

Digitization Standards for 3 dimensional objects

Definition: These standards will apply to objects where the items of interest are the materials, structure and context of the object, as compared to most textual and photographic materials, where the subject is of primary interest rather than the medium.

Users of these images will be looking at form, need data about materials, dimensions, and context, and contact info. While digitized text images can be researched directly on the web, 3D objects cannot be digitized and used for research purposes. Proper research on these materials require that the researcher view the object directly to evaluate measurements, condition, use and wear, etc.

1) What is to be documented?

a) visual:

6 sided views are possible with content DM. We should take advantage of this capability. Therefore 6 images per object could be recorded. This should include a minimum of:

- 1) overall image- complete object with no cropping, both recto and verso views.
- 2) a Proper Left and Proper right view, where relevant.
- 3) any close-up views of areas of interest

All images must include a colour scale and a size scale.

Lighting must be adequate, with minimal shadow.

There must be a neutral backdrop, colour dependent on the object being documented.

Any identification numbers (catalogue or accession) should be included in the photograph.

b) contextual

c) metadata (refer to metadata standards working group)

Technical standards:

Image quality:

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The original photographic print and film should be stored in archival quality storage envelopes in a secure area.

The digital copies (on CD) should be stored in a separate secure location.

A conservator should be consulted prior to object documentation to ensure proper handling during photo shoot.

File Format standards

Three-Dimensional artifacts

1) Preservation Standard - Master Archival Files

From digital camera:

Capture: RAW data

Image resolution: 600 dpi for image of 8.5 x 11”

File format: Tagged Image File Format (TIFF)

Compression: none

Bit-depth: 8 bit greyscale, 36 bit colour

Colour management: cieLAB (included when storing as TIF) or Adobe RGB 1998

From film based media (slides and negative): Best quality is still obtained from film scanners. If a film negative is available, use a film scanner to digitize the image in 24 bit colour, 600 dpt TIFF

** paper based prints, use standards and techniques described for scanning two dimensional media.*

Image resolution: capture should achieve 600 dpi for an image size of 8.5 X 11.

File format: TIFF

Bit depth : 8 bit greyscale, 36 bit colour

Images should include the use of 3 Targets (linear scale, greyscale and colour scale) as well as a unique object identifier (catalogue number), unless the capture file can have this data embedded (EXIF: Exchangeable image file tag)

It may be necessary to experiment with a camera to determine the capture resolution and the archival file format resolutions for three dimensional pieces.

2) Delivery standard – derivative files from archivals

Colour management: Adobe sRGB (web only) AdobeRGB1998 (for print or web)

a) Thumbnails for web browsing:

file format: GIF or JFIF

resolution: 72 dpi, minimum 512 pixels on the long dimension (512 x 768) assuming screen resolution of 600 x 800 pixels.

Compression JPEG (lossy) 10% compression.

(can be lower...must experiment with image to determine what may be acceptable)

b) access/viewing:

Image resolution: 512 pixels on long dimension (for screen resolution 800x600)

File format: JPEG (JFIF) lossy compression.

c) Proprietary standards:

JP2000 (available through ContentDM) or Adobe PDF

d) print format: if printing is to be allowed for the image, JPEG 2048- 3072. Images should be set to print at 4x6 at low to medium quality.

References:

www.Images.library.uiuc.edu (image quality calculator: for text/photographs)

<http://swcenter.fortlewis.edu/tools/digitz.htm>

www.cdpheritage.org/westerntrails/wtbpscanning.html

www.cdpheritage.org/resources/scanning/documents (pdf)

<http://lcweb2.loc.gov/ammem/formats.html>

www.ninch.org/guide.pdf (242 page document)

<http://www.tasi.ac.uk/advice/creating/fileformat.html>