Preserving your Digital Memories

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Digital Preservation refers to the series of managed activities necessary to ensure continued access to digital materials for as long as necessary.
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

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Adapted from Personal Digital Archiving Strategies, MIT Libraries Institute Archives & Special Collections
1. Find

www.digitalbevaring.dk
Photos?

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

https://www.dpconline.org/our-work/bit-list/critically-endangered
Other ‘stuff’

- Email
  - Gmail
- Social media
  - Facebook
  - Twitter
  - Instagram
- Blog
- Phone messages
  - WhatsApp
- Cloud platforms
  - Google Drive, etc.

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Email

- Saving an e-mail involves keeping it separate from your e-mail program.
- If saving a few messages, you can use the “save as” command in your e-mail browser or software program to export them as individual files.
- If saving many e-mails, investigate automatically exporting them using the email program.
- Save attachments that are part of the selected messages.

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

- CVs
- School papers
- Financial spreadsheets
- Presentation slides
- Other digital documents
- Digital copies of original hard copy documents such as letters, maps, family histories

Adapted from ‘Preserving Your Digital Memories’ http://digitalpreservation.gov/personalarchiving/
# Tips for downloading content

<table>
<thead>
<tr>
<th>Tool/Guide name</th>
<th>What is it?</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Take Out</td>
<td>Create an archive with your data from Google products.</td>
<td><a href="https://www.google.com/settings/takeout">https://www.google.com/settings/takeout</a></td>
</tr>
<tr>
<td>Facebook Data Download</td>
<td>Includes your Timeline info, posts you have shared, messages, photos and more</td>
<td><a href="https://www.facebook.com/help/131112897028467/">https://www.facebook.com/help/131112897028467/</a></td>
</tr>
<tr>
<td>Download from iCloud</td>
<td>A YouTube video describing how to download all your photos from iCloud to your Windows computer.</td>
<td><a href="https://www.youtube.com/watch?v=crFSYz3zaTE">https://www.youtube.com/watch?v=crFSYz3zaTE</a></td>
</tr>
<tr>
<td>Twitter</td>
<td>Downloading your Twitter archive</td>
<td><a href="https://support.twitter.com/articles/20170160">https://support.twitter.com/articles/20170160</a></td>
</tr>
<tr>
<td>Instaport</td>
<td>Download &amp; save Instagram videos, pictures and posts.</td>
<td><a href="https://vibbi.com/instaport/">https://vibbi.com/instaport/</a></td>
</tr>
<tr>
<td>WhatsApp</td>
<td>Backing WhatsApp messages up to Google Drive</td>
<td><a href="https://faq.whatsapp.com/en/android/28000019/?category=5245251">https://faq.whatsapp.com/en/android/28000019/?category=5245251</a></td>
</tr>
</tbody>
</table>
Identify and download/gather content to a working space.
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

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Preservation Considerations

• What kind of digital formats do I have? Can I open these files?
• Can I access this storage media?
• Are these files accessible, but the format is not widely used anymore?
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
• Uncompressed: once files are compressed you lose information
• Ubiquitous: formats that have been around for a while and are commonly used
# 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>
</tr>
<tr>
<td></td>
<td></td>
<td>PDF (.pdf)</td>
</tr>
<tr>
<td>Images</td>
<td>JPEG (.jpg, .jpeg)</td>
<td>Photoshop (.psd)</td>
</tr>
<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>
<td></td>
</tr>
<tr>
<td></td>
<td>QuickTime (.mov)</td>
<td></td>
</tr>
<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>

http://www.loc.gov/preservation/resources/rfs/index.html
https://digital.ucd.ie/about/#technical_formats
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

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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
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).
“... 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.”
Useful links

Interesting articles

• Modine, Austin. (2009). “Web 0.2: Archivists Save Geocities from Deletion.” The Register
• Flood, Alison (2017), “Seamus Heaney's biographer races to see poet's faxes before they fade.” The Guardian
PS, I just taught you the basics of Research Data Management
THANK YOU

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http://libguides.ucd.ie/data