RICHES/PHC Digitization Standards

Regional Initiative for Collecting the History, Experiences, and Stories of Central Florida,
Public History Center

RICHES and PHC Students, Volunteers, and Partner Organization Members
Spring 2013

This is the Spring 2013 RICHES Digitization Standards for RICHES and PHC students, volunteers, and partner organization members. Content may be added, deleted, or revised as needed. Please check the Wiggio student group for the latest version.

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Digitization Standards

These digitization standards were adopted from those used by the University of Central Florida Libraries Special Collections Department. The purpose of this guide is to provide general guidelines and instructions for RICHES and PHC employees, students, and volunteers to use when digitizing materials. The Public History Center (PHC) shares the same digitization protocols as RICHES.

Overview

The digitization standards utilized by RICHES and PHC are based on the Western States Digital Imaging Best Practices General Principles:

1. Scan at the highest resolution appropriate to the nature of the source material.
2. Avoid rescanning and re-handling of the originals in the future by scanning at the appropriate level of quality once.
3. Create and store a master image file that can be used to produce derivative image files and serve a variety of current and future user needs.
4. Use system components that are non-proprietary.
5. Use image file formats and compression techniques that conform to standards within the cultural heritage community.
6. Create backup copies of all files on a stable medium.
7. Create meaningful metadata for image files or collections.
8. Store materials in an appropriate environment.
9. Monitor and recopy data as necessary.
10. Document a migration strategy for transferring data across generations of technology.
11. Anticipate and plan for future technological developments.
12. Scan an original or first generation (i.e., negative rather than print) of the source material to achieve the best quality image possible.

The Master Image

Capture one, high resolution image from item being digitized. This is called the *master image*. This image will be scanned in at full size and at very high resolution, then saved unaltered as a lossless Tagged Image File (TIF) in RGB color. Scan the master image in RGB color, even if the original image is in black and white. Create one derivative file at the time of scanning: the *archive image*. The archive image will be a lower resolution image suitable for uploading to Omeka. Each item should only have to be scanned once.

Scanning

Before scanning an item, evaluate the best method to use. Most photographs, documents, and ephemera can be scanned with a flatbed scanner. However, some fragile items may be damaged if scanned on a flatbed scanner. Each item should be carefully considered to avoid irreparable damage. Sending the items to Digital Systems to be scanned on the reprographic scanner or using a high quality digital camera are viable alternatives to a flatbed.

For items that are too large to fit on the flatbed scanner, a hand scanner or digital camera may be used. 3-D objects, such as artifacts, cannot be scanned using a flatbed scanner and must be photographed with a digital camera.

The best option however, would be to take a high quality photograph of the image and scan the negative on a professional quality scanner. Carefully wipe of the scanner glass and original with a clean soft glove. Do not use any cleaning solutions or abrasive materials on either.

Using the Flatbed Scanner

When using a flatbed scanner, the highest resolution possible should be used. Generally, scans should be made at 600 DPI, however this will produce a very large file. Files over 1 megabyte are not permitted on the GLBT History Website. The website should automatically adjust the image to the restricted size when you upload it.

In digitizing historical items, the goal is to scan an unedited image that is close to the original item as possible. There should be no adjustments automatic or otherwise to the scanning mode. **Resolution** should be set appropriate to the size and condition of the item being scanned (see "Resolution" below), but no lower than 600 DPI. Scanning at a DPI higher than 1200 is only necessary when an image is unusually small or is being digitized from a negative or slide.

Save the file as a Non-Compressed TIF.

Resolution

Ensure that the proper scan resolution is selected. Image resolution is usually referred to as "dpi" (dots per inch) or "ppi" (pixels per inch). Dpi usually refers to hardware like printers (how many dots per inch the printer is capable of printing), while ppi is usually used when referring to image files displayed on a screen. The greater the ppi, the more detailed and clear the image, and the larger the file size. The bare minimum for most images is 600 ppi. However, the image should be scanned at a high resolution. Still, the best resolution for a particular image can vary on a case by case basis. Smaller images, images of poor quality, and images with lots of small details like maps should be scanned at a higher resolution, such as 1200ppi.

Scanning Text

	Master	**Access**	**Thumbnail**
Resolution	600 ppi (minimum for a standard page of text) 400-600 ppi(minimum for larger [over 8.5 x 11 inches], oversized or folio materials)	72 ppi	72 ppi
Bit Depth	24 bit Color	8 bit Color	8 bit Color
File Format	TIFF	JPEG	JPEG
Size	100%	600 pixels across long dimension	150 pixels across long dimension

When scanning text, features such as text size should be taken into consideration. The smaller the text or other details, the higher the resolution needs to be. A page with very small text may require a resolution higher than 600ppi. Always check the scans to ensure satisfactory results, and rescan at a higher resolution if necessary. If the page of text includes color elements, it should be scanned in color mode. Pages that are strictly black and white may be scanned in grayscale.

Scanning Photographs

	Master	**Access**	**Thumbnail**
Resolution	3000 to 5000 pixels across the long dimension. (no less than 600 ppi)	72 ppi	72 ppi
Bit Depth	24 bit Color	8 bit Color	8 bit Color
File Format	TIFF	JPEG	JPEG
Size	100%	600 pixels across long dimension	150 pixels across long dimension

Although the table above outlines general scanning protocols for photographs, the size, type, and conditions of various photographs should be taken into consideration. Smaller photographs and photographs of poor quality, require higher resolutions than larger, higher quality images. Sepia photographs should be scanned in color mode. If the negative for a photograph is available, it is usually best to scan from the negative for highest quality, unless there are features of the photo you want preserved, such as the photographer's manipulation. If there is significant information on the back of the photograph, the back should be scanned as a separate image. The backs of postcards should always be scanned as well.

Scanning Maps

	Master	**Access**	**Thumbnail**
Resolution	At least 5000pixels across the long dimension. (no less than 600 ppi)	72 ppi	72 ppi
Bit Depth	48 bit Color	8 bit Color	8 bit Color
File Format	TIFF	JPEG	JPEG
Size	100%	600 pixels across long dimension	150 pixels across long dimension

The resolution used to scan maps must be high enough to capture the size of the smallest detail in the map. A map with large details and fonts will not require as high a resolution as a map with small details and fonts. Maps with color should always be scanned in color.

Scanning Graphic Images

	Master	**Access**	**Thumbnail**
Resolution	3000 to 5000 pixels across the long dimension. (no less than 600 ppi)	72 ppi	72 ppi
Bit Depth	24 bit Color	8 bit Color	8 bit Color
File Format	TIFF	JPEG	JPEG
Size	100%	600 pixels across long dimension	150 pixels across long dimension

Quality Evaluation

After the image has been scanned and the bit depth adjusted, it can be evaluated for quality before it is saved. This can be done with the naked eye and with the help of imaging software. First, view the image at 100% magnification and check to make sure there are no visible flaws, such as blurring or pixilation. Also, make sure that the smallest details of the item have been captured and that the image has been properly cropped. If the image is satisfactory, check to make sure it was scanned with the proper resolution, color mode, and size.

Saving the Master Image

Items should be saved as is, with no resizing or editing, in the TIF format. TIF is a nonproprietary lossless file format and can viewed across platforms without losing information when it is saved, ensuring a high quality image. This high quality TIF will become the master image from which other images can be derived.

If the item already has a defined title, enter that when naming the file. If the item does not have a title, create one that describes what the item is. Do not use generic names, such as “Image 1.”

Saving the Archive Image

Once the master image has been created, create the archive image before closing the item. In most programs, you will be able to select File, Save As. Then save the image as a JPG image (select the highest quality) and use the same file name as the master image.