/critically-endangered
Google (Takeout): Download Your Data

Twitter (Settings – Account – Your Twitter Data): Download your Twitter Data

Facebook (Settings – Your Facebook Information): Download Your Information

InstaPort (free download): Download Your Data

Whatsapp: Back-up to Google Drive
“The meaning of digital files can change over time. The text message that initially seems inconsequential may take on vital significance if it ends up being the last communication from a loved one.”

From the DPC Technology Watch Report Personal Digital Archiving by Gabriela Redwine
Where are your photos & videos?

- Personal computers
- External hard drives
- USB drives
- Mobile phones
- Digital cameras
- SD cards
- Cloud service platforms
- Social media
- Websites
- Work computer

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Identify and download/gather content to a working space.
Some Guiding Principles

- Make an inventory of what you have and where
- Archiving is not just keeping, it’s also deleting
- Printing is not the solution
- ‘Archiving’ an email means ‘hiding’ – it’s not the same thing
- You really do have to do all those pesky updates. It’s a security issue.
- Act now!
2. Select
Decide what’s important

- Pick files that are especially unique or irreplaceable
- Pick files that you have created or own
- You can pick a few files or many files
- If there are multiple versions, save the one with the highest quality

Adapted from ‘Preserving Your Digital Memories’ [http://digitalpreservation.gov/personalarchiving/](http://digitalpreservation.gov/personalarchiving/)
File formats

- Open: greatest flexibility for future use
- Non-proprietary: less risk of format owner going out of business or no longer supporting the format
  - Lower risk of getting trapped in cycle of purchasing updated software
- Uncompressed: once files are compressed you lose information
- Ubiquitous: formats that have been around for a while and are commonly used
File formats

- Update files to newer file types
- ... or to a more stable format
# Recommended File Formats

<table>
<thead>
<tr>
<th>Data type</th>
<th>Preferred format</th>
<th>Acceptable format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text documents</td>
<td>PDF/A</td>
<td>OpenDocument Text (.odt)</td>
</tr>
<tr>
<td></td>
<td>Plain text (.txt)</td>
<td>MS Word (.doc, .docx)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rich Text File (.rtf)</td>
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<tr>
<td></td>
<td></td>
<td>PDF (.pdf)</td>
</tr>
<tr>
<td>Images</td>
<td>JPEG (.jpg, .jpeg)</td>
<td>Photoshop (.psd)</td>
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<tr>
<td></td>
<td>TIFF (.tif, .tiff)</td>
<td>RAW (.raw, .dng)</td>
</tr>
<tr>
<td>Video</td>
<td>MPEG-2 (.mpg, .mpeg, ...)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MPEG-4 H264 (.mp4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lossless AVI (.avi)</td>
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<tr>
<td></td>
<td>QuickTime (.mov)</td>
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<tr>
<td>Audio</td>
<td>Broadcast WAV (.wav)</td>
<td>MP3 AAC (.mp3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AIFF (.aif, .aiff)</td>
</tr>
</tbody>
</table>
3. Organise

- Organising your files includes a number of steps
  - File naming
  - Directory/folder structure
  - Tagging or embedding information (metadata)
File names

• Use unique & descriptive filenames
• Be concise but informative
• Avoid spaces & special characters
  – Use dashes and underscores
• Include a date (YYYY-MM-DD)
Folder structure

- Meaningful to you but easy to understand – could someone else find their way around?
- Short, descriptive folder names
- Organise by type of file, photos, video etc.
- Organise by year
Metadata

- Date
- Creator
- Description identifying people, events or locations

- Some of this will be automatically embedded in the files already.

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Embedded Metadata

• Descriptive metadata might include:
  – Headers and footers in documents that list dates of creation, version context, creator

• Add tags (embedded metadata) using Properties (Windows) or Get Info (Mac).
  – Adobe Bridge
  – Photoshop
  – Apple iPhoto
  – Window’s Photo Gallery
External Metadata

• Write a brief description of the directory structure and the documents in each folder

• A document that describes your archiving plan and organization methods

Adapted from Personal Digital Archiving Strategies, MIT Libraries Institute Archives & Special Collections
Adapted from 'Preserving Your Digital Memories’ http://digitalpreservation.gov/personalarchiving/
4. Store

- Redundancy is good!
- Make at least **two copies** of your archive
- Ideally make **three copies** of your archive

1. One copy on current computer
2. Second on an external hard drive in secure location
3. Third on an external hard drive in different locations that are as physically far apart as practical

Illustration by Jørgen Stamp [digitalbevaring.dk](http://digitalbevaring.dk) CC BY 2.5 Denmark
Storage options

• Hard disk drive
  – Inexpensive per amount of storage
  – Requires manual copying
  – Moving parts susceptible to failure

• Solid state drives (Flash drives)
  – More expensive per amount of storage
  – Easier to transport
  – Variable size
  – More reliable than spinning disks
Storage options

• Cloud storage (Google Drive, Dropbox etc.)
  – Cost may vary
  – May offer automatic backup
  – Read the Terms of Service
  – Dependent on third party (who may go out of business)

• Cloud storage is an acceptable option, but shouldn’t be used for sensitive information or as the only storage location.

• Do not use CDs or DVDs
  – Short shelf life, easily damaged, small amount of storage
5. Manage

- Review the content of your archive
  - Do you still need the files
  - What new files do you need to add?

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5. Manage

- Digital content is safest when it gets used
- Check your files at least once a year to make sure you can access & read them
- Replace hardware every five years or when necessary to avoid data loss
- Stagger replacement
- Update storage media as technology changes (zip disks → DVD → External Hard Drives).
Useful links

• Research Data Management LibGuide: http://libguides.ucd.ie/data


THANK YOU

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http://libguides.ucd.ie/data