

# Brethren Digital Archives

## Image Acquisition Guidelines

An open discussion setting forth guidelines for the digitizing of Brethren periodicals:

Discussion points:

- Equipment
- Materials to be digitized
- Reference Targets
- Image Description
- Image Acquisition
- Storage Media

# Equipment & Materials to be Digitized

## Equipment

- **Styles**
  - **Flatbed Scanner vs. Other Digital Imagers.** In all cases tabloid-sized flatbed or sheet-fed scanners shall be utilized except in those excepted cases where the subject matter exceeds the dimensions of the utilized equipment.
  - **Flatbed Scanner vs. Sheet-fed Scanner.** In those cases where the firm intends to utilize a sheet-fed scanner, each item intended to be so processed shall be encapsulated in a suitable protective sleeve during the process.
  - **Digital Camera vs. Sheet-fed Scanners.** For those items too large for tabloid-sized flatbed or sheet-fed scanners, it shall be on a case-by-case basis decision of the client as to whether to use a digital camera or a large format sheet-fed scanner.
- **Specifications**
  - **Specification sheet.** Each piece of equipment's specification sheet shall be supplied to the client for determination of acceptance of said piece of equipment.
  - **Optical resolution.** Each accepted piece of equipment shall meet or exceed an optical resolution of no less than 1200 ppi in at least one spatial dimension as described and delineated in Guides to Quality in Visual Resource Imaging in Chapter 2, Sub-chapter 4.1.1: Spatial Sampling Rate.1
  - **Dynamic range.** The minimum acceptable dynamic range shall be no less than 3.2 Dmax as described and delineated in Technical Guidelines for Digitizing Archival Materials for Electronic Access... on page 26: Technical Overview—Quantifying Scanner/Digital Scanner Performance—Dynamic Range.2

## Materials to be Digitized

- **Bound publications**
  - **No guillotine unbinding!** All bound periodicals, books or similar materials shall be unbound by hand using accepted archival standards.
  - **Signature preservation.** The signature integrity of each unbound periodical, book or similar material shall be maintained.
  - **Archival repairs.** Each page of unbound periodical, book or similar material shall be repaired, as needed, utilizing accepted mending tissue or other proscribed standards. Each repair shall be performed in a minimalistic manner.
- **Stapled publications**
  - **Staple removal.** All staples shall be removed in a manner non-destructive to the publication.
  - **Signature preservation.** The signature integrity of each unbound periodical, book or similar material shall be maintained.
  - **Archival repairs.** Each page of unbound periodical, book or similar material shall be repaired, as needed, utilizing accepted mending tissue or other proscribed standards. Each repair shall be performed in a minimalistic manner.
- **Singular Documents**
  - **Archival repairs.** Each singular document, such as original minutes, congregational documents, etc., shall be repaired, as needed, utilizing accepted mending tissue or other proscribed standards. Each repair shall be performed in a minimalistic manner.

# Reference Targets & Image Description

## Reference Targets

- **Pre-Image Acquisition Calibration**

- **Record Groups.** Prior to image acquisition of a record group the equipment so utilized shall be calibrated with either the manufacturer's recommended calibration target or optionally either a Kodak Q-13 or Q-60 Color Input Target.
- **Singular Items.** In the case of singular items, such as but not limited to glass plate negatives, photographs, historically significant documents, etc., calibration may be reserved for a similar set of records. Within the metadata for that specific item calibration information shall be recorded.

- **Reference Target Utilization Parameters**

- **Record Groups.** Before image acquisition of a record group (periodicals, books, etc.) a properly accredited reference target utilizing both color and gray scale shall be scanned and included as being part of that record group. A properly accredited reference target can be either those recommended by the manufacturer or a Kodak Q-13 or Q-60 Color Input Target.
- **Singular Items.** In the case of singular items, such as but not limited to glass plate negatives, photographs, historically significant documents, etc., reference target information specifics may be recorded within the metadata for that specific item.

## Image Description

- **File Formats**

- **Archival Acceptable.** Image format to be utilized is Tagged Image File Format (TIF/TIFF). Multi-page TIFF files are not to be utilized. The only allowable compression acceptable is Lempel- Ziv-Welch (LZW) lossless compression.
- **Not archival Acceptable.** In the case of creating Internet or screen acceptable viewable images only the Joint Photographic Experts Group (JPG / JPEG) is acceptable. The file shall be saved with a compression ratio not to exceed 75% loss.

- **Resolution**

- **Record Groups.** In the case of periodicals, books, or similar items the pixel resolution shall be no less than 400 dpi at a bit depth of 8 bits. It shall be the option of the client whether to have the front and back covers, and the associated inside pages, scanned at a resolution of 600 ppi in 24 bit color of signature style publications.
- **Singular Items.** In the case of singular items, such as but not limited to glass plate negatives, photographs, historically significant documents, etc., these items shall be digitized at a resolution of no less than 1200 ppi in 24 bit color.

- **Metadata**

- **Record Groups.** In the case of periodicals, books or similar items there shall be created a cover sheet detailing all metadata for that particular record group. This metadata target shall include but not be limited to informational metadata pertaining to the record group, the name of the equipment operator, technical metadata of the equipment utilized, and repository information. This metadata target shall include information pertaining to any tonal adjustments made to any derivative files.
- **Singular Items.** In the case of singular items, such as but not limited to glass plate negatives, photographs, historically significant documents, etc., all metadata as described above shall be recorded within the resultant image file.

- **Profiles**

- **Gray Scale.** In all cases any created digital gray scale image shall utilize a Gray Gamma of 2.2 as described and delineated in Technical Guidelines for Digitizing Archival Materials for Electronic Access... on pages 36-38: Imaging Workflow-Color Management Background.3
- **Color.** In all cases any created digital color image shall utilize the Adobe RGB 1998 color profile as described and delineated in Technical Guidelines for Digitizing Archival Materials for Electronic Access... on pages 36-38: Imaging Workflow-Color Management Background.4

# Image Acquisition & Storage Media

## Image Acquisition

- **Backing**
  - **Reflective.** A black reflective backing shall be utilized facilitating ease of overscan selection and removal in following steps.
- **Processing: Production Masters**
  - **Deskew: Record Groups.** In the case of periodicals, books or similar previously bound items the resultant image shall be deskewed so as to ensure the previously bound edge is perpendicular.
  - **Deskew: Singular Items.** In the case of singular items, such as but not limited to glass plate negatives, photographs, historically significant items, etc., each item shall be deskewed in a manner as to ensure that the item is in a "best fit" rotation.
  - **Overscan.** All overscan shall be removed to the original edges of each resultant image utilizing methods conversant with best digital workflow procedures leaving a white background.
  - **Cropping & Path.** Each resultant image shall contain a saved path using a 0.5 pixel tolerance utilizing an inverse selection of the white overscan pixels. This path shall be expanded 1 pixel and the image cropped to this dimension.
  - **Binding Holes.** Holes created during the binding process shall be digitally repaired using best scenario procedures.
  - **Saving: Record Groups.** In the case of periodicals, books or similar previously bound items the resultant image shall be saved utilizing the same page number as the original page (i.e. 001.tif, 002.tif, etc.). In the case of metadata targets they shall be saved as 0.tif. In the case of front matter pages these images shall be saved in such a manner as to ensure that within a file directory structure they fall within the order between the metadata target and the first numbered page of the publication.
  - **Saving: Singular Items.** In the case of singular items, such as but not limited to glass plate negatives, photographs, historically significant items, etc., each item shall be saved so that the file naming structure allows for progressional reading as in the original items.

## Processing: Derivative Files

- **TIF files.** A set of files shall be created from the production masters with tonal adjustments applied to them. Within the metadata for the resultant derivative files the white and black point settings utilized shall be recorded. The file shall be saved utilizing parameters previously mentioned.
- **JPG files.** A set of files shall be created from the tonally adjusted TIF derivative files. It shall contain the same metadata as was applied to the derivative files. The file shall be saved utilizing parameters previously mentioned.
- **PDF files.** A Portable Document Format (PDF) file shall be created from the TIF derivative files. It shall have the same metadata applied as was applied to the derivative files. In the case of printed materials this file shall be OCR'd utilizing Adobe's Clear Scan technology. The OCR setting utilized shall be the lowest downsampling rate. It shall be saved with no compression.

## Storage Media

### Type

- **Digital Video Disks.** The files shall be delivered to the client utilizing Digital Video Disks (DVD) tested for a life span of no less than 70 years duration. The files shall be stored within file directories labeled "Raw", "Enhanced" and JPG. Each disk shall be appropriately labeled in such a fashion as will endure for the expected lifetime of the disk.
- **Disks Cases.** Each set of disks shall be stored in a case holding the entirety of the set. Each case shall be appropriately labeled in such a fashion as will endure for the expected lifetime of the disks