

Preservation Metadata Implementation Guidelines
for North Carolina Digital Collections
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Rev. Date: 5/2011

The Preservation Metadata Implementation Guidelines for the State Library materials within the North Carolina Digital Collections are a set of rules for the creation of preservation metadata. Field names are followed by an A (Access copy) or M (Master copy) to define which version's data to populate in the given field. Please refer to the [Dublin Core Metadata Implementation Guidelines](#) for guidance on creating descriptive metadata.

Revisions/additions

Metadata field	Date revised	Revision

Bit Depth-M			
Element	N/A		
Mandatory	No		
Repeatable	Yes		
Crosswalk to PREMIS	1.5 objectcharacteristics		
Controlled vocabulary	Values below are preferred.		
Definition	Bit depth is a measurement of the number of colors or shades of gray that can be represented by a pixel. The smallest unit of data stored in a computer is called a bit.		
Input guidelines	1. Standard values include:		
	Type of scan	Preferred Value	This means
	Bitonal	1 bit	Each pixel is either black or white
	Grayscale	8 bit	Each pixel can be 1 of 256 shades of gray
		24 bit	Each pixel can be 1 of 16.8 million shades of color
	Color	8 bit	Each pixel can be 1 of 256 shades of color
		24 bit	Each pixel can be 1 of 16.8 million shades of color
	Video	24 bit	Stereo if the original is in stereo; mono if the original is in mono
Audio	16 bit	Stereo if the original is in stereo; mono if the original is in mono	

Examples	24 bit
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Capture Tools-M	
Element	N/A
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	
Controlled vocabulary	Yes
Definition	The hardware and/or software used to create a digital file from an analog object. This can include a scanner, digital camera, photo editing software, or a video conversion tool.
Input guidelines	1. Use controlled vocabulary to select the appropriate hardware and/or software, include company, product name, model or version number.
Examples	Epson Expression 10000XL scribe3.chapelhill.archive.org

Checksum-M (See chart below)							
Element	N/A						
Mandatory	Yes						
Repeatable	Yes						
Crosswalk to PREMIS	1.5.2.1 messageDigest Algorithm 1.5.2.2 messageDigest						
Controlled vocabulary	None						
Definition	A form of redundancy check, the checksum can be used to detect errors unseen by the human eye. It does this by adding up the bits and storing the resulting value. The checksum value is a string of alphanumeric characters.						
Input guidelines	<p>1. Generate a checksum using a checksum utility (Ex. HashMyfiles) 2. Specify the specific algorithm used to construct the checksum followed by a colon 3. Record the alphanumeric value as indicated below as it is generated by the utility.</p> <table border="1"> <thead> <tr> <th>Born Digital</th> <th>Digitized +Original Object Identifier = PDF</th> <th>Digitized +Original Object Identifier ≠ PDF</th> </tr> </thead> <tbody> <tr> <td>Enter checksum for the Master file in metadata</td> <td>Enter checksum for the Master file in metadata</td> <td>Enter checksums and file size for Masters in a .txt file and save in the admin folder</td> </tr> </tbody> </table> <p>* If a checksum is present in the metadata and the Original Object Identifier is not a PDF, that checksum was generated on the Access file.</p>	Born Digital	Digitized +Original Object Identifier = PDF	Digitized +Original Object Identifier ≠ PDF	Enter checksum for the Master file in metadata	Enter checksum for the Master file in metadata	Enter checksums and file size for Masters in a .txt file and save in the admin folder
Born Digital	Digitized +Original Object Identifier = PDF	Digitized +Original Object Identifier ≠ PDF					
Enter checksum for the Master file in metadata	Enter checksum for the Master file in metadata	Enter checksums and file size for Masters in a .txt file and save in the admin folder					
Examples	SHA-1: 0074D6B323BC85581A8CDAFAF8FCECD4EBD2AA31						

Digital Characteristics-A	
Element	Format-Extent
Mandatory	Yes
Repeatable	Yes
Crosswalk to PREMIS	1.5 objectcharacteristics 1.5.3 size
Controlled vocabulary	None
Definition	The electronic format of the resource being described. For digital assets, format may include the extent of the digital resource, such as file size or playtime.
Input guidelines	<ol style="list-style-type: none"> 1. Include file size in kilobytes (KB), megabytes (MB), etc. Round to the nearest kilobyte or tenth of a megabyte. This information is usually available by looking at the Properties box of the object. For digital audio and video, include playtime of the resource. 2. If the digital object is in a format with easily ascertained page numbers, include the number of pages. Separate this information from the file size with semicolon-space. If the software program and the page numbers in the content of the document are different, use the page numbers listed on the software program.
Examples	6,331 KB; 100 p. 31 MB; 67 p. 51,624 KB; 44 min. 87,194 KB; 1 hr., 14 min.

Digital Creation Date-M	
Element	N/A
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	1.5.5.3 dateCreatedByApplication
Controlled vocabulary	Uses ISO 8601 W3C Date Time Format standard.
Definition	Date of creation for the digital object. This should be expressed in ISO 8601 date-time format (YYYY-MM-DD) and can be automatically generated in many systems.
Input guidelines	<ol style="list-style-type: none"> 1. Use ISO 8601 format for recording date information (YYYY-MM-DD) or (YYYY-MM) 2. Record year, month, and day for more flexible management. 3. For files scanned over time, enter the year and month in which the object was scanned, or enter multiple dates separated by a semi colon.
Examples	2010-05-20 2011-01 2011-01-31;2011-02-01

Digital Creator-M	

Element	N/A
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	N/A
Controlled vocabulary	Yes
Definition	Name of the creator (individual) of the digital surrogate.
Input guidelines	1. Enter "Last name, first name" or email address
Examples	Kenney, Kathleen scanner-john-gill@archive.org

Original Object Identifier-M	
Element	N/A
Mandatory	Yes
Repeatable	Yes
Crosswalk to PREMIS	1.6 originalName
Controlled vocabulary	None
Definition	An identifier for the master copy generated by the creator/submitter and formatted as received.
Input guidelines	1. Enter filename of the digital object with extension.
Examples	P1080067.JPG pubs_lawsofnorthcarol1817nort.pdf

Pres File Name-M	
Element	Identifier.local
Mandatory	Yes
Repeatable	Yes
Crosswalk to PREMIS	N/A
Controlled vocabulary	1.1.2 objectIdentifierValue
Definition	The file name of the master copy of the digital resource physically residing in the State Library of North Carolina.
Input guidelines	Refer to Scanning Guidelines for file name creation.

Pres File Path-M	
Element	Identifier.local
Mandatory	Yes
Repeatable	No
Crosswalk to PREMIS	1.7.1.2 contentLocationValue
Controlled vocabulary	None
Definition	Path information identifying the location of the master copy of the file maintained for preservation purposes by the State Library of North Carolina.

Input guidelines	<p>Do not include the name of the drive, as this may change when files are moved or accessed differently.</p> <p>For digitized state pubs:</p> <ol style="list-style-type: none"> 1. \Preservation_content\StatePubs 2. \pubs_[unique project name] <ol style="list-style-type: none"> a. for single-item projects, a few meaningful words from the title of the item followed by the year of publication, formatted YYYY, or b. for multiple-item projects, a few meaningful words representing the name of the project. 3. \images_master <p>Example (multiple-item project):\Preservation_content\StatePubs\pubs_edp\images_master</p> <p>Example (single-item object): \Preservation_content\StatePubs\pubs_catalogclevelandcounty1967 \images_master</p>
	<p>For born-digital state pubs:</p> <ol style="list-style-type: none"> 1. \Preservation_content\StatePubs 2. \pubs_borndigital 3. \images_master <p>Example: \Preservation_content\StatePubs\pubs_borndigital \images_master</p>
	<p>For objects not in the state pubs collection:</p> <ol style="list-style-type: none"> 1. \Preservation_content 2. \[unique project name] 3. \images_master

Resolution-M	
Element	N/A
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	1.5 objectcharacteristics
Controlled vocabulary	None
Definition	Digital resolution of the digital object measured in dots per inch.
Input guidelines	<ol style="list-style-type: none"> 1. For images, enter the resolution value in dots per inch (dpi) 2. Followed by a space and “dpi”
Examples	300 dpi

Revision-M	
Element	
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	1.10 relationship

Controlled vocabulary	None
Definition	For tracking derivative files of the master.
Input guidelines	Enter the name of the migrated file including file format followed by a comma and the date the file was migrated.
Examples	pubs_catalogclevelandcounty1967.jpg, 2011-01-10

Security-M	
Element	N/A
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	1.5.6.1 inhibitorType
Controlled vocabulary	Yes
Definition	Any method employed to inhibit access to the file.
Input guidelines	Enter a short description of the security technology used.
Examples	Lock (PDF) Watermark

URL-A	
Element	Identifier
Mandatory	No
Repeatable	Yes
Crosswalk to PREMIS	1.1.2 objectIdentifierValue
Controlled vocabulary	None
Definition	A designated domain at which the access version of the object can be viewed.
Input guidelines	Enter the URL where the object is meant to be accessed by the public. Include the entire URL, with the http:// or https:// designation. A permanent URL, DOI or handle is preferred, if one is available.
Examples	http://www.archive.org/details/growingmarketing00gill http://digitalstatelibnc.cdmhost.com/u?p249901coll22,586

