
Topic : Making Discovery Compatible Tapes

Reference Release: v3.4.4

Date : January 2014

Summary:

At the time of this writing, the Discovery Channel has issued 3 different LTO tape formats for submitting productions to their organization. These formats are as follows :

- **Footage Master** per spec Discovery File Based Footage Policy v2.0 2013
- **Graphics Master** per spec Discovery Communications Global Technical Specifications - Version 4_0
- **Program Master** per spec File Based Program Master Tech Spec Interim Standard_Version 1_3_1_012913

Cache-A software version 3.3 added the capability to make Footage Master tapes.
Cache-A software version 3.4.3 added the capability to make Graphics Master tapes.
Cache-A software version 3.4.4 added the capability to make Program Master tapes.

This document contains a very high level overview of what users need to do on the Cache-A side to make correct tapes. Note that the user is expected to create the appropriate folder structures, metadata.xml files and content as specified by Discovery for their submission.

Footage Master Procedure:

This procedure assumes that you are familiar with the Footage Discovery spec and have properly prepared your footage and metadata.xml file in preparation for creating your submission tape (note that Discovery provides a tool to aid in the creation of the metadata file, available from their Producer's Web Portal).

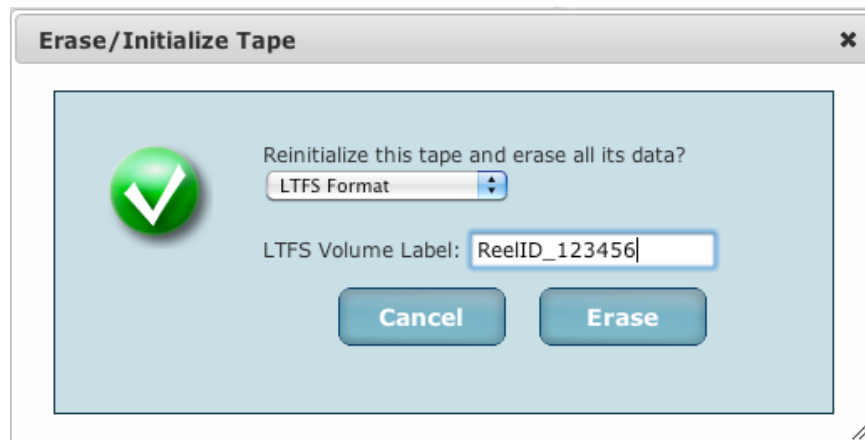
1. Go to the Cache-A web UI page for System Tools > Settings tab and ensure that the following setting is selected and applied before formatting your submission tape:



Discovery Footage Master Setting

- The “Discovery LTFS Format setting ensures that the “metadata.xml file is placed into the correct partition of the LTFS tape.
 - We recommend turning Off MD5 Checksums for fastest archiving performance. Checksums and the Discovery MD5 settings are not used for Footage tapes.
2. Format the tape you are going to use for your Footage Master with LTFS format selected. For Footage Masters, the LTFS Volume name is optional, but we

recommend you give the tape its final Discovery name at this time; Discovery specifies that ‘Each OCM Volume must have a unique name. This unique name becomes the “OCM Volume Identifier,” and must match the “Reel ID” or “Reel Name” in the nonlinear editing systems.’



Discovery Footage Tape Formatting

3. Archive your footage onto the tape with any workflow that suits your environment. Be sure to place that content within an appropriately named folder at the root level of the tape (this means at the top level, not contained within any other folder).
4. Archive the metadata.xml file (this may actually be done before, with or after the footage). Be sure to place the metadata.xml file at the root level of the tape.

Graphics Master Procedure:

This procedure assumes that you are familiar with the Graphics Discovery spec and have properly prepared your graphics files and metadata.xml file in preparation for creating your submission tape.

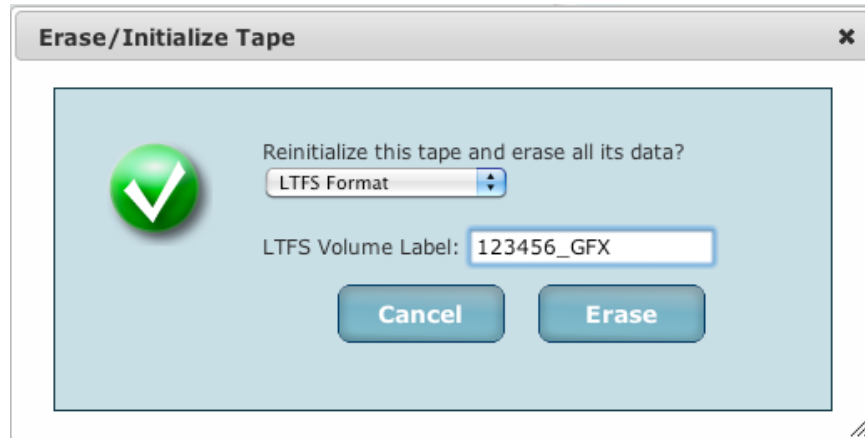
1. Go to the Cache-A web UI page for System Tools > Settings tab and ensure that the following setting is selected and applied before formatting your submission tape:



Discovery Footage Master Setting

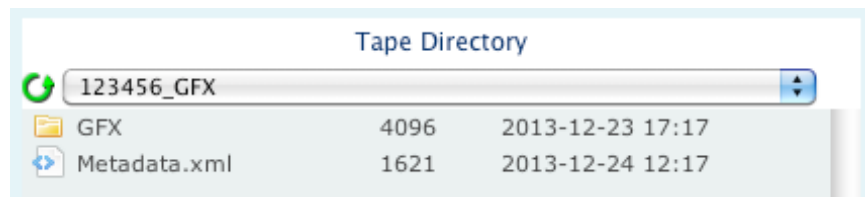
- MD5 Checksums must be enabled so that they are calculated as content is archived to tape.
- The “Discovery” LTFS Format setting ensures that the “metadata.xml” file is placed into the correct partition of the LTFS tape.

- The “Discovery” MD5 Checksum setting causes the Cache-A system to automatically generate an appropriate GFX.MD5 file and place it in the GFX folder upon the user telling the system to eject the tape – this file is generated and written to tape just prior to actually ejecting.
2. Format the tape you are going to use for your Graphics Master with LTFS format selected. For Graphics Masters, the LTFS Volume name for the tape must be set to its final Discovery name at this time; Discovery specifies that ‘The name of the LTFS volume on the LTO-5 tape must be the program’s property ID followed by the suffix _GFX.’



Discovery Graphics Tape Formatting

3. Archive the metadata.xml file (this may actually be done before, with or after the graphics files). Be sure to place the metadata.xml file at the root level of the tape.
4. Archive your graphics files onto the tape with any workflow that suits your environment. Be sure to place that content within a folder named “GFX” at the root level of the tape (this means at the top level, not contained within any other folder). The following image shows how the completed tape should appear.



Graphics Folder and Metadata file

5. Eject the tape to cause the GFX.MD5 checksum file to be assembled and written to tape.

Program Master Procedure:

This procedure assumes that you are familiar with the Discovery Master File Based Delivery spec and have properly prepared your main, graphics and audio files into their

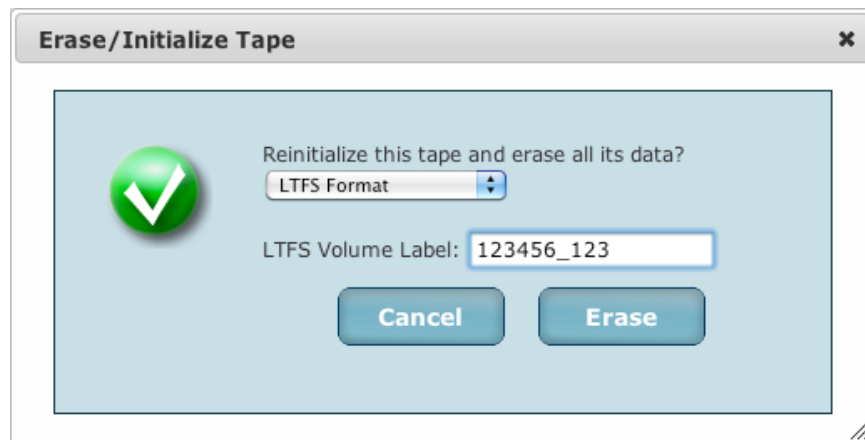
appropriate folders, and have created the metadata.xml file in preparation for creating your submission tape.

1. Go to the Cache-A web UI page for System Tools > Settings tab and ensure that the following setting is selected and applied before formatting your submission tape:



Discovery Footage Master Setting

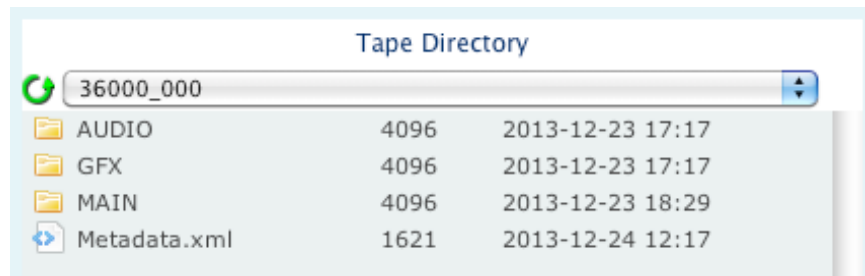
- MD5 Checksums must be enabled so that they are calculated as content is archived to tape.
 - The “Discovery” LTFS Format setting ensures that the “metadata.xml” file is placed into the correct partition of the LTFS tape.
 - The “Discovery” MD5 Checksum setting causes the Cache-A system to automatically generate an appropriate MAIN.MD5, GFX.MD5, and/or AUDIO.MD5 file(s) and place them in their respective folders upon the user telling the system to eject the tape – these files are generated and written to tape just prior to actually ejecting.
2. Format the tape you are going to use for your Program Master with LTFS format selected. For Program Masters, the LTFS Volume name for the tape must be set to its final Discovery name at this time; Discovery specifies that ‘The name of the LTFS volume on the LTO-5 tape must be the program’s property ID and episode number. The property ID is a five or six digit number assigned to the program or series by the network. The episode number is a three digit number indicating the sequence of episodes within a series.’



Discovery Graphics Tape Formatting

3. Archive the metadata.xml file (this may actually be done before, with or after the content files). Be sure to place the metadata.xml file at the root level of the tape.
4. Archive your main, graphics and audio files onto the tape with any workflow that suits your environment. Be sure to place the appropriate content within the

appropriate folders named at the root level of the tape (this means at the top level, not contained within any other folder). The following image shows how the completed tape should appear (if audio and graphics elements accompany the main program files).



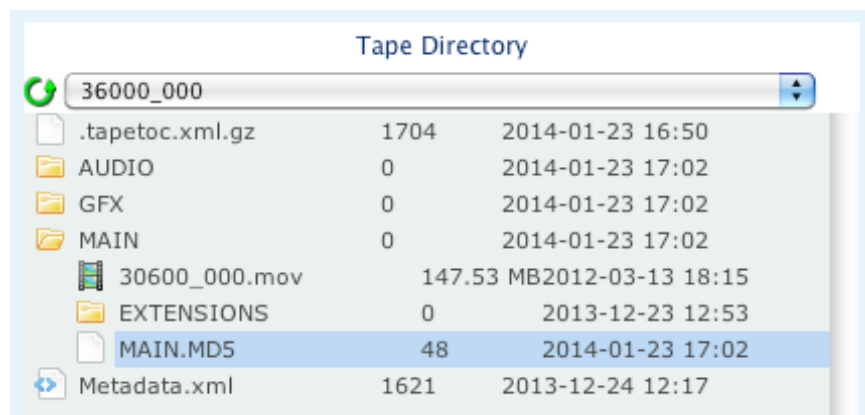
Item	Size	Date/Time
AUDIO	4096	2013-12-23 17:17
GFX	4096	2013-12-23 17:17
MAIN	4096	2013-12-23 18:29
Metadata.xml	1621	2013-12-24 12:17

Graphics Folder and Metadata file

5. Eject the tape to cause the MD5 checksum file(s) to be assembled and written to tape.

Tips:

- Since the MD5 checksum file or files are not generated until the tape is being ejected, the Cache-A Catalog and tape table of contents will not show these checksum files. If you would like to ensure that they are present, reinsert the tape at any time and select “LTFS Sync” from the MENU button to rescan the LTFS index, which will add them to the Cache-A Catalog if they were properly created.



Item	Size	Date/Time
.tapetoc.xml.gz	1704	2014-01-23 16:50
AUDIO	0	2014-01-23 17:02
GFX	0	2014-01-23 17:02
MAIN	0	2014-01-23 17:02
30600_000.mov	147.53 MB	2012-03-13 18:15
EXTENSIONS	0	2013-12-23 12:53
MAIN.MD5	48	2014-01-23 17:02
Metadata.xml	1621	2013-12-24 12:17

MAIN.MD5 shown added back to the Catalog

Note the presence of the “.tapetoc.xml.gz” file – this is actually the Cache-A table of contents that resides on the tape and is included in the LTFS index. The inclusion of this file is acceptable to Discovery and can be ignored.