Digital Preservation Day at the Library: A How-To Guide

Presenters: Lizzy Baus and Sara Ring
Why Digital Preservation Day?

- Estimated 1.3 billion items at risk in U.S. libraries, archives, and museums*
- All these things can harm our physical collections
  - Light
  - Pollution
  - Heat
  - Moisture
- You can educate your community about preservation!

*IMLS Heritage Health Index report, 2005
Speaking of Preservation...
Agenda

- Planning a Preservation Day Event
- Mock Event
  - How we have done it
  - Digital image basics
  - Digital preservation 101
Planning a Preservation Day Event
Hosting Events - Purpose

- Community engagement/relationship building
- Public education opportunity
- All-ages programming (but especially for adults)
- Materials collection – maybe
Hosting Events - Hardware

- Scanners
- Laptops
- Lightbox
- Camera
- Flash drives
- Rulers
- Pencils
- Paper forms

A.R. Miller, Hardware and Cutlery, Minneapolis, Minnesota, 1880-1910
https://reflections.mndigital.org/catalog/mpls:23665
Hosting Events - Our Equipment

- Epson Perfection V850 ProScanner
- Dell Latitude Laptop
- Pelican Case w/foam and lid accessory organizer; case features handles and wheels
- Portable Light Box for 3D items, including lights
Hosting Events - Software

- **Photoshop** or other photo editing program
- If you’re collecting metadata
  - Excel, Google Sheets, Word or another text editor
Hosting Events - Metadata

- Collection techniques/best practices (e.g. Mariah Carver Smith, not Grandma)
- Focus on the stories - this will help tease out information
- Occasions might recall locations
Hosting Events - Collaborations

- Libraries
- Historical societies
- Local museums
- Genealogy/ancestry groups

Deutsche Tisch, Northfield, Minnesota, 1892
https://reflections.mndigital.org/catalog/ccn:240
Hosting Events - Education Topics

- Family history – very popular
- Local history
- Genealogical research
- Preservation – physical and/or digital
Hosting Events - Marketing

- Who is your audience?
- Flyers
- Local Newspaper
- Local genealogy groups
- Social media
Mock Event: Check In Station
Mock Event: Check In Station

- Explain the process to patron
- Ask for details
  - Contact information
  - Brief titles of images/docs
  - If they wish to donate
- Assign code to use at scanning station for file naming
- Answer questions
Check in Station

Role play:
Greta has come to our event with some pictures to scan. Lizzy welcomes her and gets her checked in.
**Digital Image Basics**

**Pixels - the building blocks**

- Picture element = pixel
- Smallest unit of data in a digital image
- Each pixel has exactly one tonal value (black, white, gray, or color)
Digital Image Basics

Resolution - how many blocks

- The level of spatial data captured
- A measure of “density”
  - 300 dots per inch
  - 3000 x 4200 pixels
- DPI – dots per inch
- PPI – pixels per inch
- Pixel Array – # of pixels across both dimensions
Digital Image Basics

Bit Depth - how many colors

- The number of possible shades of gray or color
- Most common bit depths:
  - 1-bit: black and white
  - 8-bit grayscale: 256 shades of gray
  - 8-bit color: 256 shades of color
  - 24-bit RGB*: ~17 million colors, three 8-bit channels

* RGB – Red, Green, Blue is the color model system used in electronic systems and photography to create colors by combining different amounts of red, green, and blue
Digital Image Basics

Common Image File Formats

- TIFF - Tagged Image File Format
- JPEG - Joint Photographic Experts Group
- JPEG 2000 - like TIFF but smaller file size
- GIF - Graphics Interchange Format
- PNG - Portable Network Graphics
- RAW - uncompressed, unprocessed
Standards/ Best Practices

  - Resolution: whatever gives you **3000-5000 pixels** on longest side
  - Bit depth: b&w - **1 bit**
    - grayscale - **8 bit**
    - color - **24 bit**
  - File format: **TIFF**
  - Compression: **none or lossless**

- Specific material considerations
- Other resources
  - Federal Agencies Digital Guidelines Initiative
  - Library of Congress Digital Preservation

**Sample resolutions based on size for Images:**
- 2” x 2” - 1500 dpi
- 3” x 5” - 600 dpi
- 4” x 7” - 450 dpi
- 8” x 10” - 300 dpi
Mock Event: Metadata Station
Mock Event: Metadata Station

What Happens Here?
- We ask for descriptive information (collection metadata)
- We measure the original
Options for Collecting Metadata

<table>
<thead>
<tr>
<th>Location/Organization(s)</th>
<th>Community Scanning Event – [Date]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL INFORMATION:</strong></td>
<td></td>
</tr>
<tr>
<td>Your Name:</td>
<td></td>
</tr>
<tr>
<td>Date of Creation (Date of photograph or the date an item was published):</td>
<td></td>
</tr>
<tr>
<td>Title:</td>
<td></td>
</tr>
<tr>
<td>Creator (author, photographer, etc.):</td>
<td></td>
</tr>
<tr>
<td>Dimensions (in cm):</td>
<td></td>
</tr>
<tr>
<td><strong>FORMAT INFORMATION: What is the item’s physical format?</strong></td>
<td></td>
</tr>
<tr>
<td>IMAGE – PHOTOGRAPH (Circle one):</td>
<td>TEXT – DOCUMENT (Circle one):</td>
</tr>
<tr>
<td>Photograph - Black and White</td>
<td>Photograph - Color</td>
</tr>
<tr>
<td>Studio Portrait (photograph taken at a professional studio)</td>
<td>Booklet/Pamphlet</td>
</tr>
<tr>
<td>Negative – black and white</td>
<td>Negative – color</td>
</tr>
<tr>
<td>Postcard</td>
<td>35 mm slide</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Was this image professionally produced? (Example: Studio portrait or commercial postcard) Circle One: Yes or No</td>
<td>Was this document published? Circle One: Yes or No</td>
</tr>
<tr>
<td>Name of Publisher/Photography Studio:</td>
<td>Name of Publisher:</td>
</tr>
<tr>
<td>Place of Publication/Photography Studio:</td>
<td>Place of Publication:</td>
</tr>
<tr>
<td><strong>SUBJECT INFORMATION: What is depicted, shown or discussed?</strong></td>
<td></td>
</tr>
<tr>
<td>People:</td>
<td>People:</td>
</tr>
<tr>
<td>Businesses, Buildings, Organizations:</td>
<td>Businesses, Buildings, Organizations:</td>
</tr>
<tr>
<td>City:</td>
<td>City:</td>
</tr>
<tr>
<td>County:</td>
<td>County:</td>
</tr>
<tr>
<td>State:</td>
<td>State:</td>
</tr>
<tr>
<td>Natural Features:</td>
<td>Natural Features:</td>
</tr>
<tr>
<td>Historic Event:</td>
<td>Historic Event:</td>
</tr>
</tbody>
</table>

**WRITE A BRIEF DESCRIPTION:**

- Attendees can fill this one out by hand if they wish.
Options for Collecting Metadata

**Metadata Spreadsheet**

- Staff can fill this out and give a copy to the attendee/patron

<table>
<thead>
<tr>
<th>Anoka County Community Scanning Events</th>
<th>Metadata</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 9, 2016</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contributor Name</strong></td>
<td><strong>Item Code</strong></td>
</tr>
<tr>
<td>1 Bernadette</td>
<td>2016.1881.01</td>
</tr>
<tr>
<td>2 Bernadette</td>
<td>2016.1891.02</td>
</tr>
<tr>
<td>3 Bernadette</td>
<td>2016.1891.03</td>
</tr>
<tr>
<td>4 Bernadette</td>
<td>2016.1891.04</td>
</tr>
<tr>
<td>5 Bernadette</td>
<td>2016.1891.05</td>
</tr>
<tr>
<td>6 Bernadette</td>
<td>2016.1891.06</td>
</tr>
<tr>
<td>7 Bernadette</td>
<td>2016.1891.07</td>
</tr>
<tr>
<td>People</td>
<td>Businesses, Buildings, Organizations</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Minneapolis</td>
<td></td>
</tr>
<tr>
<td>Kimball</td>
<td></td>
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<td>Kimball</td>
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<tr>
<td>Minneapolis</td>
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<tr>
<td>Minneapolis</td>
<td></td>
</tr>
</tbody>
</table>
Collecting Metadata

Role play:
Lizzy asks Greta to describe her item. Greta tells Lizzy about who took the picture, where, when, and so on.
Mock Event: Scanning Station
Mock Event: Scanning Station

- Before scanning, estimate size
Mock Event: Scanning Station

Scanning:

Once all the equipment is connected and turned on, open Photoshop from the laptop’s toolbar.

1. Format:
   a. Examine the item to determine the appropriate scanning approach. Documents, photographs and other opaque images are scanned straight on the scanner bed, slides and negatives require additional tools (go to Step 2).

2. Scanning Photos or Documents:
   a. Position the print photograph or document in the upper right corner of the scanning bed, facedown and as straight as possible.
   b. Close the scanner cover.
   c. In Photoshop, go to the File menu, choose Import, then select “Epson Perfection V600/V800.”
   d. Examine the item to choose the appropriate settings.
   e. In the Epson Scan window, check that Mode is set to “Professional.”
   f. From the “Settings” menu choose the preset option that is closest to your item:
      i. Document 8.5”x11”
      ii. Slides
      iii. Color negatives
      iv. B & W negatives
      v. Image 2”x2”
      vi. Image 3”x5”
      vii. Image 4”x6”
      viii. Image 5”x7”
      ix. Image 8”x10”
   g. In the EpsonScan control box, click the “Preview” button.
   h. In the Preview box, use the mouse to drag the scanning frame to the desired size. You want to capture the entire object, but not the scanning bed.
   i. Examine the preview. If it needs to be straightened, adjust the item and click “Preview” again. You can use the Epson controls to rotate the image if necessary.

Refer to our cheat sheet

2” x 2” – 1500 dpi
3” x 5” – 600 dpi
4” x 6” and 5”x7” – 450 dpi
8” x 10” – 300 dpi
Mock Event: Scanning Station

Position the photograph

Close lid
Mock Event: Scanning Station

Open Photoshop, connect to scanner

Choose “Professional Mode” in Epson window
Mock Event: Scanning Station

Choose photo/doc dimensions, select “Preview”

Is it at least 3000 pixels on the longest side?
Mock Event: Scanning Station

Scan if meets 3000 pixel minimum

Edit if needed (rotate, crop, etc)
Mock Event: Scanning Station

- Save as TIFF and JPEG
Digital Preservation 101

Digitization ≠ Preservation

Graphic based on http://www.caps-project.org/cache/DigitalMediaLifeExpectancyAndCare.html
Digital Preservation 101

**Preservation Tips**

**Introduction**

Take action now to preserve your family memories.

Starting a project to organize and preserve your family photographs and other content can be daunting. This brochure contains a few introductory tips to help you preserve your physical photographs and documents. Visit the following website for more information and resources to get you started:

[www.zum.edu/resources](http://www.zum.edu/resources)

Are you thinking about or have you already started a project to scan or digitize your family photographs and documents? Digital content is fragile and also needs care. Software and hardware used to read files can become obsolete, and the media that we store our digital content on (computers, flash drives, CDs) has a limited lifespan. Take a look at the steps listed on the back of the brochure to help you preserve your digital content for the future.

**More Resources**

Preserving Your Digital Memories

[www.zum.edu/1x22](http://www.zum.edu/1x22)

Provides tips for preserving email, digital photographs, videos, personal digital records, and websites.

Library of Congress Personal Digital Archiving website

[www.zum.edu/1x23](http://www.zum.edu/1x23)

Includes introductory videos and other helpful guides for home digitization projects.

The Digital Beyond

[www.thedigitalbeyond.com](http://www.thedigitalbeyond.com)

Regular posts about estate planning in the digital age.

**Temperature and Humidity**

- Store photographs and papers in an environment where you are comfortable. Basements can be damp and lead to mold. Attics can be too hot.
- Avoid extremes in temperature and relative humidity.

**Handling**

- Handle photographs and papers with clean, dry hands.
- Don’t force rolled or folded items open if they resist. Contact a conservator.

**Protection**

- Organize photographs and papers into acid-free folders and boxes for easy access and protection from light and damage.
- Protect from direct sunlight when displaying.

**Tips for Preserving Photographs and Documents**

- Look for acid-free products.
- Store photographs in albums with acid-free pages or polyvinyl, polyethylene or polypropylene sleeves.
- Mount photographs with photo corners, not glue or tape.
- If storing in boxes, keep like size items together.
- Use pencil when labeling the backs of photos.

Go to [www.zum.edu/resources](http://www.zum.edu/resources) for additional information on protecting your keepsakes.

**Tips for Preserving Digital Content**

- Be consistent in how you name folders and files. Use descriptive names, and consider adding dates and keywords.
- Write a brief description of how you have organized the files and save it along with the files.
- Store & Protect
  - Protect your digital content from:
    - Physical & Natural Disasters
    - Accidental Deletion
    - Cybersecurity
- Keep at least two copies of the files you want to save (more copies are better).
- Store a second copy in a different geographic location if possible. For example, store your digital content on your computer at home, and back up the content to a second external storage device that you keep at another family member’s house.
- Alternatively, you could store your second copy using a cloud storage service.
- Move your digital content to a new storage device every five years.

**Select & Organize**

- Do you really need to keep 50 photos of your cat? Select which digital files you want to keep forever, and delete the rest.

- If there are multiple versions of an important photo, pick the one with the highest quality.
- Consider discarding drafts and only keeping the final versions of documents.
- Organize your files. There is no one recommended system for organizing files; choose one that works for you.
- You could keep all your photographs in one folder, or create separate folders for each year, each event, or organize by subject.
Digital Preservation 101 - Identify

- Locate flash drives or other external hard drives, CDs, phones, camera memory cards
- Download files from email and social media that you wish to keep
- Transfer files off of your devices to one location, ideally your computer
Digital Preservation 101 - Select

- Make choices on what to keep
- Remove duplicates or near duplicates
- Remove images that are out of focus
- Remove poor images
- Keep if only image of important person/event
Digital Preservation 101 - Organize

Folder Organization
- No one system for organizing your files, choose one that works for you, and be consistent

By Year
- 1957
- 1958
- 1959
- 1960

By Year and Month
- April
- February
- Holidays
- January
- March
- May

By Subject
- All four kids
- Carol
- Diane
- Jeff
- Rick

- Write a description of how files have been organized and save it in the same folder with the files
Digital Preservation 101 - Organize (Cont.)

- Rename files with descriptive names
  - Use names and dates

- Be aware of sorting order
  - Year vs. month, alphabetical?

- Avoid spaces, punctuation or symbols
  - # $ % ! . * “ ”
  - Use camel case, hyphens, and underscores instead
Digital Preservation 101 - Metadata

Who?
James Krahn; Delores Krahn

What?
World War II

Where?
Eau Claire, Wisconsin

When?
1939-1945
Characteristics of good preservation file formats

- Public and open documentation
- Non-proprietary
- Widespread adoption
- Can be opened, read, and accessed using readily-available tools

Use Cases

- TIFF vs JPEG
- Microsoft Word (.doc, .docx) → PDF (.pdf)
Digital Preservation 101 - Store & Protect

- Back Up your Files
  - 3-2-1 Rule: Three copies, stored on two different media, and one copy located off-site
    - Copy 1: stored on your computer
    - Copy 2: stored on CD or external hard drive
    - Copy 3: stored in Google Drive/Dropbox or through some other cloud storage service

- Move your digital content to a new storage device every five years
Summary

- **Planning** - Collaborations and promotion
- **Hosting** - Check-in
  - Digital image basics
- **Hosting** - Metadata
- **Hosting** - Scanning
  - Digital preservation
Reserve a kit today!

- Email mino@umn.edu to set up a loan for your next event.
- For more information, check out our Scan for Keeps website at mndigital.org.
Thank You!

Robinson Crusoe before an angry sea, New York Public Library, 1920
http://digitalcollections.nypl.org/items/68dfb877-b9db-77b0-e040-e00a18060bb0
Contact Us

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Digital Initiatives & Metadata Education
mino@umn.edu
800-462-5348

Scan for Keeps Program Website
https://mndigital.org/projects/scan-keeps