

Resolution Chart for Image Digitization

Digital Stewardship Curriculum

Resolution in Image Digitization

Resolution in an image is the number of pixels in each dimension that is displayed. In other words, resolution is the *density* of pixels in the image. The measurement for resolution in images is DPI (Dots per Inch) in print form or PPI (Pixels per Inch) in digital form. When capturing images in digitization, there is an inverse relationship between the resolution needed to meet a “high resolution” standard and the size of the image. The smaller an image is, the higher the resolution needed to achieve “high resolution.”

Depending on the type of material being digitized, common recommendations range from 4,000 pixels on the long edge (text and manuscript material) to 6,000 pixels on the long edge (transmissive materials such as negatives or slides). The appropriate PPI for an image can be calculated using an equation, or using the chart on page 3. A variety of standards and resources exist to guide your institution in creating best practices for image digitization. A few selected websites are below:

- Federal Agencies Digitization Guidelines Initiative (FADGI)
<http://www.digitizationguidelines.gov/guidelines/>
- The Sustainable Heritage Network Photographs and Images
<http://sustainableheritagenetwork.org/digital-heritage/category/photographs-and-images>
- Library of Congress Sustainable Formats
<http://www.digitalpreservation.gov/formats/intro>

Remember, resolution is just one measure of quality for digitization of images. You should also consider other factors such as bit depth, color profile, tonal range, and file format.

How to Use this Chart

This resolution chart can be used as a quick reference guide to deciding on the best resolution for a given format and size. The first row indicates what type of material to be scanned (**Verso of Archival Material, Legacy Digitization, Photographic Content - Transmissive and Reflective, Photographic Content - Reflective, and Manuscript and Textual Material**). Each pair of columns underneath show the number of inches on the long edge (Length of Long Edge), then the appropriate resolution for digitization (Digitization Resolution).

Step 1: Determine which format your material is, using the five choices in the first row of the chart.

Step 2: Measure the long edge of your material using a ruler.

Step 3: Find the appropriate measurement in inches that is closest to your measurement.

Step 4: Find the Digitization Resolution to the right of that number.

For example, if you had a photographic print (reflective) which measured 7 inches on the long edge, you would want a scan of at least 725 PPI to achieve the best resolution possible. Scanning at a lower resolution would risk loss of detail, but scanning at much higher resolution would result in a larger file size without capturing more detail.