

Digitizing Your Historical Photographs Workbook

New York State Archives

2011

Digitizing Your Historical Photographs

Agenda

Introductions, review of workshop goals

What can you digitize?

Why digitize?

Digitization basics: Capturing the Image
Format, resolution, bit depth, compression

Digitization basics: What is Metadata?

[Break]

Digitization basics: Metadata elements

- Metadata examples
- Exercise
- Preservation

Sharing and displaying your images

Wrap-up and conclusion

For more information:

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Phone: (518) 474-0670

Email: ARCHTRAIN@mail.nysed.gov

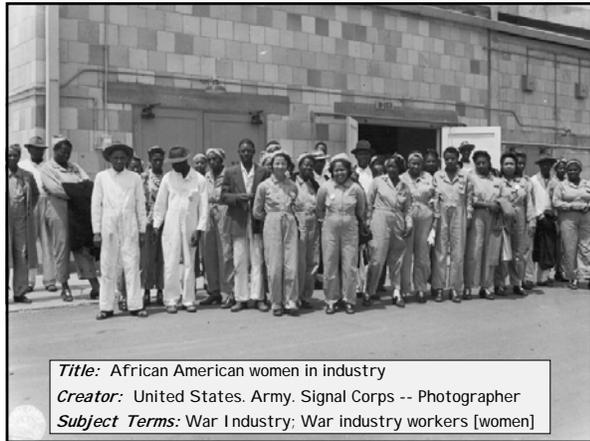
Website: <http://www.archives.nysed.gov/a/workshops>

The New York State Archives is part of the Office of Cultural Education within the New York State Education Department.

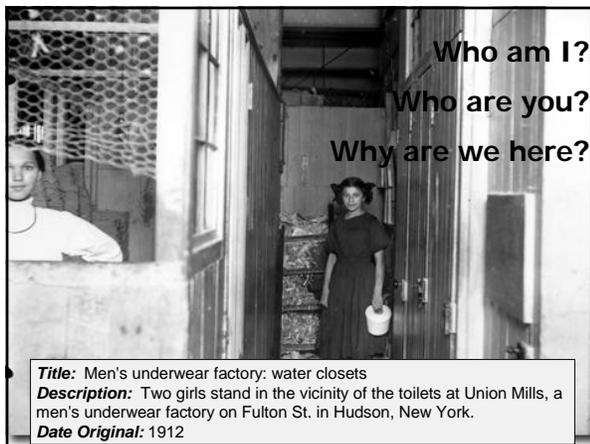
Digitizing Your Historical Photographs



New York State Archives
www.archives.nysed.gov
2011



Title: African American women in industry
Creator: United States. Army. Signal Corps -- Photographer
Subject Terms: War Industry; War industry workers [women]



Title: Men's underwear factory: water closets
Description: Two girls stand in the vicinity of the toilets at Union Mills, a men's underwear factory on Fulton St. in Hudson, New York.
Date Original: 1912

Today We Will Discuss

- What can you digitize?
- Why digitize photographs?
- Digitization basics
 - Capturing photos via the scanning process
 - Making photos useful
- Using digital photographs

What Can You Digitize?

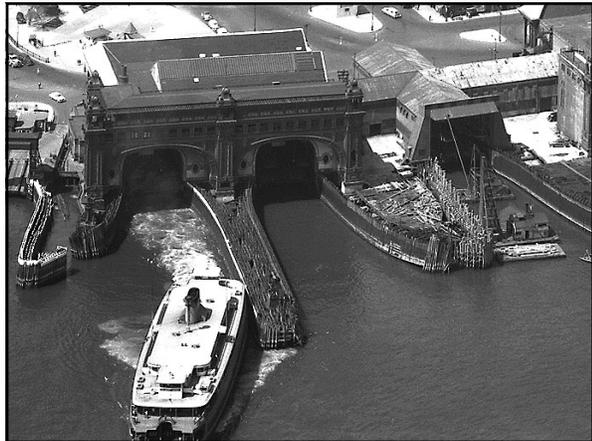


Why Digitize?

- Save wear and tear on originals
- Improve retrieval and access
- Allow greater sharing of photographs
- Allow greater use of the photograph



Title: Fairchild Aerial Survey negative, The Bowery, Manhattan Island.
Date Original: 1951-06-19



Are You Ready for Digitization?

- Why are you doing it?
- Do you have institutional support?
- Are your materials processed?
- Do you have the technology?
- Can you maintain the images and the technology?

Capturing the Image: Scanning Basics

- Capture once, use many times
- Scan from earliest generation
- Know the technical issues

Before Scanning

- What are you scanning ?
- What is the size of the object you are scanning ?
- Do you want it scanned in grayscale or color ?
- How much space do you have to store your images?
- How will you use your images?

Technical Specifications

1. Digitization Formats
2. Image Resolution
3. Bit Depth
4. Compression

1. Digitization Formats

Master Image

- Archival image and your official record
- Tagged Image File Format (TIFF)

Access Image

- For web presentation, on local computers, or in emails
- Joint Photographic Experts Group (JPEG)

2. Image Resolution



Generally represented as
Dots Per Inch - DPI



The resolution setting allows you to control how many dots per inch your final image will have.

Image Resolution - 800 DPI



Image Resolution - 100 DPI



Image Resolution - DPI

- Master Image (TIFF)
 - Photographic print: 300 dpi
 - Glass plate negative or lantern slide: 800 dpi
 - Photographic negative or slide: 2400 dpi
- Access Image (JPEG)
 - Photographic print: 100-200 dpi
 - Glass plate negative or lantern slide: 300-400 dpi
 - Photographic negative or slide: 450 dpi

Image Resolution - Pixels per side

Master Image

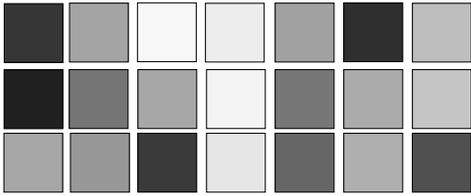
Shorter side of image should be at least 3,000 pixels



3. Bit Depth



Grayscale



Color

Bit Depth

Black and White

- Format: 8-bit
- Color depth: Grayscale

Color

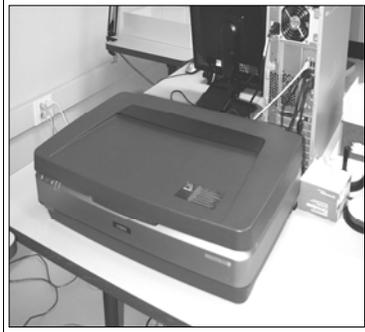
- Format: 24-bit RGB
- Color depth: Color

4. Compression

TIFF/Master Image file
Uncompressed

JPEG /Access Image file
Compressed

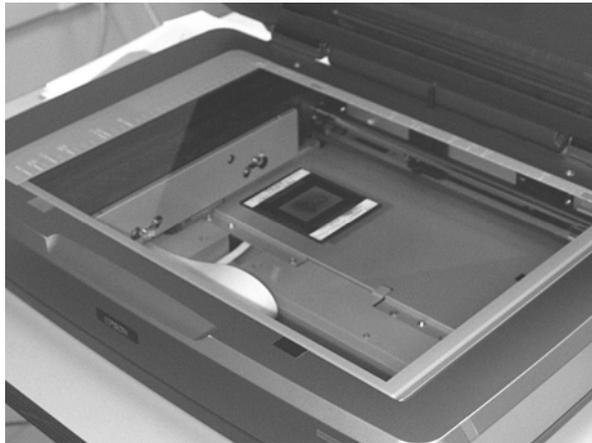
What
Does
Scanning
Involve?

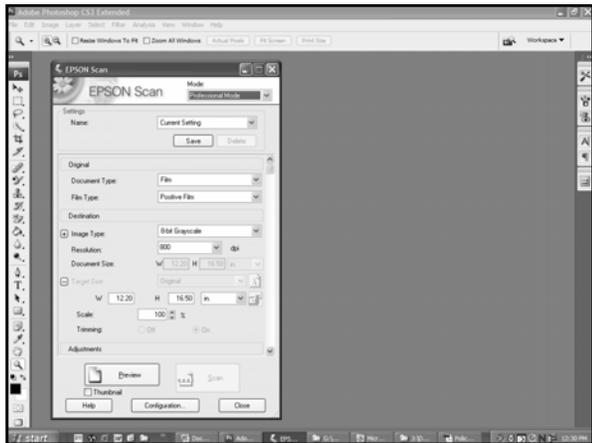






Title: Instructional lantern slides
Creator: New York State Education Dept. Division of Visual Instruction
Date Original: [ca. 1856-1939]
Identifier: A3045_78_12364

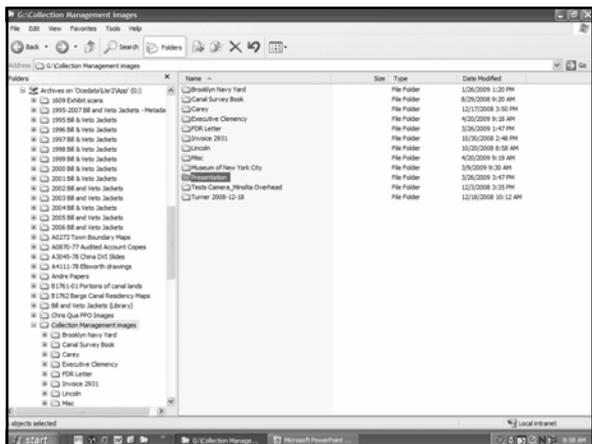


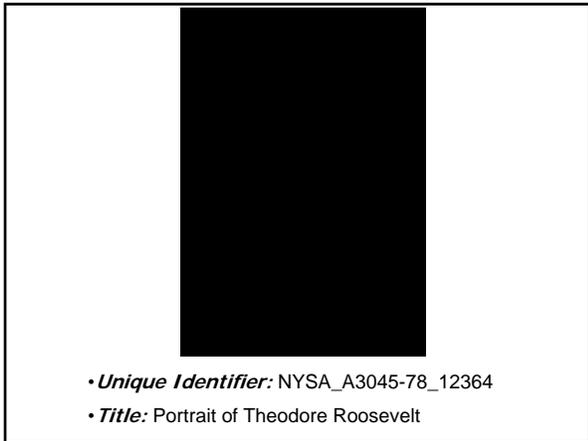












| Name | Size | Type | Date Modified |
|------------------------------------|-----------|-------------|-------------------|
| Metadata | | File Folder | 4/6/2009 9:36 AM |
| CON Negatives | | File Folder | 1/20/2008 3:51 PM |
| CON Prints | 8,457 KB | TIF File | 7/3/2007 6:55 AM |
| Conservation | 5,863 KB | TIF File | 7/3/2007 6:55 AM |
| Contribution 1771 A3021415 | 5,762 KB | TIF File | 7/3/2007 6:55 AM |
| DWG Exhibit Items | 7,746 KB | TIF File | 7/3/2007 6:55 AM |
| DWG Images | 7,569 KB | TIF File | 7/3/2007 6:55 AM |
| DW7 | 5,777 KB | TIF File | 6/18/2007 6:54 AM |
| Dw | 6,476 KB | TIF File | 6/18/2007 6:54 AM |
| Dw-Before & After Samples | 8,158 KB | TIF File | 6/18/2007 6:54 AM |
| Dw-House/interior | 3,463 KB | TIF File | 6/18/2007 6:54 AM |
| Dutch Manuscripts | 3,381 KB | TIF File | 6/18/2007 6:54 AM |
| DWG Reference for DWG | 6,888 KB | TIF File | 6/18/2007 6:54 AM |
| New DWG Images | 7,099 KB | TIF File | 6/18/2007 6:54 AM |
| X Files | 5,250 KB | TIF File | 6/18/2007 6:54 AM |
| BHRC: DWG 14 PDF | 7,212 KB | TIF File | 6/18/2007 6:54 AM |
| BHRC: DWG 13 PDF | 7,025 KB | TIF File | 6/18/2007 6:54 AM |
| BHRC: DWG 17 PDF | 6,873 KB | TIF File | 6/18/2007 6:54 AM |
| BHRC: DWG 18 PDF | 6,444 KB | TIF File | 6/18/2007 6:54 AM |
| BHRC: DWG 19 PDF | 6,156 KB | TIF File | 6/18/2007 6:54 AM |
| BHRC: DWG 20_21 PDF | 6,660 KB | TIF File | 6/18/2007 6:54 AM |
| Electronic Schoolhouse Project | 5,965 KB | TIF File | 7/18/2007 6:55 AM |
| Field Images | 3,907 KB | TIF File | 7/3/2007 6:55 AM |
| FIC Images | 10,206 KB | TIF File | 6/18/2007 6:54 AM |
| Field/inter Images | 3,692 KB | TIF File | 6/18/2007 6:54 AM |
| Imaging Projects Tracking Database | 11,945 KB | TIF File | 6/18/2007 6:54 AM |
| Leake Project Images | 5,330 KB | TIF File | 6/18/2007 6:54 AM |
| Images | 3,692 KB | TIF File | 7/3/2007 6:55 AM |
| Magazine Images | 5,005 KB | TIF File | 6/18/2007 6:54 AM |
| OH9 July 08 | 3,461 KB | TIF File | 7/3/2007 6:55 AM |
| metadata | 13,082 KB | TIF File | 6/18/2007 6:54 AM |
| PHO Images | 4,888 KB | TIF File | 6/18/2007 6:54 AM |
| Presentation 080307 | 4,272 KB | TIF File | 6/18/2007 6:54 AM |
| Reference Images | 4,169 KB | TIF File | 7/3/2007 6:55 AM |
| Rockefeller Exhibit Images | 3,505 KB | TIF File | 7/3/2007 6:55 AM |

What is Metadata?

- Information about information.
- More specifically, metadata tells you
 - what the image is about and who made it
 - how it can be accessed and used
 - how it was digitized

Metadata Elements

- Unique Identifier
- Title
- Creator
- Subject Terms
- Description
- Date Original
- Location
- Rights
- Date Digital
- Digitization Specifications

Title

What the photo is about



Title: Birds Eye View; Speculator, New York
[circa 1912]

Title



Title: Logs in the Jessup River, Northern New York; 1943

Title



Title: Elephant Ranee of Charles Hunt's Circus in doorway of Elephant Hotel with Marcia Hunt; Somers, New York; 1953

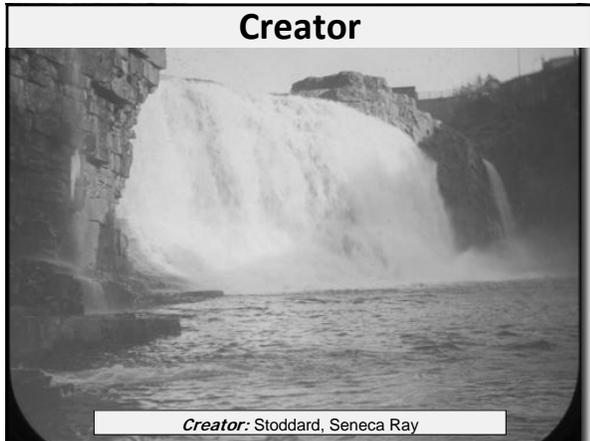
Creator

Who made the photo



Creator: New York (State). Conservation Dept.

Creator



Creator: Stoddard, Seneca Ray

Creator



Creator: Bronx Parkway Commission

Creator



Creator: Unknown
Description: Dorothy Freer in her backyard holding her doll. There is laundry hanging in the distance. This picture was most probably taken on or near 3 Broadhead Ave. in New Paltz, the residence of her grandmother, Marguerite Freer.

Subject Terms finding the photo



Subject Terms: Automobile service stations; Automobiles; Buildings

Subject Terms: What Words Do I Use?



Art and Architecture Thesaurus (AAT)

camp (temporary settlements); camp furniture; cooking utensils; tents (portable buildings); axes; pack baskets

Thesaurus of Graphical Materials (TGM)

Camping; Campfires; Outdoor cookery; Tents; Axes; Baskets

Library of Congress Subject Authority Headings and Name Authority Headings (LCSH)

Camping; Campfires; Outdoor Cooking; Campers (Persons); Tents; North Country (New York)

Description

Detailed information about the image



From the Albert R. Stone Negative Collection, Rochester Museum & Science Center, Rochester, N.Y.

Description: The Irondequoit Grange, #849, has arranged a prizewinning display of fruits and vegetables at the 1915 Rochester Industrial Exposition. Even the letters and designs on the bulletin board behind the display have been fashioned from fruits and vegetables. The designs include a sickle, a hand plow, a star, and a sheaf of wheat.

Date Original

when the photo was taken

Standard: YYYY-MM-DD

Normalized examples

1903

1897-07

1897-07-16

Range of dates: 1910 – 1920

Uncertain date: 1977 circa

Unknown date: Undated



Date original:1970-01-01

Location



Where
the photo
was taken

Location: Chester (Village), Orange County,
New York

Rights



- Who has access to this photo
- Who has ownership
- How it may be used

Rights: This digital image may be used for educational uses, as long as it is not altered in any way. Prior written permission is required for any other use of the images from the Woodstock Public Library District collection. <http://www.hrvh.org/>

Digitization Process Metadata

- **Date digital:** when the photo was digitized
- **Digitization specifications:** TIFF or JPEG, the DPI, the bit depth settings. compressed or not, the scanner and software used
 - Example: TIFF, 300 dpi, 8 bit grayscale, uncompressed, 1640 XL Epson Scanner; Adobe Photoshop CS, Windows 2000 Professional

Metadata Examples

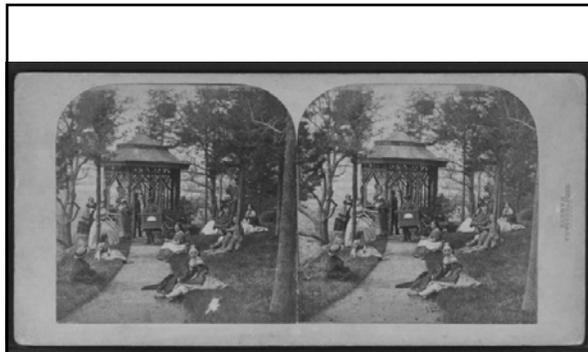


Title: Example of Bad Parking, Rochester, New York

From the Albert R. Stone Negative Collection, Rochester Museum & Science Center, Rochester, N.Y.



1) *Title:* Early Crane Orchestra



2) *Title:* Organ grinder, Saratoga, New York



3) *Title:* Day after the dance, spring





Exercise: Describing the Image

Metadata for Example 1

Title: *Early Crane Orchestra*

Subject: Music--Instruction and study; Teachers colleges; Potsdam (N.Y.)—History

Alternate Subject: Art and Music; Education

Creator: Unknown

Publisher: SUNY Potsdam

Description: Early orchestra at the Crane Institute of Music in Potsdam, NY, part of the Potsdam Normal School.

Geographic Location: Potsdam, St. Lawrence County (NY)

Type: Image (Photograph)

Format: Photograph; b & w; 4 3/8 x 6 15/16 in.

Date: 18??

Copyright Statement: SUNY Potsdam is the copyright holder of this item. For further information see <http://history.nnyln.org/copyright.html>.

Credit Line/Contact Information: College Archives & Special Collections, SUNY Potsdam, Potsdam, NY (315) 267-3326

Holding Institution: SUNY Potsdam

Digital Collection: Crane School of Music

Identifier: earlyorchestra2018

Source: SUNY Potsdam College Archives & Special Collections

Metadata for Example 2

Image Title: *Organ grinder, Saratoga.*

Creator: Barnum, Deloss -- Photographer

Created Date: [ca. 1865]

Medium: Albumen prints

Specific Material Type: photographs

Source: Robert N. Dennis collection of stereoscopic views. / United States. / States / New York / Stereoscopic views of Saratoga Springs, New York

Source Description: Approx. 72,000 stereoscopic views : 10 x 18 cm. or smaller.

Location: Stephen A. Schwarzman Building / Photography Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs

Catalog Call Number: MFY Dennis Coll 91-F146

Digital ID: G91F146_042F

Record ID: 726717

Digital Item Published: 12-1-2005; updated 5-18-2009

Metadata for Example 3

Title *Day after the dance, spring*

Creator unknown

Date.Original unknown

Description Photograph of seven people walking down dirt road, away from camera. Five women in long dresses with hair in buns, two men in suits, one looking back. Two of the women have arms around shoulders. Farm, telephone lines and hills in distance. Notes on margin reads: "Sophy Hickok, Frances Van Aken, Ruth Mew: and "Arethusa house"

Subject.LCSH Teachers colleges; Teachers college students [Note they are using two different authorities]

Subject.TGM Teachers colleges; Students

Personal Name Hickok, Sophy; Van Aken, Frances; Mew, Ruth

Corporate Name New Paltz (N.Y.). Normal College

Location New Paltz (Town) - Ulster County - New York

Coverage Early 20th Century

Format.Original photograph; b&w; 2.25 x 3.25 in. (5.6 x 8.1 cm.)

Resource Type Still Image

Relation from unknown album page

Source Part of the Sojourner Truth Library Historic Photograph Collection

Resource Identifier STe00003

Publisher.Digital Sojourner Truth Library

Date.Digital 2006-05-15

Format.Digital image/jpeg

Exhibit Homepage <http://www.hrvh.org/exhibit/educationvalleyfair/>

Digital Collection Historic Photograph Collection, Education in a Valley Fair

Holding Institution Sojourner Truth Library, SUNY New Paltz

Contact Information Sojourner Truth Library, SUNY New Paltz, 300 Hawk Drive, New Paltz, NY, 12561

Rights Prior written permission required to use any photograph from the Sojourner Truth Library Historic Photograph Collection

Technical Data Archival TIFF - Microtek Scanner 9800 XL, Adobe Photoshop Elements 4.0; 600 dpi; 24 bit color; RGB; 10,028,720 bytes: 2167 x 1541 pixels; no compression; JPEG enhanced for web

Metadata for Example 4

Title: *"Before" Of NY-327-81, White Plains. (PBP 17)*

Repository Name: Westchester County Archives

Collection Name: Historic American Engineering Record, Bronx River Parkway Reservation – HAER No. NY-327

Name of Creator: Bronx Parkway Commission

Date of Creation: 08/13/1912

Format: Photograph

Call Number: A-0321(2)F PH80

Dimensions: 8" x 10"

Description: This photograph is a good example of the polluted condition of the Bronx River before the Bronx River Parkway Reservation, as many privies are shown in close proximity to the water.

Location of photograph: White Plains - New York.



Metadata Exercise

This image is one of a series of photographs from the New York State Factory Investigating Commission. This commission was formed after the Triangle Shirtwaist Fire in 1911 to visit factories throughout the state and report on their conditions. Along with written reports and documentation such as time cards, the commission took many photographs of the interiors and exteriors of factories.

The original photograph was created on a visit the commission made in 1912 to the Waring Hat Manufacturing Company in Yonkers, New York. On that visit, one inspector photographed the hat forming room where hats received their initial shapes, and noted that during his visit the room was very humid and did not have proper ventilation. This humid, unventilated condition was reported in several other rooms in the factory as well.

The image was scanned on March 29, 2009 as a TIFF file at 300 dpi, 8 bit grayscale, and was left uncompressed. It was saved as: NYSA_A3029-78_B3_F7_tif. A 1640 XL Epson Scanner was used to capture the image, with Adobe Photoshop CS as the capturing software.

Metadata Worksheet

Referring to the image on the previous page, enter metadata for the following core elements we've discussed.

(These seven elements, usually the ones that the public sees, can be written before scanning.)

Title: _____

Creator: _____

Subject Terms: _____

Description: _____

Date Original: _____

Location: _____

Rights: This image is provided for education and research purposes. Rights may be reserved. Responsibility for securing permissions to distribute, publish, reproduce or other use rest with the user. For additional information see our [Copyright and Use Statement here](#).

(These three elements will be written after scanning. They are usually only viewed locally.)

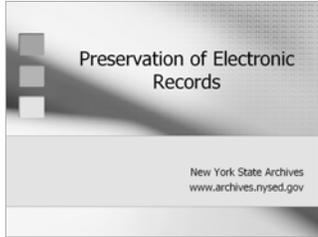
Date Digital: _____

Digitization Specifications: _____

Unique Identifier: _____

Preserving Your Digital Photographs

See related NYSA workshop



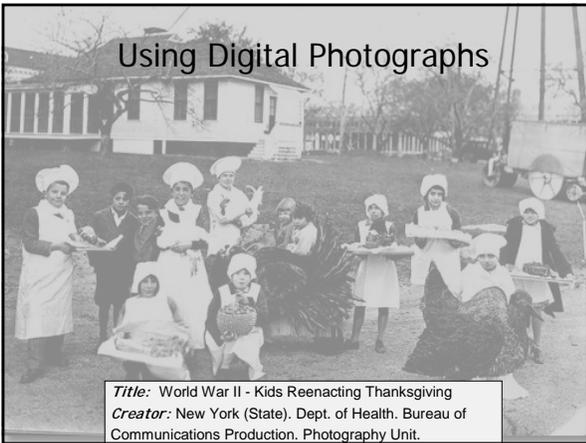
Make Backups

- Backing up files provides additional protection from loss
- Decide necessary level of backup
- Decide frequency of backup
- Find a safe storage location



Title: Antonia Pantoja in car with family at Coney Island, Brooklyn, 1945.

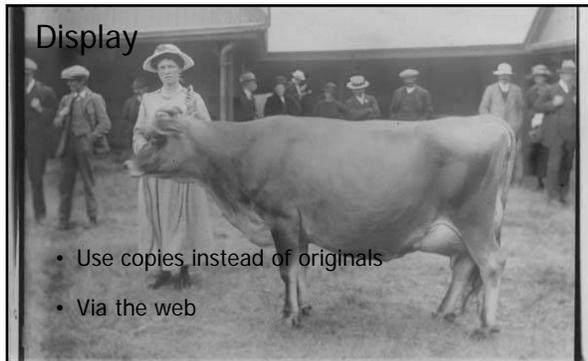
Using Digital Photographs



Title: World War II - Kids Reenacting Thanksgiving
Creator: New York (State). Dept. of Health. Bureau of Communications Production. Photography Unit.

Credit where Credit is Due

- Develop a policy
- Consider copyright
- Provide a credit/citation statement
 - Haviland-Heidgerd Historical Collection, Elting Memorial Library
 - University Archives at Herrick Memorial Library, Alfred University



- Use copies instead of originals
- Via the web

Title: A Ben Duchess with lady handler, Chester, NY
Rights: Use of copyright protected material requires the prior written permission from the Chester Historical Society. Material may be reproduced for educational, nonprofit use only, with appropriate citation. Notify The Chester Historical Society of such use.

Use Your Own Website

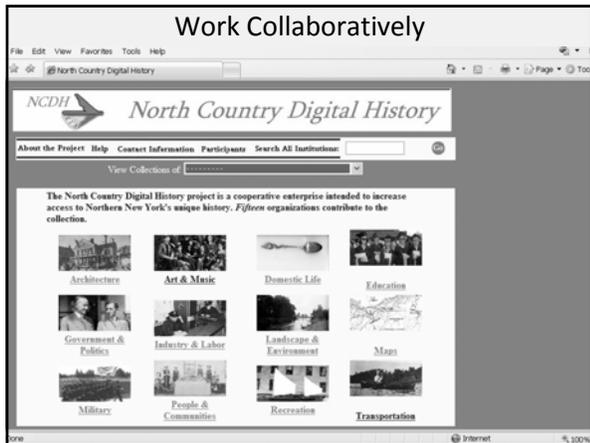
Libraries + Collections Department
RMSC
Rochester Museum & Science Center

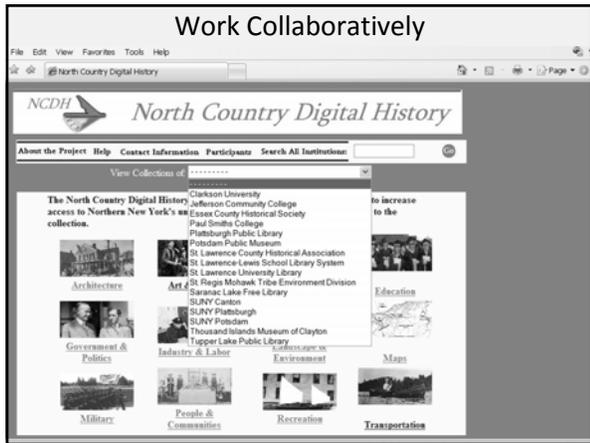
Search | Rights & Reproductions | Categories | Photographs | Search | Help | Print | Quick Links

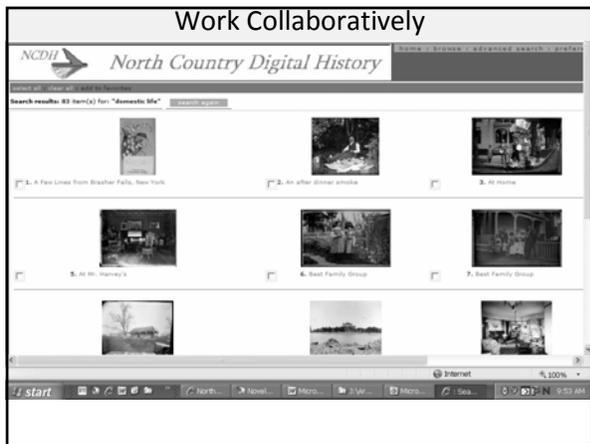
Results 1 - 10 of about 14,000 for photographs (category), sorted by: relevance

- 1. **Lamoka Lake Site - trench 1**
An excavated trench at the Lamoka Lake archaeological site with a shovel at the bottom of the pit and three hearths at different levels. At the surface level there is a dickax rock and perhaps a bag of rocks.
Acc. No.: RM 4
Collection: RM Negative
Subject: Archaeological sites ; Archaic (archaeological culture) ; Hearths ; Pickaxes ; Shovels
Found:
- 2. **Lamoka Lake Site - bone and stone objects**
These objects were among those selected by W.A. Ritchie Feb. 1956 and housed temporarily in the N.Y. State Museum. Top row left: seven objects showing the progression from bone blank to finished bone fishhooks.
Acc. No.: RM 11
Collection: RM Negative
Subject: Archaic (archaeological culture) ; Bone ; Fishhooks ; Stone
Found:
- 3. **Mohawk basketmaker**
Mohawk basketmaker Mrs. Louise Mitchell sits in a wooden chair and Francis Johnson stands beside her. Mrs. Mitchell is beginning to weave a basket. She is

Refine
Collection:
• Albert S. Stone Negative (133)
• Freeman C. Johnson (202)
• RM Negative (52)
Format/Type:
• Negative, Glass Plate (1,334)
• Photograph (649)
• Object (56)
• Photograph, Postcard (28)
• Photograph, Polaroid (6)
• Black-And-White Negatives (1)
• Negative, Photographic (2)
• Negative, Film (2)
• 3 More...
Culture:
• Endowee (22)
• Seneca (3)
• Miami (1)
• 7 More...
Subject:
• Black-And-White Negatives (1932)
• Paradise & Processions--New York (State)--Rochester (104)
• Man--New York (State)--Rochester (42)
• Horse--New York (State)--Rochester (28)







Work Collaboratively

Title
All Home
House
Families
Children
North Country (N.Y.)
Domestic Life
Jameson, A. L.
July 4, 1919
Image
(Photograph)
glass plate negative 2 - 8 in.
1919
See <http://history.muh.edu/copyright.html>
Curator of Special Collections, St. Lawrence University Library, Canton, NY

Alternate subject
Creator
Description
Type/Genre
Format/Medium
Date
Copyright Statement
Credit Line/Contact Information
Holding Institution
Digital Collection
Resource Identifier

St. Lawrence University Library, Canton, NY
A. L. Jameson Glass Plate Negative Collection
Max. Collection Number 89, negative 46

Web 2.0 Applications: Flickr

New York State Archives' photostream

Fur dresser: fleshing room where surplus flesh is removed from underside of skins
Updated on Sep 1, 2009
0 comments

Crowd of employees of the Remington Typewriter Co. before its main building, Ilion, New York
Updated on Aug 31, 2009
0 comments

Rows of men straddling workbenches in factory room. Date Original: 1912 Source: New York...
Updated on Sep 1, 2009
0 comments

Typewriter factory with employees in front
Date Original: 1911 Source: New York State Archives
Updated on Sep 1, 2009
0 comments

Honoring the Workers of New...
8 photos

Summer in New

On Your Way...

Title: Race of Miniature Sailboats, Annual Regatta, Boat Pond, Central Park, New York City, 1935

Contact Us

www.archives.nysed.gov

email: dhs@mail.nysed.gov

phone: (518) 474-6926



Backing Up Your Electronic Image Files

Back-up “Dos”

Establish a backup schedule

Do you need to save each day’s work?

Because of the number of changes per day?

Because of the importance of the information?

If on a network, there may be nightly backups.

Do you need only weekly or monthly backups?

Because you can fairly easily update lost information

You could make it a routine for ending the week or the month

Make your backup procedure part of the office routine

Both the download of files and removal to offsite storage

Use new, good-quality storage media for backups

Use hard drives and tape drives, and gold CD-R and DVD-R discs. Store them in archival polypropylene cases.

Label and date your backups so you can find the information easily

Use a water-based permanent media marker to label them, and write only on the clear center section of the disc.

Maintain backups offsite

Or an on-site disaster can destroy the original and the backup

Be creative: maybe trade storage space with another government

Store backup copies in a climate-controlled location other than your home. Never store them in a basement, attic, or garage! In addition, keep magnetic media (floppy disks, portable hard drives, tapes) away from electric motors or other sources of magnetic fields (e.g., elevator shafts).

Verify your backup

Either through bit-counting or by viewing backup Bit counting: keeps track of the number of bits in the original file and the number backed up. If the numbers match, then it’s assumed the backup worked

Viewing means testing

Open up the backup and see if it works

Back-up “Don’ts”

Don’t back up over a backup

If the backup procedure fails, you might lose both your backup and the original data at once

Limit reuse of tapes or disks - Over time and use, their quality declines

Avoid using drives, or memory cards as your primary backup media; and avoid buying in bulk or purchasing no-name media.

Don’t store backups onsite, especially backups of any vital records

A backup at another site provides real protection

Don’t store electronic media in fire-resistant safes

Standard fire safes keep paper from burning, but tapes and cartridges melt at a lower point than paper

It may take days before you can get to the safe

Consider using a media cabinet is better and always store offsite

Cabinet is designed to keep the temperature lower than the melting point of plastic

Safe deposit boxes might not be the best choice either

You can’t be sure you’ll get quick access since banks have limited hours

Only a limited number of people have access

A word about CDs and DVDs

If you decide to keep your image files on CDs or DVDs, keep in mind that their life expectancy can be as little as five to ten years. Store the discs vertically in cases specified for CDs or DVDs in a cool, dry, dark, and clean environment. Handle the discs by the outer edge or the center hole and use a non-solvent-based felt tip, permanent marker to mark the label side of the disc.

Do not bend the discs or touch their surface. Do not use adhesive labels or mark the disc in the data area. Try not to expose the discs to rapid changes in temperature or humidity or to prolonged ultraviolet light. If cleaning is called for, then wipe the disc with a clean cotton fabric in a straight line from the hole to the outer edge; as tempting as it may be, do not wipe in a circular motion around the disc.

| Element Name | |
|--|---|
| Required elements for staff view | |
| Collections | <p>Collection must be established before Adding an Entry to the DMS. Name of collection as displayed on website. There can be many levels of collections. The highest level establishes relationship of digital resource to larger collection. A smaller collection may be a grouping of like images within a larger collection (Maps, Artifacts, Photographs, within Native American Collection). Collections can have the same names, however, each collection has a unique number associated with it - this number will help you select the correct collection.</p> <p>Examples: Native American Collection, Environmental History Collection, New York Lantern Slides Collection.</p> |
| Digitization Specifications | <p>Definition: Technical information about the creation of the resource - File format, resolution, bit depth, compression, hardware, and software.</p> <p>Example: <i>Creation</i> - Tiff; 800ppi; 8 bit grayscale; uncompressed. <i>Used</i> - 1640 XL Epson Scanner, Photoshop CS</p> |
| Caption | <p>Definition: Information displayed with thumbnail. Same as formal or supplied Title. Caption may duplicate or expand upon the information given in the Title field by including date (only the year, in most cases) and/or information such as geographic location. Captions are not punctuated as sentences and should be brief, to encourage readability. Abbreviations are encouraged where suitable. Use punctuation appropriately. This field is keyword searchable.</p> <p>Examples: Map of Champlain Drainage Basin, Plattsburgh, N.Y. 1913; Panorama showing Lake Champlain, N.Y., 1913; Verplanck Colvin Adirondack Survey field book, 1881-1886</p> |
| Title | <p>Definition: The name given to the original item. Title may be an original title (appearing on the original item or supplied by its creator) or a supplied title (created based on information about or contained in the original item.) Titles are not punctuated as sentences. Use punctuation appropriately. This field is keyword searchable.</p> <p>Examples: <i>Map</i> - Map of Champlain Drainage Basin; <i>Lantern slide</i> - Panorama northeast of Mt. Defiance showing Lake Champlain; <i>Field Book</i> - Diagrams of Stations, Showing Directions of Points Observed</p> |
| Publisher | <p>Definition: Entity responsible for making the resource available in its digital form - in most cases, New York State Archives.</p> |
| Digital Technician | <p>Definition: The person responsible for creating the digital scan. Choose Username from dropdown menu. Usernames are added by Administrative and Technical Services.</p> <p>Examples: mcherv, esouthwo, plee, amattraz, jvonlin</p> |
| Type | <p>Definition: Description of the original item. Choose from dropdown menu. Types are added by Administrative and Technical Services.</p> <p>Examples: Photograph: color lantern slide; Document: handwritten letter; Map: hand drawn map</p> |
| Access Level | <p>Staff or Extended Public. Staff view must have the eleven required (*) fields. Extended public view must have the same eleven required (*) fields of Staff view plus Description, Subject, Source, Creator, Rights, and Brief Description</p> |
| Identifier | <p>Definition: Unique string of characters used to identify the resource described by this metadata. Identifier should match the image file name. Characters are derived from Source information (Repository acronym, accession number, box number, folder number, item number)</p> <p>Examples: NYSA_A3045-78_15001; NYSA_12590-05_B1_F3</p> |
| Date_Digital | <p>Definition: Date the resource is scanned. Always expressed as MM/DD/YYYY</p> |
| Date_Original | <p>Definition: The creation date of the original resource. This is a text field. Enter dates in the form YYYY-MM-DD. Use a single hyphen to separate the year, month, and day components. Enter the date as completely as possible. Date Original is a text field; therefore it will accept an incomplete date, such as YYYY or YYYY-MM. A range of dates should be separated with a space hyphen space, as in 1910 - 1920. Use circa or a question mark (?) if date is approximate. Use Undated if an approximate date cannot be provided.</p> <p>Examples: 1897, 1897-07, 1897-07-16, circa 1910, 1906? 1890 - 1910</p> |
| Additional Required fields for Extended Public View | |
| Brief Description | <p>Definition: Brief summary of core function, activity, subject or individuals that were the basis of the original resource's creation. This field has character limitations. This description may or may not be a complete sentence. Use punctuation appropriately. This field is keyword searchable.</p> <p>Examples: 1) Panoramic view of Manhattan with three prominent landmarks.</p> |

New York State Archives - Guide to describing images (metadata)

| Element Name | Contents |
|---|--|
| | 2) Photograph of Governor Whitman with Conservation Dept. personnel at State Capitol park. 3) Photograph of May Pole dance for Field Day at Remington Typewriter Company. |
| Description | Definition: A short account of the intellectual and historical content of the resource. The specificity or degree of description will depend upon the intended audience, the subject matter and the needs of the project. Use punctuation appropriately. This field is keyword searchable. Examples: <i>Landmarks</i> - Panoramic view of Manhattan, New York City. Prominent visible landmarks include the Empire State Building, Central Park and the George Washington Bridge. <i>Persons</i> - View of New York State Governor Charles S. Whitman (in office 1915-1919) at a review of state game protectors, possibly on East Park side of the New York State Capitol in Albany, N.Y. <i>Events/activities</i> - View of Field Day at the Remington Typewriter Co. in Ilion, Herkimer County. About thirty-eight young women in white dresses are dancing around a May Pole. |
| Relations | One Relations field is provided. Separate Relations statements should be separated by a space in this field. Two commonly used Relation statements are IsPartOf and IsFormatOf. Definition IsPartOf: A reference to a related resource. Contains information necessary to find or link to a related resource. The described resource is either a physical or logical part of the related resource. Examples: IsPartOf: Department of Visual Instruction Lantern Slides. Definition IsFormatOf: The described resource is the same intellectual content of the referenced resource but presented in another format. Examples: IsFormatOf: Digital representation of 8x10 glass negative in New York State Archives, Conservation Dept. Photographic Prints and Negatives, circa 1909-1949 |
| Source | Definition: The holder of the original resource - most instances New York State Archives - and the following information: Repository, accretion number, title, span dates, box, folder, and item number (last three items vary depending on record level of container list or indexing) Examples: New York State Archives, Series 14297-87, Conservation Dept. Photographic prints and negatives, circa 1909-1949, Negative no. 284; New York State Archives, Series A3045-78, Education Dept. Division of Visual Instruction. Instructional lantern slides, circa 1911-1939, Negative no. 15001 |
| Creator | Definition: Person or organization responsible for creating or assembling the intellectual content of the material. Examples: Organization - New York (State). Education Dept. Division of Visual Instruction. (Expressed as it appears in the catalog, following Library of Congress rules for Corporate author); Persons - Colvin, Verplanck, 1847-1920 (Expressed as Last name, first name.) |
| Subjects | Definition: What the content of the resource is about or what it is, expressed by headings, keywords, phrases or names; or terms for significantly associated people, places or events. Select at least one term from drop down menu. Terms are Library of Congress authoritative subject terms. |
| Recommended elements for a more complete extended public view record | |
| Language | Definition: The language in which a text is written or the spoken language of a video/audio. Defaults to English. Examples: English, Spanish, French, Dutch |
| Contributor | Definition: Person or organization that made significant intellectual contributions to the resource but whose contribution is secondary to the creator - editor, transcriber, illustrator. Examples: DVI Lantern Slide photographer: Abbott, C.G. (Clinton Gilbert), 1881-1946 (photographer) (Expressed as Last name, First name. Occupation may be included in parenthesis if person is not well known) |
| Pr Copy | Definition: Public Programs and Outreach field use to determine if a print copy of the original is on file. |
| Type Notes | Definition: Notes about the original item, for example its condition (cracked; torn) or temporary location (in conservation lab for treatment) |
| Locations | Definition: The location(s) covered by the resource - not the place of publication. This field is optional. Choose appropriate Location (s) from drop down menu. Terms are Library of Congress geographic subject terms. |
| Time Periods | Definition: Time period covered by the intellectual content of the resource - not the publication date. This field is optional. Choose appropriate time period from drop down menu. |

Ten Core Elements

We are going to focus our discussion on the following ten core elements. The first seven elements, usually the ones that the public sees, can be written before scanning.

Title: _____

Creator: _____

Subject Terms: _____

Description: _____

Date Original: _____

Location: _____

Rights: _____

(These three elements will be written after scanning. They are usually only viewed locally.)

Date Digital: _____

Digitization Specifications: _____

Unique Identifier: _____

Unique Identifier Creation

Make it unique, make it standard, and create it consistently

The New York State Archives (NYS) developed naming convention guidelines for Unique Identifier (aka filename) creation that describe the source of the original.

Because the needs of every institution vary with the approach and intent to scanning and digital projects, on the following page we have included examples from several other repositories that use local naming conventions. As with NYS's, all these naming conventions describe the source of the original as well.

A Unique Identifier is a string of characters and record numbers that clearly and uniquely identifies a digital object or resource. The Unique Identifier ensures that individual digital objects can be accessed, managed, stored, recalled, and used reliably.

- The Unique Identifier is created using components of the original materials source information for example:

Repository; Series number (or collection number); Box number;
Folder number; Item number; Page number

- Use as much of this information that is available, that is unique to the item, and that is understood by staff as it relates to the item and the collection it is part of.
- Abbreviate Repository, box, folder, and page in order to keep the string from becoming too long.
- Capitalize the letters representing repository acronym, (followed by the series or collection number), and capitalize the first letter of box, folder and page for the rest of the string.
- Use underscores in place of spaces, dots, or dashes between information
- Establish your Unique Identifier naming convention guidelines, use it consistently, but be flexible, and document any necessary changes to Unique Identifier creation in your guidelines.

Local Naming Convention Examples

| Unique Identifier | Source of original material |
|---|---|
| AML_P20914 | <p><u>Repository:</u> Adirondack Museum Library <u>Collection:</u> Adirondack Museum Historical Photograph collection <u>Photograph number:</u> P20914</p> |
| CUA_3458_B1_F2_001 | <p><u>Repository:</u> Division on Rare and Manuscript Collections, Cornell University Library <u>Collection and collection number:</u> Clifton Mines photographs and miscellany, 3458 <u>Unique info:</u> Box 1, Folder 2 (folder contains multiple unnumbered photographs)</p> |
| NYSА_13721-83_V39_Earl_Elmer | <p><u>Repository:</u> New York State Archives <u>Series number:</u> 13721-83 <u>Title:</u> Abstracts of National Guard service in World War I, 1917-1919 <u>Unique info:</u> Volume 39, (items arranged alphabetically)</p> |
| <p>NYSА_16828-01_B7_F32_1 NYSА_16828-01_B7_F32_2 NYSА_16828-01_B7_F32_3, etc.</p> | <p><u>Repository:</u> New York State Archives <u>Series number:</u> 16828-01 <u>Title:</u> Water Supply Commission survey questionnaires, 1905-1906 <u>Unique info:</u> Box 7, Folder 32, 7 pages</p> |
| NYSL_SC7004_B2_F58 | <p><u>Repository:</u> New York State Library <u>Collection and collection number:</u> William Cockburn Family papers, SC7004 <u>Unique info:</u> Box 2, Folder 58</p> |
| UCCA_93-0079_B15_7571-1 | <p><u>Repository:</u> Ulster County Clerk Archives <u>Collection and collection number:</u> Ashokan Reservoir Record collection, Ashokan Reservoir transcripts, 93-0079 <u>Unique info:</u> Book 15, page 7571-1</p> |

Imaging Quality Control Checklist

Quality is most easily evaluated through visual inspection. Things to look for during visual inspection include:

| <input type="checkbox"/> | Inspection Criteria |
|--------------------------|--|
| | image the correct size |
| | image the correct resolution |
| | file name correct |
| | file format correct |
| | image is in correct mode (i.e. color or grayscale) |
| | appropriate detail in highlight or shadows |
| | appropriate light and dark |
| | even tonal values or flare |
| | appropriate sharpness |
| | not pixilated |
| | no digital corruption (such as very regular, straight lines across picture) |
| | no Moiré patterns (wavy lines or swirls, usually found in areas where there are repeated patterns, such as half-tone dots, also bright patches of color; can appear when scanning through mylar) |
| | image appropriately cropped |
| | image not rotated or reversed |
| | image not skewed or off-center |
| | correct color balance |
| | appropriate tonal variation |

Concepts in Imaging - an investigation of terms

What are the differences between a TIFF and a JPEG?

They are different file formats. We recommend you save all scans as TIFFS, then create a JPEG from the master TIFF as an extra version for use. Here's why: **TIFF** (which is derived from "Tagged Image File Format") is the agreed standard for saving good quality images. When the image is saved, the file is not compressed, so the quality of a TIFF file remains uncompromised. Due to its uncompressed nature, TIFFs can be larger than files of other image formats. **JPEG** (which is derived from "Joint Photographic Experts Group") is the most common format used for sending attachments via email, or displaying images on a website. It allows the image to be compressed, so it takes up less storage space, but the compression causes something to be lost each time the image is edited and saved (known as "lossy" compression), so it is not considered an archival format. ["A **lossy compression** method is one where compressing data and then decompressing it retrieves data that may well be different from the original, but is close enough to be useful in some way."]

Although TIFF is not a compressed format, there is the option of using a form of compression called LZW compression when you save the file. This is a lossless data-compression technique for reducing a file's size. At NYSA we don't use this, but if you have a limited amount of storage, you may wish to choose the option of LZW compression when saving your images.

If TIFF is the standard, when would you use a JPEG?

If you want to put images on your website, a JPEG will load faster for users with a slower internet connection, and reduce the storage requirements for your website. You can email sample images to researchers in JPEG format. TIFFs can be too large to send or can overload the recipient's mailbox.

Both TIFFS and JPEGs are composed of thousands of pixels. What is a pixel?

Pixels are **picture elements**. When viewed together individual pixels create a composite image. Pixels only contain information about one color of one dot in an entire image. Images with a higher density of pixels are more detailed than images composed of fewer pixels. Images composed of more pixels may also be magnified at a higher power while still presenting a crisp image.

What are ppi and dpi, and is there a difference?

The density of the pixels (or the ratio of pixels within a given unit of measurement) is described as the image resolution. Resolution is usually expressed as pixels per inch (ppi). Dots per inch (dpi) is more correctly applied to describe the printed output of a digital image (as dots rather than pixels), but dpi and ppi are used inter-changeably to describe resolution.

In Figure 1.1 you can see how 4ppi picks up the broad tones of the image, but with only 4 pixels per inch, it is unable to render any detail. 72ppi shows the image without clarity. By scanning at 300ppi you can render a crisp, detailed representation of the original photo.

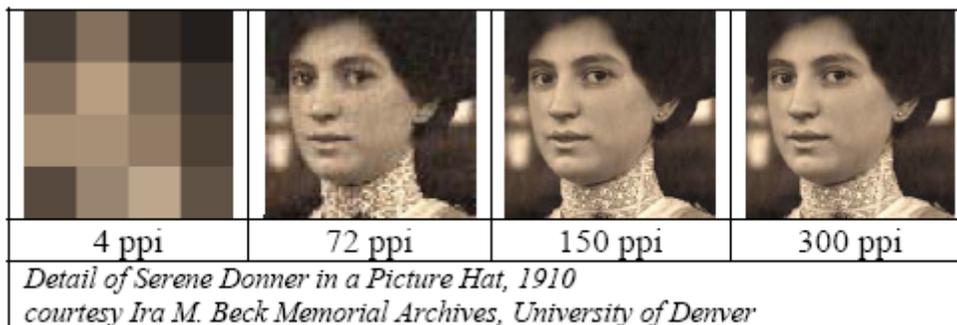


Figure 1.1: Image from Western States Digital Imaging Best Practices Version 1.0

How do you select the appropriate resolution (ppi)?

Handout 7 shows the resolutions we select for scanning, varying according to the format of the original item. Our standard for most formats is 300 ppi, and we will demonstrate some examples of the detail which can be captured at that resolution. An image which you want to blow up for a display needs to be scanned at a higher resolution in order to maintain quality at a larger size.

Knowing the size of the original item, and the ppi allows you to work out the approximate file size of the final scan, e.g. if a 4" x 5" image is scanned at 100 ppi, then height and width for the digital image is 400 pixels tall by 500 pixels across for a total of 200,000 pixels.

What are the color options for images?

The most common choices are 8-bit grayscale (made up of shades of gray) and 24-bit color. The "bit" we are referring to is the way in which the pixels are encoded digitally. For those that want to read further: Pixels are encoded as bits, also

called binary numbers, that correlate to a specific color. The more bits available to which a color could be assigned, the more color options are available for a digital image. Bit-depth is determined by the number of bits used to define each pixel. The greater the bit depth, the greater the number of tones (grayscale or color) that can be represented. Digital images may be produced in black and white (bitonal), grayscale, or color. For example, an image with a bit-depth of 1 has two possible binary values for each pixel, 0 and 1 of which one value will correspond to black and the other white. With two possible tones in an image, white and black, the image is usually called bi-tonal. An image with a bit-depth of 2 has two digits of binary values, totaling 4 possible binary numbers which can be associated with colors, 00, 01, 10, and 11. These binary values would be associated with black, dark gray, light gray, and white.

A Note About JPEG 2000:

JPEG 2000 (.jp2) is a recently developed open standard with a small but growing governmental and educational user base which is increasingly regarded as an acceptable alternative to the TIFF format. Moreover, the JPEG 2000 format supports both lossless and lossy compression of images. As a result, use of JPEG 2000 may reduce overall storage costs: an image saved as a compressed JPEG 2000 file can be 50% smaller than the same image stored as an uncompressed TIFF.

Be sure to note that lossless compression, which will not remove any data from the image files, is the only acceptable option for scanning archival materials.

However, JPEG 2000 file formats are not widely supported in web browsers, and so are not generally used on the World Wide Web. And at this time, the software options for creating and viewing JPEG 2000 files are relatively limited; if anyone asks, plugins can be downloaded for viewing in Firefox, Internet Explorer, Safari, and PhotoShop CS3.

The JPEG 2000 image format was developed to replace the older JPEG (.jpg) format, and should not be confused with it.

Scanning Settings for Photographic Images

| Image Type | Format | Bit Depth | Spatial Resolution | Compression |
|------------|--------|-----------|--------------------|-------------|
|------------|--------|-----------|--------------------|-------------|

Black & White Photographic Prints

| | | | | |
|--------|------|-----------------|--------------------------------------|--------------|
| Master | TIFF | 8-bit Grayscale | At least 300 dpi or 3000 pixels/side | Uncompressed |
| Access | JPEG | 8-bit Grayscale | 100-200 dpi | As needed |

Color Photographic Prints

| | | | | |
|--------|------|------------------|--------------------------------------|--------------|
| Master | TIFF | 24-bit RGB Color | At least 300 dpi or 3000 pixels/side | Uncompressed |
| Access | JPEG | 24-bit RGB Color | 100-200 dpi | As needed |

Black & White Lantern Slides and Glass Print Negatives

| | | | | |
|--------|------|-----------------|--------------------------------------|--------------|
| Master | TIFF | 8-bit Grayscale | At least 800 dpi or 3000 pixels/side | Uncompressed |
| Access | JPEG | 8-bit Grayscale | 300-400 dpi | As needed |

Color Lantern Slides and Glass Print Negatives

| | | | | |
|--------|------|------------------|--------------------------------------|--------------|
| Master | TIFF | 24-bit RGB Color | At least 800 dpi or 3000 pixels/side | Uncompressed |
| Access | JPEG | 24-bit RGB Color | 300-400 dpi | As needed |

Black & White Photographic Negatives and Slides

| | | | | |
|--------|------|-----------------|------------------------------|--------------|
| Master | TIFF | 8-bit Grayscale | 2400 dpi or 3000 pixels/side | Uncompressed |
| Access | JPEG | 8-bit Grayscale | 450 dpi | As needed |

Color Photographic Negatives and Slides

| | | | | |
|--------|------|------------------|------------------------------|--------------|
| Master | TIFF | 24-bit RGB Color | 2400 dpi or 3000 pixels/side | Uncompressed |
| Access | JPEG | 24-bit RGB Color | 450 dpi | As needed |

Before you begin scanning:

| <input type="checkbox"/> | Activity |
|--------------------------|--|
| | Establish staff/volunteers required |
| | Establish technical specification guidelines (equipment; formats, resolution, bit depth, compression, etc.) |
| | Establish timeline (deadlines and other demands on staff and equipment) |
| | Develop metadata guidelines |
| | Set up visual resources management program (configure spreadsheet or database, or install DCM application) |
| | Select collections to be digitized (ascertain whether there are any privacy issues and how images will be displayed) |
| | Open lines of communication with all staff involved |
| | Set up work space to accommodate materials |

Scanning work flow:

| <input type="checkbox"/> | Activity |
|--------------------------|---|
| | Pull originals for scanning |
| | Prepare originals for scanning (remove folders, staples, insert batch sheets, etc.) |
| | Using agreed upon settings, scan the originals |
| | Check scans (Quality Control) |
| | Approve scans or rescan originals |
| | Provide filenames |
| | Save scanned images to established location |
| | Enter metadata according to established guidelines |
| | Check metadata (Quality Control) |
| | Re-house originals |

Criteria for scanning

Will scanning increase access to the material(s)?

- Items of key historical or intellectual content, 'national treasures';
- Collections in medium/high demand;
- Material not readily accessible due to conservation or security considerations;
- Items that are relatively unknown, for which digital access could be expected to increase demand for and interest in the items; and,
- Projects to scan new acquisitions in certain formats.

Will scanning contribute to the preservation of archival material?

- Scanning will not cancel the need to preserve original items; scanning will assist preservation goals by reducing the need for originals to be physically handled.

Will scanning increase the utility of the items?

- Items that are easier to navigate and handle in digital form;
- Collections for which scanning would add to the ways in which the material can be used; and,
- Collections which will complement other digital collections by allowing materials to be compared and contrasted.

Is there an institutional imperative for this scanning?

- Would scanning result in efficiency gains for your institution by reducing the cost of maintaining and providing physical access to heavily used items;
- Would scanning attract funding or to generate income through marketing; and,
- Would scanning attract or promote additional digitization activities.

Will scanning provide context to other collections, including projects that will supplement or complement existing digital collections?

Will a scanning project fulfill ad hoc requests where the full cost of digitization is born by another agency or individual?



URLs to Online Resources

Digitizing Your Historical Photographs Workshop

- New York State Archives Imaging Production Guidelines (2006)
www.archives.nysed.gov/a/records/mr_erecords_imgguides.shtml

Online Controlled Vocabularies / Thesauruses

- Getty Institute's Art and Architecture Thesaurus (AAT)
http://www.getty.edu/research/conducting_research/vocabularies/aat/
- Library of Congress' Thesaurus of Graphic Materials (TGM)
www.loc.gov/pictures/collection/tgm/
- Library of Congress' [Subject] Authorities (LCHS)
<http://authorities.loc.gov/>

Copyright Resources

- United States Copyright Office: Copyright
www.copyright.gov/
- Copyright Basics
www.copyright.gov/circs/circ1.pdf
- Copyright Term and the Public Domain in the United States, Peter Hirtle, Cornell University Library
<http://copyright.cornell.edu/resources/publicdomain.cfm>

Visual Resources Management Tools

Off-the-shelf

- MS Excel: <http://office.microsoft.com/en-us/excel/>
- MS Access: <http://office.microsoft.com/en-us/access/default.aspx>
- Filemaker Pro: www.filemaker.com/

Digital Collections Management software programs with web publishing capabilities. Sites have links to institutions that use their software:

- EmbARK - www.gallerysystems.com/products/embark.html
- Luna Insight- www.luna-imaging.com/index.html
- ContentDM - www.dimema.com/
- Past Perfect - www.museumsoftware.com/

Additional Digital Imaging Resources

- New York State Archives' image description standards
request at : dhs@mail.nysed.gov
- Dublin Core Metadata Element set
<http://dublincore.org/documents/dces/>
- *Cornell University: Moving Theory into Practice-Digital Imaging Tutorial*
www.library.cornell.edu/preservation/tutorial/contents.html
- *Getty Institute: Introduction to Imaging*
www.getty.edu/research/conducting_research/standards/introimages/index.html

Preservation of Digital Photographs

- *Digital Preservation Management: Implementing Short-term Strategies for Long-term Problems*
www.icpsr.umich.edu/dpm/dpm-eng/eng_index.html
- NYSA's *Preservation of Electronic Records* Workshop
To find out more about this workshop which presents preservation tips on all types of electronic records go to:
www.archives.nysed.gov/a/workshops/index.shtml

Sharing your Historical Photographs Online examples from individual repositories

- Bard College Archives and Special Collections, Annandale-on-Hudson
www.bard.edu/archives/digitalcoll.htm
- Brookside Museum, Saratoga County Historical Society
www.brooksidemuseum.org/exhibits/virtual-exhibits/batter-up/
- Cornell University Division of Rare and Manuscript Collections
<http://rmc.library.cornell.edu/collections/rmccollections.html>
- Erie Canal Museum
www.eriecanalmuseum.org/HISTORY+PHOTOGALLERY.tab.aspx
- Lucy-Desi Museum, Jamestown, NY
www.lucy-desi.com/library/archives.html

- New York State Archives – The Digital Collections
www.archives.nysed.gov/d/
- Onondaga Historical Association Museum and Research Center
www.cnyhistory.org/Upload_Project/
- Rochester Museum and Science Center Collections and Libraries
<http://collections.rmasc.org/>
- Town of Yorktown (Westchester County)
www.yorktownhistory.org/ (click on “Archives” then click on “Photo Archives”)
- Warren County Records Center and Archives (scanned historical documents)
www.co.warren.ny.us/records/archive.php
- Westchester County Virtual Archives
www.westchesterarchives.com/Home.html

**Sharing your Historical Photographs
Collaborative digital collection sites**

- New York 3Rs Association’s Library Councils list (find your local library council)
www.newyorkheritage.org/ny3rs.php
- New York Heritage Digital Collections
www.newyorkheritage.org
- Interested in joining the *New York Heritage Digital Collections* collaborative?
Fill out the form at: www.newyorkheritage.org/joinus.php
- Northern New York Library Network’s North Country Digital History Collection
<http://history.nnyln.net/index.php>

Digitizing Your Historical Photographs: Describing the Image Exercise

Metadata for Image NYSA_A3029-78_B3_F7_tif

Title: Hat factory: workmen in Forming Room where hats are first shaped, 1912

Creator: New York (State). Factory Investigating Commission

Subject Terms: [These are LC subject headings] Hat trade--United States--History; Hat trade--Employees; Factory inspection--New York (State)--Yonkers; Work environment

Description: Several men, dressed in work clothes, some in aprons, their sleeves rolled up, stand in the aisle between tables and machinery in the Forming Room of the Waring Hat Manufacturing Company in Yonkers, New York. In the hat manufacturing process, hats received their initial formation in the Forming Room. During the inspection, the Factory Investigation Commission found this room, and many others at the Waring Hat Manufacturing Company, to be excessively humid and lacking proper ventilation.

Date Original: 1912

Location: Yonkers, N.Y.

Rights: This image is provided for education and research purposes. Rights may be reserved. Responsibility for securing permissions to distribute, publish, reproduce or other use rest with the user. For additional information see our [Copyright and Use Statement here](#).

Date Digital: 2009-03-29

Digitization Specifications: TIFF, 300 dpi, 8 bit grayscale, uncompressed, 1640 XL Epson Scanner, Adobe Photoshop CS

Unique Identifier: NYSA_A3029-78_B3_F7_tif