



Deluxe Media

Title: CFF File Creation: Getting Metadata Information v1

W.I. #: N/A (yet)

Date: February 24, 2014

1. Purpose

The purpose of this work instruction is to inform **project managers** how to gather and prepare metadata for CFF file creation. Note that instructions vary between clients.

2. Application

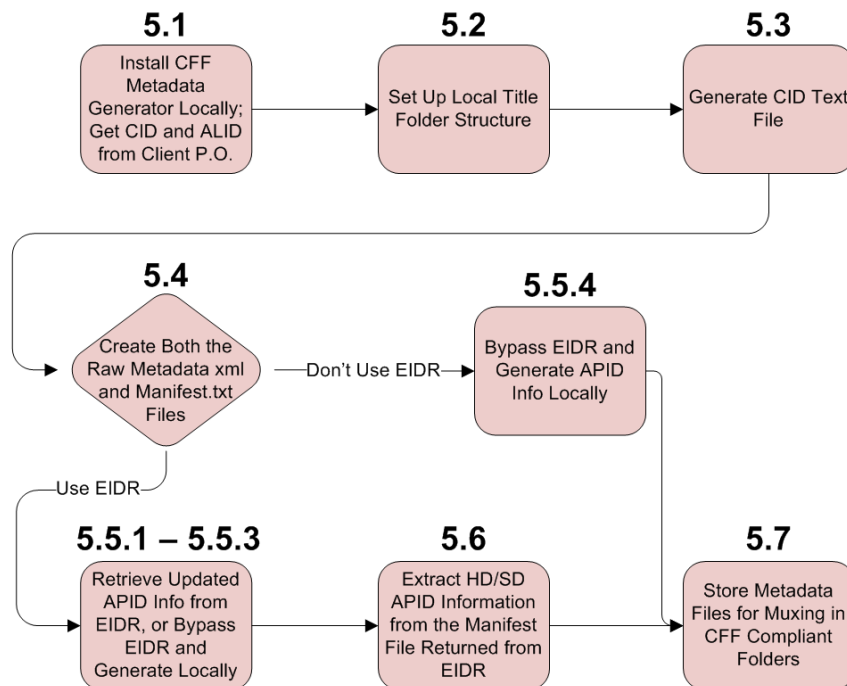
This work instruction applies to the first of five steps in the UltraViolet CFF (Common File Format) file creation process.

3. Process Owner(s)

If this document seems incorrect/outdated, please contact the below person for updates:

Role (BU & Dept.)	Contact Person
Technical Writer, Applications Development	Aaron Pillar (818-565-3893)
POD Leader, DDS Burbank 4 BD	Tom Lai
Director of Global Quality Assurance, Global QA	Justine Mannino

4. Flow Chart





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5. Procedure Details

5.1. Install CFF Metadata Generator Locally and Retrieve CID and ALID from Client Purchase Order

Note: This document contains multiple steps directing users to install applications or to setup folders locally. For ease of access, it is recommended a single location (your desktop, your documents folder, a subfolder in your documents folder, etc.) be chosen for all resources intended to be accessed locally.

- **CFF:** Acronym for Common File Format; a file format that is an extension of ISO box structures, using a common encryption algorithm to allow use by multiple platforms and multiple DRMs. UltraViolet's CFF file extension is .uvu.
- **CID:** Acronym for Content Identifier (number); this identifier uniquely identifies metadata associated with content. This can be anything from a TV Show or movie to a TV Season or Show, a movie series, a miniseries, or a franchise containing movies, television and games. Content Identifiers can also reference clips, mash-ups, "best-ofs" and other pieces or compilations. The Content Provider provides metadata for any of these entities and provides a unique Content Identifier for each.
- **ALID:** Acronym for Asset Logical Identifier (number); corresponds either to the EIDR Edit of an episode record or to the edit of a root movie or TV record.
- **EIDR:** Acronym for Entertainment Identifier Registry Association; a universal unique identifier system for motion pictures and television programs. The identification system uses metadata that is associated with top-level titles, edits, DVDs, encodings, clips, and mash-ups.

5.1.1. Extract the CFF Metadata Generation Tool to Your Desktop

In the ([\\10.1.17.37](#)) T:\UltraViolet\TOOLS\CFFMETADATAGENERATOR folder, click to open the folder for the most recent version of CFF Metadata Generator, then click the Stuffit Archive file named "CFFMetadataGenerator" to extract the CFF Metadata Generator to a location of your designation on your local CORP network machine. A folder called "CFFMetadataGenerator" should appear (at the destination you selected) containing a series of application-related files, including the application's executable Jar file, also called, "CFFMetadataGenerator."

5.1.2. Access the UltraViolet Master Metadata Document Applicable to Your Client

Note: Select the most recent version of the document, and consult your supervisor if the location of any of these documents appears to have changed.



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FOX: L:\CEA\1_Projects\Fox\CFF\1_Production_QC_Trackers\Wave_1\Fox CFF Tracker_MM.DD.YY (or wave 2, or whichever wave you're working on)

Lionsgate: L:\UltraViolet\Lionsgate Entertainment\WAVE 1\LE CFF Tracker WAVE # (or wave 2, or whichever wave you're working on)

Universal, Focus, Mattel, Rogue, Tinseltown Toons, Open Road, Visiona Romatica, TAT, Cepia: L:\UltraViolet\CFFGenerator\UV Metadata Master

5.1.3. Add Your Title to the UltraViolet Master Metadata Document

Begin to create a new entry in the UltraViolet master metadata document for the title you're working on (see column headers for what information goes in which column).

Figure 1 - Example Entries in the "UltraViolet Metadata Master" Document for Universal Studios

1	Original Title	EIDR#	ALID	UV CID
821	White Noise	10.5240/650C-6709-C2C2-E712-7004-6	urn:dece:alid:eidr-s:650C-6709-C2C2-E712-7004-6	urn:dece:cid:eidr-s:650C-6709-C2C2-E712-7004-6
822	White Noise 2	10.5240/3A9E-EF70-9998-3B9B-B0E3-8	urn:dece:alid:eidr-s:3A9E-EF70-9998-3B9B-B0E3-8	urn:dece:cid:eidr-s:3A9E-EF70-9998-3B9B-B0E3-8
823	Wild Child	10.5240/E201-2D86-9832-E2FF-5EA7-F	urn:dece:alid:eidr-s:E201-2D86-9832-E2FF-5EA7-F	urn:dece:cid:eidr-s:E201-2D86-9832-E2FF-5EA7-F
824	Winchester '73	10.5240/E03C-1858-4C08-1607-8D1E-O	urn:dece:alid:eidr-s:E03C-1858-4C08-1607-8D1E-O	urn:dece:cid:eidr-s:E03C-1858-4C08-1607-8D1E-O
825	The Wiz	10.5240/EF45-3E24-8E80-A17A-C96E-5	urn:dece:alid:eidr-s:EF45-3E24-8E80-A17A-C96E-5	urn:dece:cid:eidr-s:EF45-3E24-8E80-A17A-C96E-5
826	The Wizard	10.5240/C762-AC03-D321-7F4E-D779-8	urn:dece:alid:eidr-s:C762-AC03-D321-7F4E-D779-8	urn:dece:cid:eidr-s:C762-AC03-D321-7F4E-D779-8
827	The Wolf Man (1941)	10.5240/4C02-BF11-2225-13F9-065B-2	urn:dece:alid:eidr-s:4C02-BF11-2225-13F9-065B-2	urn:dece:cid:eidr-s:4C02-BF11-2225-13F9-065B-2
828	The Wolfman (2010)	10.5240/2ACF-6F09-AB38-EBB2-56FC-C	urn:dece:alid:eidr-s:2ACF-6F09-AB38-EBB2-56FC-C	urn:dece:cid:eidr-s:2ACF-6F09-AB38-EBB2-56FC-C

5.1.4. Retrieve CID and ALID from Client

Retrieve from the client (most likely by email) the title's purchase order, and copy the title's **CID** and **ALID** into the **CID** and **ALID** columns of the UltraViolet master metadata document, and then save the UltraViolet master metadata document.

5.2. Set Up Local Title Folder Structure

For the title you're working on, create this folder structure on your local corp desktop:

Example folder structure:

C:\Users\Username\Desktop\CFF Project\IceAge4\Metadata_Raw

C:\Users\Username\Desktop\CFF Project\IceAge4\Metadata_Raw\EIDR

C:\Users\Username\Desktop\CFF Project\IceAge4\Metadata_Transformed

C:\Users\Username\Desktop\CFF Project\IceAge4\Metadata_Transformed\EIDR



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These folders will be used as destinations for some of the metadata files retrieved from the Production Coordinator (or "Coordinator") that are needed for CFF file creation.

- **Production Coordinator:** The Coordinator is the central clearinghouse that holds information about UltraViolet content and UltraViolet users. The Coordinator does not store or deliver content. It only stores information about users and what content rights they own. There is only one Coordinator, currently operated on behalf of DECE by a company called "Neustar."
- **DECE:** Acronym for Digital Entertainment Content Ecosystem; a consortium of major Hollywood studios, consumer electronics manufacturers and retailers, network hardware vendors, systems integrators and Digital Rights Management (DRM) vendors, chartered in 2008 to develop a set of standards for the digital distribution of premium Hollywood content, a "digital locker" system now known as "UltraViolet."

5.3. Generate CID Text File

Open the Windows Accessory application called "Notepad," paste the CID(s) from the UltraViolet master metadata document into the new txt document, and then save the text document in the title folder of your project which you created on your local corp desktop.

Figure 2 - Example of FOX CID list in CID.txt

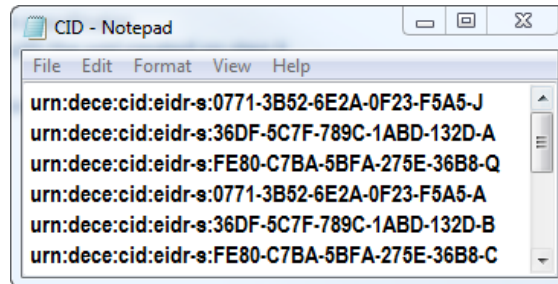
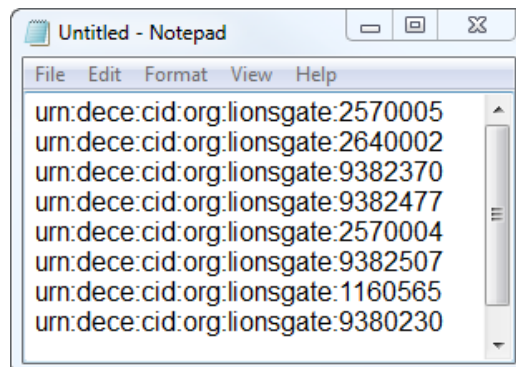


Figure 3 - Example of Lionsgate CID list in CID.txt





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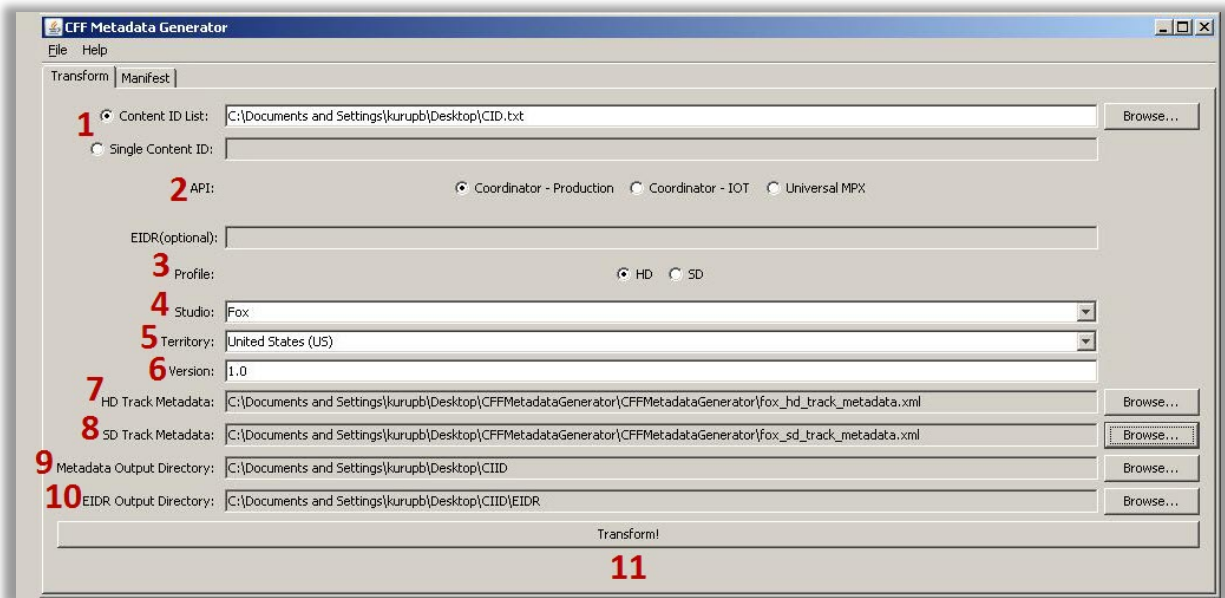
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Example path for CID.txt file save location: C:\Users\Username\Desktop\CFF Project\IceAge4\CID.txt

5.4. Create Both the Raw Metadata xml and Manifest.txt Files

At the local location where you extracted the CFF Metadata Generator application, in the CFF Metadata Generator folder, click on the executable Jar file called “CFFMetadataGenerator.” On the tool’s Transform tab follow the steps below.

Figure 4 - CFF Metadata Generator Transform Tab Interface



5.4.1. Click either the Content ID List or Single Content ID radio button and then (for a list) browse and select the CID.txt file you created in step 5.3, or (for a single ID) enter the CID in the field.

5.4.2. Select an API (select Coordinator – Production)

5.4.3. Select a Profile (HD or SD).

5.4.4. Select a Studio.

5.4.5. Select a Territory.

5.4.6. Enter a Version number (if not already there, enter 1.0).

5.4.7. Click the Browse button, navigate to the CFFMetadataGenerator folder you extracted in step 5.1.1 above, and select the HD Track Metadata .xml file for the client whose title you’re working on. For example, for FOX or Universal, HD filename examples would be fox_hd_track_metadata or universal_hd_track_metadata, respectively.



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5.4.8. Click the Browse button, navigate to the CFFMetadataGenerator folder you extracted in step [5.1.1](#) above, and select the SD Track Metadata .xml file for the studio whose title you're working on. For FOX or Universal, filename examples would be fox_sd_track_metadata or universal_sd_track_metadata, respectively.

5.4.9. Click the Browse button and select C:\Users\Username\Desktop\CFF Project\IceAge4\Metadata_Raw as the directory for the Metadata Output.

5.4.10. Click the Browse button and select C:\Users\Username\Desktop\CFF Project\IceAge4\Metadata_Raw\EIDR as the directory for the EIDR Output.

5.4.11. Click the Transform button to submit the CID.txt file to the Coordinator. Processing of the four results below will occur:

- i. The Coordinator will return an HD and an SD xml, both generated into the Metadata Raw > EIDR Output Directory you created in step [5.2](#). They will be used next in step [5.5](#) below.
- ii. The Coordinator will return a movie xml and an optional metadata xml, both generated into the Metadata Raw > Output Directory you created in step [5.2](#). They will be used next in step [5.7](#) below.
- iii. The Coordinator will return several image files (for required and optional images in the muxer UI) per title, again, generated into the Metadata Raw > Output Directory you created in step [5.2](#). They will be used next in step [5.7](#) below.
- iv. A Manifest.txt file will be generated into the Metadata Raw > Output Directory you created in step [5.2](#). If your client **uses** EIDR, you'll need this file in the section of step [5.5](#) below titled, "[Retrieve APID Information from EIDR](#)." If your client does not use EIDR, you can continue with the section of step [5.5](#) below titled, "[Generate APID Information Locally](#)."

Note: Occasionally, the tool throws errors for certain CIDs. It's recommended to use this tool for 25-50 titles at a time to be safe. If errors persist, PMs need to inform the client and obtain revised/correct IDs and try again.

5.5. Retrieve Updated APID Information from EIDR, or Bypass EIDR and Generate APID Information Locally.

Select one of the two options below for updating APID information.

- **APID:** Acronym for Asset Physical Identifier (number). One for SD container, one for HD container.



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Option 1: Retrieve Updated APID Information from EIDR (used by, for example, Fox)

5.5.1. Zip the HD and SD XMLs and the Manifest.txt File

Select (or copy) the HD and SD xmls and the Manifest.txt file returned from the Coordinator (you can put them in a single folder together) and compress all three files into a Zip file.

5.5.2. Submit Zipped HD and SD XMLs and Manigest.txt File to EIDR

Note: An account should have been previously set up. Consult your supervisor.

Click on this link ([EIDR Request Submittal location](#)) to submit a request to EIDR for the updated APID information. Before clicking the Submit button at the bottom of the page, attach the ZIP file to the request.

Here is an example of the filled-in fields on the request page:

Hello EIDR Team,

I've attached a zip file with the HD and SD XMLs of the following Fox titles that we will need new APIDs for.

*Abraham Lincoln: Vampire Hunter
Diary of A Wimpy Kid: Dog Days
Ice Age: Continental Drift
A Good Day to Die Hard
A Good Day to Die Hard (Extended)
Trance
Taken 2
Red Dawn
Hitchcock
Get The Gringo
Cowgirls 'n Angels
Crooked Arrows
The Heat*

We would like this request to be completed by the morning of Monday 1/27/14.

Thank you,

John Doe



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5.5.3. [Receive Email Notification from EIDR with Link to Download the Updated APID Information](#)

Project managers will receive an email notification with a link to the EIDR site explaining where they can download the updated Manifest.txt and the two xmls (per film). Follow step [5.6](#) to continue processing the Manifest.txt file. Follow step [5.7](#) below to continue processing the xmls.

Option 2: Bypass EIDR and Generate APID Information Locally (used by, for example, Lionsgate)

5.5.4. [Access the UltraViolet Master Metadata Document and Manually Create the HD and SD APIDS for Your Title](#)

If, to get updated APID information, the client prefers to bypass EIDR, you can manually make the necessary changes to all ALIDS received from the client.

In the UltraViolet master metadata document kept by Project Managers (whose file path is listed in section [5.1.2](#) above), create the HD and SD APIDs for each title. To use client Lionsgate as an example, in columns E and F of the UltraViolet master metadata document, you can create both APIDS from the ALID you entered in column C in step [5.1.4](#) above (bold text below is only for clarification).

ALID: urn:dece:**alid**:org:lionsgate:2640004

HD APID: urn:dece:**apid**:org:lionsgate:2640004_**HD001**

SD APID: urn:dece:**apid**:org:lionsgate:2640004_**SD001**

Note: The trailing number (HD001, or HD002) would increment at a new revision (notice in Figures 5 and 6 below the second to last APIDs are 003s).

When authors are ready to mux, they will access the UltraViolet master metadata document kept by Project Managers and copy the HD and SD APIDS into the ALID_APID_HD and ALID_APID_SD .txt files (respectively) in the UltraViolet folder on the production server. Then authors will append as a prefix and save, to each added APID, the Content ID of the title, followed by a TAB keystroke, so that the APIDS appear in the document like this:



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Figure 5 - Content ID Appended as a Prefix for HD APIDS in .txt Document

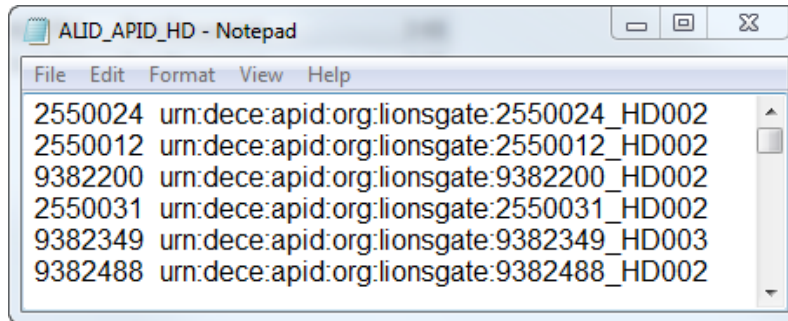
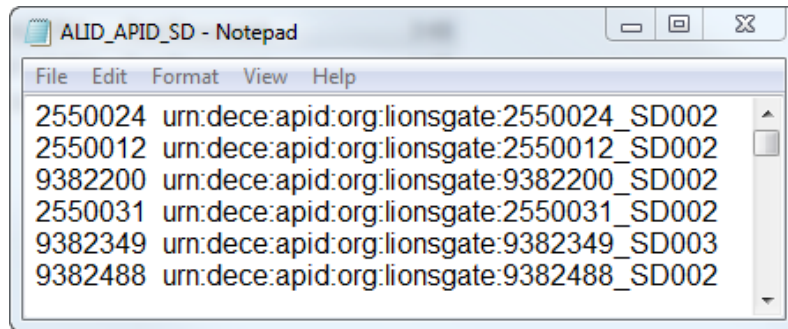


Figure 6 - Content ID Appended as a Prefix for SD APIDS in .txt Document



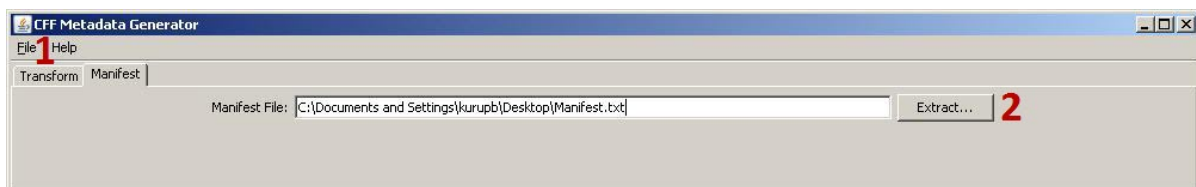
The muxer application will use these files later as the source of APID information for the CFF file.

Lastly, for this section of step 5.5, ignore step 5.6 below, but continue to step [5.7](#).

5.6. Extract HD/SD APID Information from the Manifest File Returned from EIDR

On the Manifest tab of the CFF Metadata Generator, follow the steps below.

Figure 7 - CFF Metadata Generator Manifest Tab Interface





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5.6.1. Choose Destination to Extract HD/SD APID Information from the Updated Manifest.txt File

Click the File menu, select the Settings item, and then select (if you're doing this for the first time) a destination in the UltraViolet folder on the production server for the HD/SD ALID/APID files that will be created upon extracting the ALID/APID information from the Manifest.txt file returned from EIDR. Here are the file paths for the two destinations:

HD: <\\10.1.17.37\cff\UltraViolet\ FOX ALID APID\HD>

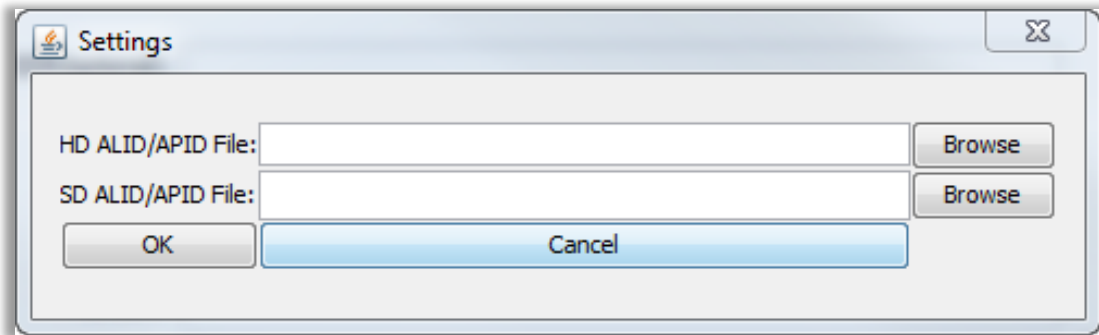
SD: <\\10.1.17.37\cff\UltraViolet\ FOX ALID APID\SD>

Note: If you're *not* doing this for the first time, navigate to and select the *already created* files in the UltraViolet folder on the production server. They will be updated upon extraction of the information from the Manifest.txt.

HD: <\\10.1.17.37\cff\UltraViolet\ FOX ALID APID\HD\filename>

SD: <\\10.1.17.37\cff\UltraViolet\ FOX ALID APID\SD\filename>

Figure 8 - Select HD/SD ALID/APID Destination Files



Click the OK button.

5.6.2. Extract the APID Information from the Manifest.txt

Drag and drop the Manifest.txt file received from EIDR into the Manifest File field, and then click the Extract button to extract the HD and SD information from the Manifest.txt file and create (or update) the HD/SD ALID/APID files on the production server. The muxer application will use these files later as the source of APID information for the CFF file.



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5.7.Store Metadata Files for Muxing in CFF Compliant Folders

Once authors have created the CFF compliant folder structure that will house the source files used to mux the title you're working on (as seen in the folder structure example below), provide the metadata files you've created to them to put in these folders.

- 00_Source
- 01_Video
- 02_Audio
- 03_Subtitle
- 04_RequiredMetadata
- 05_OptionalMetadata
- 06_RequiredImages
- 07_OptionalImages
- 08_ChapterThumbnails
- 09_WarningCard
- 10_Output
- 11_Verifier
- 12_MuxingScript
- 13_Others

For example, for the FOX title "Hitchcock," authors will distribute the files as such:

For the two HD and SD XMLs received back from EIDR (or for the two HD and SD XMLs created by the CFF MG which were **not** sent to EIDR), they will be placed in both the Required and Optional Metadata folders.

Required:

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\04_Metadata\00_HD

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\04_Metadata\01_SD

Optional:

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\05_OptionalMetadata\00_HD

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\05_OptionalMetadata\01_SD

For the movie XML file returned from the Coordinator, it will be placed in both Required Metadata folders:

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\04_Metadata\00_HD



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\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\04_Metadata\01_SD

For the optional metadata XML returned from the Coordinator, it will be placed in both Optional Metadata folders:

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\05_OptionalMetadata\00_HD

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\05_OptionalMetadata\01_SD

For the five required images returned from the Coordinator, the 800 X 1200 (pixel measurements) image will be placed in both of the Required Images folders:

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\06_RequiredImages\00_HD

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\06_RequiredImages\01_SD

And the remaining four images will be placed in both of the Optional Images folders:

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\07_OptionalImages\00_HD

\\10.1.17.37\cff\UltraViolet\FOX\Hitchcock\07_OptionalImages\01_SD

This completes the work instructions for CFF File Creation: Getting Metadata Information.