

Photo Digitization

A photo digitization projects begin prior to the first scan and extend beyond the completion of the actual digitization. The following is a breakdown of pre-, during, and post- digitization activities based loosely on FADGI's report "Digitization Activities: Project Planning and Management Outline."

Pre-Digitization (including planning)

- Defining purpose, scope, and goal of project
- Identifying resources necessary for completion
- Defining responsibilities and communications (including external stakeholders)
- Selection and appraisal of materials to be digitized
 - Gathering documentation describing materials, IP rights, and use conditions
- Defining standards for digital objects and metadata
- Developing workflow and quality control measures

Digitization

- Get it – Retrieval and digitization of materials according to digitization plan and workflow
- Check it – Performing quality control according to digitization workflow
- Metadata creation
- Save it – Deliver master and access files to appropriate locations using appropriate naming convention

Post-Digitization

- Uploading and management within content management system
- Managing use and access, including re-use by archives
- Assessment and evaluation

Photo Digitization Standards

BCR's CDP Digital Imaging Best Practices

Photographs			
	Master	Access	Thumbnail
File Format	TIFF	JPEG	JPEG
Bit Depth	16 bit grayscale 48 bit color	8 bit grayscale 24 bit color	8 bit grayscale 24 bit color
Spatial Resolution	400 to 800 PPI	150 to 200 PPI	144 PPI
Spatial Dimensions	4000 to 8000 pixels across the long dimension, depending on size of original, excluding mounts and borders	600 pixels across the long dimension	150 to 200 pixels across the long dimension

Resolution

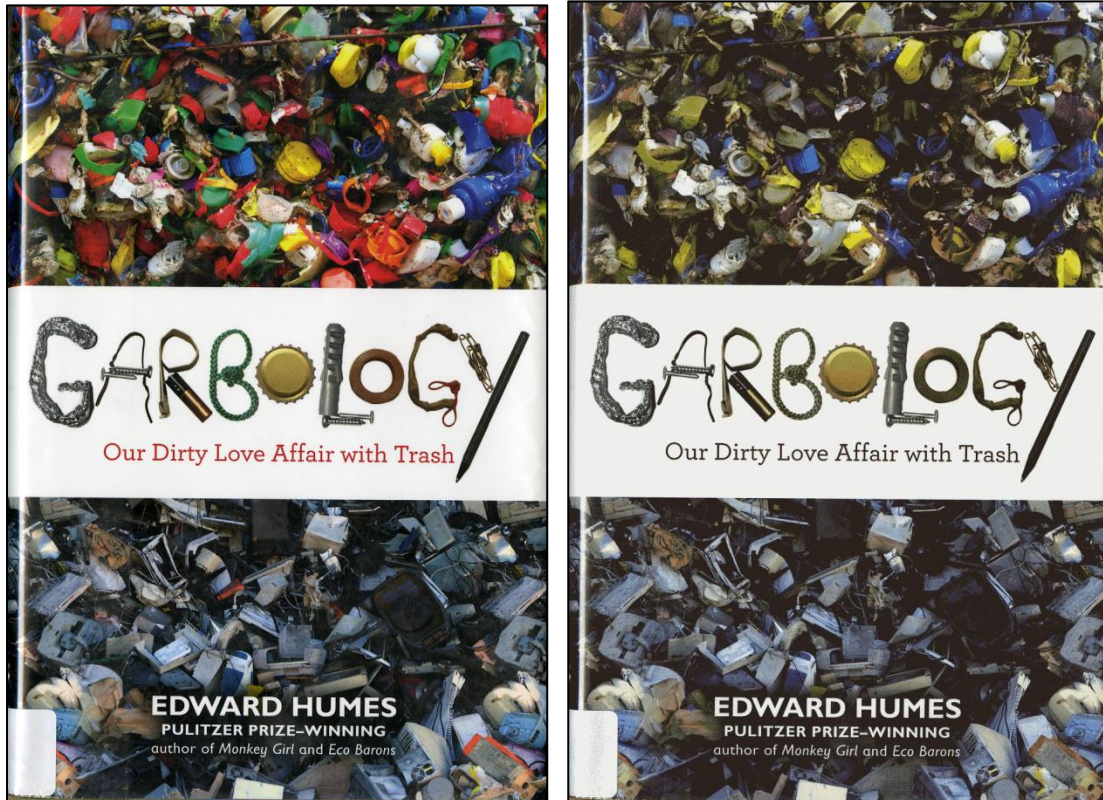
- Measures “pixel density” or number of pixels used to represent an image
- Impacts image sharpness and how much you can enlarge or zoom in on an image
- Measured in pixels per inch



The image to the left is from an image with nearly 3000 pixels along the long edge. The image on the right is from the same image with roughly 300 pixels along the long edge.

Color Bit-Depth

- Measures the number of shades or colors that can be represented
- Color photos require higher bit-depth than black and white
- Bit-depth = Number of channels x Bits per channel
 - E.g., rgb (3 color channels) at 8 bits per channel = 24 bit-depth



The image on the left is in 48 bit color. The image on the right is 4 bit color.

File Formats

- Many formats (like JPEGs) are compressed to create smaller files
- These technology blend color and other information to fudge details
- These differences tend to be negligible
- Compressing compressed file formats amplifies effects of compression



The image on the left is a TIFF saved at resolution of 300 ppi. The image on the right is a JPEG created from the image on the left.

Creating a Digitization Plan and Workflow

Prior to creating a digitization workflow, you should define some key facts. There's a ton of literature on managing digital projects, so with each category, I'll simply pose a few questions you will want to answer and point you to more resources at the end.

Purpose, Scope, and Goals

The following points will help define selection criteria, digitization priorities, and metadata planning.

- Why are you digitizing?
 - E.g., Online presentation, exhibit, publication, preservation
- Are there any stakeholders you want to notify?
 - Collection donor, researchers, community members, other professionals
- How much do you want to digitize
 - Entire collections? Only as much as needed?
- Who do you want to reach with your project?
- How will you define success?

Resources

- Who is going to work on the project?
 - Who is going to manage the project?
- What funding do you have?
- What supplies, equipment, or skills are missing?

Selection

- What resources and documentation do you have to help make decisions?
- Are the intellectual property rights clear?
- Are there any damaged materials? Are they worth repairing for the purposes of the project?
- Which materials are most important? Which materials should be digitized first?

Image and Metadata Standards

- Can you digitize masters according to best practices?
- How will access copies be used?
 - What specifications are needed for predicted use?
 - How will description impact use?

- Are you locked into a metadata schema or do you have flexibility?
- Are there any fields requiring clarification?
 - E.g., type vs. format, date fields for physical object vs. digitization date, creators and contributors
- Are there any content standards or vocabularies useful for describing the images?
 - Are there any fields requiring a home-grown vocabulary?
- Where will metadata live?
- How should files be named and where should they be saved?

Developing a Workflow

- Who is going to be creating the images and metadata?
 - What decisions can they be trusted with?
 - What rules and procedures need to be black and white?
- What handling guidelines are necessary?
- What are the specifications for masters and access copies?
- What processes can be batched, automated, or streamlined?
 - E.g., conversion of TIFFs to JPEGs, using a negative insert to batch scan, using autofill and/or drop down menus for metadata fields with predictable entries
- What elements should titles and descriptions include?
 - Place names? Years? Specific titles or occupations?
- Where should materials be saved for preservation, access, and presentation?
- Where should quality control occur?
 - E.g., after initial image capture, prior of submission of materials to CMS

Practice Batch Processing

The following instructions are for batch processing master TIFFs into access JPEGs. There is a folder on the lab station desktops titled “pc156 - Masters” that contains a set of TIFFs to practice on.

Setup

Create folder for JPEGs on desktop

Creating JPEGs in Irfanview

1. Open Thumbnail Viewer.
2. Select files.
3. Select “Start Batch Dialogue with Selected Files.”
4. Change output format to “JPEG.”
5. Check “Advanced Options” and select “Advanced” button.
6. Set appropriate resolution.
7. Select a folder to save to.
8. Select “Start Batch.”

Cleanup

Delete folder for JPEGs on desktop