



Dolby CineAsset

User's Manual

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Notices

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Dolby CineAsset software is based in part on the work of the Qwt project (qwt.sf.net).

This software uses libraries from the FFmpeg project under the LGPLv2.1.

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (openssl.org).

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Expat 2.0.1: expat.sourceforge.net

libcurl 7.39.0: curl.haxx.se/libcurl

portaudio: portaudio.com

qextserialport: github.com/qextserialport/qextserialport

quazip: quazip.sourceforge.net

zlib 1.2.8: zlib.net

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Introduction to the Dolby CineAsset User's Manual

This documentation provides the instructions for operating the Dolby CineAsset mastering software suite.

- [Contacting Dolby](#)

1.1 Contacting Dolby

You can contact Dolby Cinema Solutions and Support using email or regional telephone numbers. You can also access documentation by visiting the Dolby customer portal.

Contact Dolby Cinema Solutions and Support

- Send an email to cinemasupport@dolby.com.
- Call:

Americas: +1-415-645-4900

Europe/Middle East/Africa (EMEA): +44-33-0808-7700

Asia-Pacific (APAC): +86-400-692-6780

Japan: +81-3-4540-6782

Access documentation

Visit www.dolbycustomer.com.

Submit feedback about this documentation

Send an email to documentation@dolby.com.

Dolby CineAsset suite overview

Dolby CineAsset is a software-based mastering solution that converts popular video and image files into an encrypted or unencrypted Digital Cinema Package file that is played back on digital cinema servers. Dolby CineAsset includes four applications: CineAsset Editor, CineAsset, CineAsset Player, and CineInspect. Support for distributed rendering with render nodes is also provided.

- [CineAsset](#)
- [CineAsset Editor](#)
- [CineAsset Player](#)
- [CineInspect](#)
- [CineAsset render nodes](#)

2.1 CineAsset

CineAsset manages the audio and video content, stores Digital Cinema Packages, connects devices and groups, ingests content over the network or from connected devices, manages certificates, and manages and generates Key Delivery Messages. Most tasks performed are displayed in the **CineAsset** main window.

2.2 CineAsset Editor

CineAsset Editor allows you to create 2D and 3D compositions from audio and video files or image sequences and apply filters such as color conversion and encryption. Afterward, it passes the composition to CineAsset Schedule, which handles the conversion and encryption, and places the Digital Cinema Package (DCP) in the CineAsset database.

2.3 CineAsset Player

CineAsset Player can play back encrypted or unencrypted DCPs generated by any digital cinema mastering solution, as well as any video file or audio file supported by the Dolby CineAsset software.

In addition to playing back a DCP, Dolby CineAsset Player can play back many popular video file types and can perform quality checks on an encrypted or nonencrypted DCP.

CineAsset Player is intended for quality control purposes and is not meant to replace a cinema server playback system. As such, many content distributors will not grant keys to playback their content.

2.4 CineInspect

CineInspect inspects the DCP files by running a number of tests designed to verify the integrity of the DCP makeup. You can choose from various validation levels to inspect an unencrypted or encrypted Digital Cinema Package.

After you inspect the DCP file, you can export a set of log messages that display the tests performed and the results obtained from the inspection.

2.5 CineAsset render nodes

CineAsset provides support for distributed rendering using render nodes. A render node is a computer running a special version of the CineAsset engine that requires no user interaction. There is no protection on the render node installations. You can install the render nodes on multiple computers on the network.

When the master version of Dolby CineAsset is running, it searches for render nodes on the network. For example, if the Universal Serial Bus (USB) dongle is licensed for five render nodes, it uses up to five render nodes it finds on the network when it is processing tasks.

Software and hardware requirements

The software and hardware system requirements for Dolby CineAsset provide useful information to help you verify setup options and avoid performance issues.

- [Hardware system requirements for Microsoft Windows](#)
- [Hardware system requirements for Apple Mac OS X](#)
- [Hardware system requirements for Linux](#)
- [Minimum hardware system requirements for Dolby CineAsset Player](#)
- [Minimum hardware system requirements for HD-SDI output](#)
- [USB dongle and license requirements](#)

3.1 Hardware system requirements for Microsoft Windows

The hardware system requirements for Microsoft Windows provide useful information to help you verify setup options and avoid performance issues.

- Operating systems: Windows 7, Windows 8.1, or Windows 10 (64 bit)
- Random-access memory (RAM): 4 GB minimum, 8 GB recommended
- Intel Core 2 Duo minimum, Core i7 recommended
- Graphics adapter with minimum 512 MB dedicated memory (Intel integrated graphics not recommended)

3.2 Hardware system requirements for Apple Mac OS X

The hardware system requirements for Apple Mac OS X provide useful information to help you verify setup options and avoid performance issues.

- Operating systems: Apple Mac OS X 10.8.x to 10.12.x
- RAM: 4 GB minimum, 8 GB recommended
- Intel Core 2 Duo minimum, Core i7 recommended
- Graphics adapter with minimum 512 MB dedicated memory (Intel integrated graphics not recommended)

3.3 Hardware system requirements for Linux

The hardware system requirements for Linux provide useful information to help you verify setup options and avoid performance issues.

- Operating systems: CentOS 6 or CentOS 7 (64 bit)
- RAM: 4 GB minimum, 8 GB recommended
- Intel Core 2 Duo minimum, Core i7 recommended
- Graphics adapter with minimum 512 MB dedicated memory (Intel integrated graphics not recommended)

3.4 Minimum hardware system requirements for Dolby CineAsset Player


When you use Dolby CineAsset Player for real-time playback of a 2K, 24 fps DCP with color conversion, we recommend these minimum hardware system requirements.

- Central processing unit (CPU) with 12 physical cores or six cores with Intel Hyper-Threading Technology (HT Technology)
- 8 GB RAM
- Graphics adapter with 1 GB dedicated memory
- Fast local storage dedicated to content, such as a 7,200 RPM SATA III disk drive or solid-state drive

 **Attention:** Real-time playback of any high-frame-rate 3D DCP or 4K DCP may not be attainable.

3.5 Minimum hardware system requirements for HD-SDI output

Dolby CineAsset Player supports and was tested with DeckLink HD Extreme 3D+ and DeckLink 4K Extreme PCIe models.

 **Attention:** Real-time playback of a 4K DCP may not be attainable.

These are sample configurations for Microsoft Windows 7:

- Six core processors (Intel Xeon X5650 2.67 GHz)
- 24 GB RAM
- Nvidia Quadro 2000D (1 GB RAM)
- DeckLink 4K Extreme
- SSD for media
- This configuration is capable of playing 2D, 2K at 24 fps, with color conversion enabled, to a high-definition serial digital interface (HD-SDI) output, without dropping frames (standard computer monitor output disabled).

These are sample configurations for Apple Macintosh Pro:

- Twelve core processors (Intel Xeon dual 2.4 GHz)
- 12 GB RAM
- AMD ATI Radeon HD 5770 (1 GB RAM)
- DeckLink 4K Extreme
- 2x SATA drives (RAID 0) for media
- This configuration is capable of playing 2D, 1080p at 24 fps, with color conversion enabled, to HD-SDI, without dropping frames (standard computer monitor output disabled).

When a supported card is recognized by Dolby CineAsset Player, it displays under the **Device** menu.

These three playback options are provided to maximize performance:

- Plays only to the HD-SDI output
- Plays only to a standard computer monitor
- Plays to both a standard computer monitor and the HD-SDI output

3.6 USB dongle and license requirements

The Dolby CineAsset license is included on a USB dongle. The Dolby CineAsset software provides you with a standard version for unencrypted material and a professional version for encrypted material.

Since the license is located on the USB dongle, make sure the USB is always plugged in when operating the Dolby CineAsset software.

3.6.1 USB dongle for encrypted content

Use the professional version to encrypt content and generate a Key Delivery Message (KDM) for encrypted content. The USB dongle for the professional version uses a unique private key stored on the USB dongle. This allows you to generate a KDM for content that is encrypted with a professional USB dongle.

3.6.2 USB dongle for unencrypted content

Use the USB dongle for the standard version to work with unencrypted content.

3.6.3 Evaluation version

Use the evaluation version to test the encryption feature. The certificates and private keys used by the evaluation version are not unique to each installation. You can generate a KDM with the evaluation installation for any encrypted content generated with any other evaluation installation.

4

Installing the Dolby CineAsset software

The Dolby CineAsset software requires the USB dongle for installation and operation. The USB dongle includes the license for either the professional or standard version.

- [Installing the Dolby CineAsset software on Microsoft Windows](#)
- [Installing the Dolby CineAsset software on Mac OS X](#)
- [Installing the Dolby CineAsset software on Linux](#)
- [Viewing the Dolby CineAsset software version](#)
- [Render nodes optional setup](#)

4.1 Installing the Dolby CineAsset software on Microsoft Windows

You can install the Dolby CineAsset software on Microsoft Windows operating systems.

Prerequisites

To receive the software package, contact Dolby Cinema Solutions and Support at cinemasupport@dolby.com.

Procedure

1. Insert the USB dongle into a port on your workstation.
2. Double-click the installation package file, and follow the onscreen prompts.
The software package for Microsoft Windows operating systems uses the *DolbyCineAsset-8.x.x-Win-64.exe* file.
3. After you install the package, reboot the workstation.

4.2 Installing the Dolby CineAsset software on Mac OS X

You can install the Dolby CineAsset software on Mac OS X operating systems.

Prerequisites

To receive the software package, contact Dolby Cinema Solutions and Support at cinemasupport@dolby.com.

Procedure

1. Insert the USB dongle into a port on your workstation.
2. Double-click the installation package file, and follow the instructions to mount the image.
The software package to mount the image for Mac OS X operating systems uses the *DolbyCineAsset-8.x.x-macOS.dmg* file.
3. Double-click the installation package file, and follow the onscreen prompts.
The software package for Mac OS X operating systems uses the *DolbyCineAsset-8.x.x-macOS.pkg* file.
4. After you install the package, reboot the workstation.

4.3 Installing the Dolby CineAsset software on Linux

You can install the Dolby CineAsset software on Linux CentOS operating systems.

Prerequisites

To receive the software package, contact Dolby Cinema Solutions and Support at cinemasupport@dolby.com.

About this task

You can also install this package from a command-line interface (CLI).

Procedure

1. Insert the USB dongle into a port on your workstation.
2. Double-click the installation package file and follow the onscreen prompts.
The software package for Linux CentOS 6 operating systems uses the *DolbyCineAsset-8.x.x-CentOS6.x86_64.rpm* file.

The software package for Linux CentOS 7 operating systems uses the *DolbyCineAsset-8.xx-CentOS7.x86_64.rpm* file.

3. After you install the package, reboot the workstation.

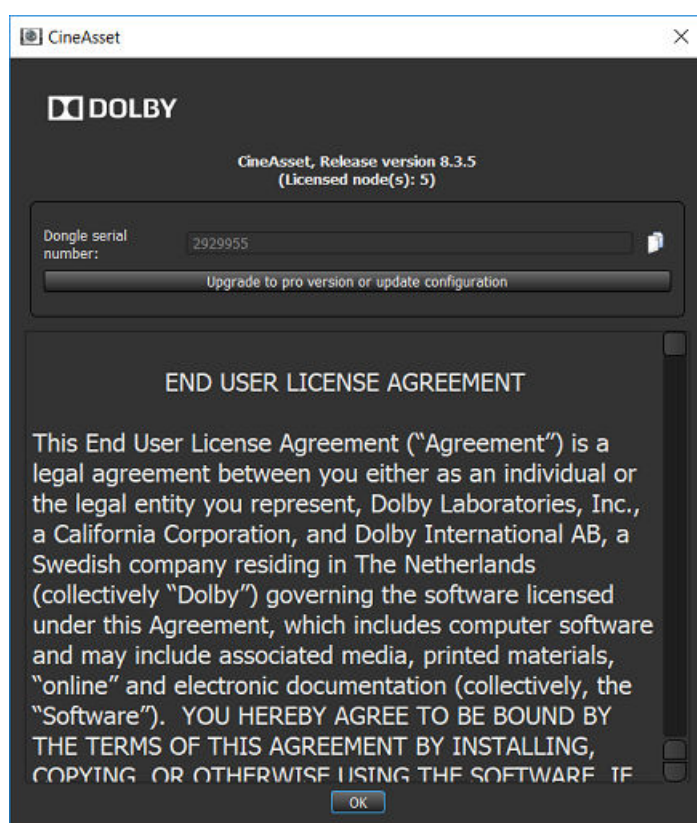
4.4 Viewing the Dolby CineAsset software version

You can view the Dolby CineAsset software version from the **CineAsset** main window, **CineAsset Editor** main window, **CineAsset Player** main window, and **CineInspect** main window. You can also view the number of licensed render nodes your USB dongle supports.

Procedure

1. In the **CineAsset** main window, click **Help**, and then click **About**.
2. In this window, view the software version and licensed render nodes information, and then click **OK**.

Figure 1: Software version and licensed render nodes

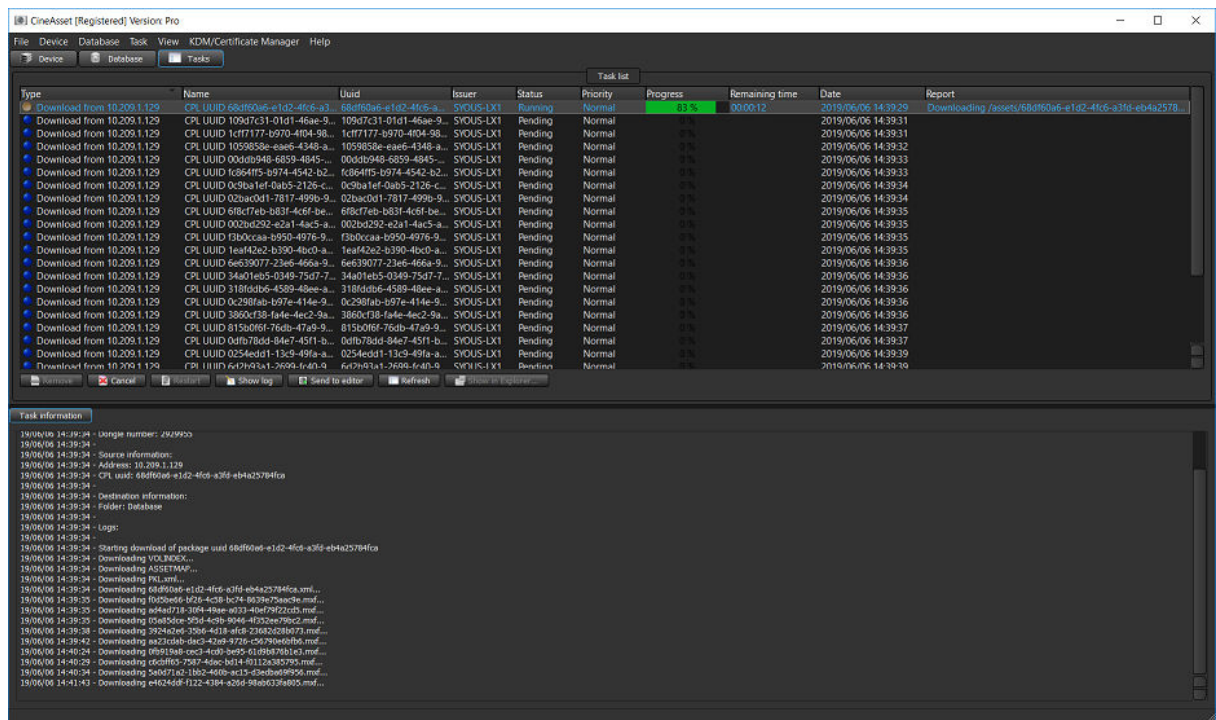


4.5 Render nodes optional setup

Dolby CineAsset provides you with the option to set up and configure render nodes on a workstation. When the render node is running, the application icon is displayed in the task bar or menu bar.

When CineAsset processes a job, the **Task Information** section in the **CineAsset** main window **Tasks** tab displays the list of servers used as render nodes.

Figure 2: Render Nodes task information



4.5.1 Requirements for CineAsset render nodes

The USB dongle must include licensing for at least one render node and must be installed on the same platform as the master copy of the Dolby CineAsset software.

For example, if the software is running on a Microsoft Windows workstation, the render node must also be installed on a computer system running Windows.

You can install additional render node licenses by contacting Dolby. Also note that the network infrastructure must be capable of sustaining the throughput required for distributed rendering. Insufficient network bandwidth may actually slow down rendering processes.

The software is designed to automatically search for render nodes on a network, and there is no configuration required to set up distributed rendering with Dolby CineAsset.

4.5.2 Installing and configuring a render node

You can install and configure each render node on a workstation on the same network as the Dolby CineAsset master workstation.

Prerequisites

Install the master version of Dolby CineAsset on the master workstation.

About this task

- For Microsoft Windows 7 and later, use *DolbyCineAssetServer-8.x.x-Win-64.exe*.
- For Mac OS X 10.8 to 10.11, use *DolbyCineAssetServer-8.x.x-macOS.dmg*.
- For Linux CentOS 6, use *DolbyCineAssetServer-8.x.x-CentOS6.x86_64.rpm*.
- For Linux CentOS 7, use *DolbyCineAssetServer-8.x.x-CentOS7-x86_64.rpm*.

Procedure

- 1.** Install the server version of Dolby CineAsset on the secondary workstation.
- 2.** When installation is complete, open the server version of Dolby CineAsset.
- 3.** Open the master version of Dolby CineAsset.
The render node installs in the background while both the master and server versions of Dolby CineAsset are running.
- 4.** Repeat this procedure to install and configure more render nodes, as needed.

Configuring folders, groups, and devices

You can configure the default settings for the database folder, groups, and any connected devices from the **CineAsset** main window. You can also create a new show playlist (SPL), and then load it and control playback on a connected device.

- [Database folder](#)
- [Drop-in folders](#)
- [Creating a new group](#)
- [Connecting a new device](#)
- [Editing a device](#)
- [Removing an existing group or device](#)
- [Controlling a device with transport controls](#)
- [Loading an SPL](#)
- [Creating a new SPL](#)

5.1 Database folder

After you install Dolby CineAsset for the first time, a database folder is automatically created.

The database (DB) folder holds all content that is encoded and wrapped. The database location can be configured to an internal drive, an external drive, or a networked drive. Databases on network drives can be shared between different installations on the same network.

i Tip: The default database folder is found at `~/DolbyCineAsset/Default_DCinema`.

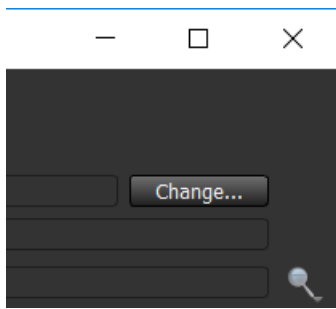
5.1.1 Changing the database folder

You can use the **Database** window to change or configure the database folder.

Procedure

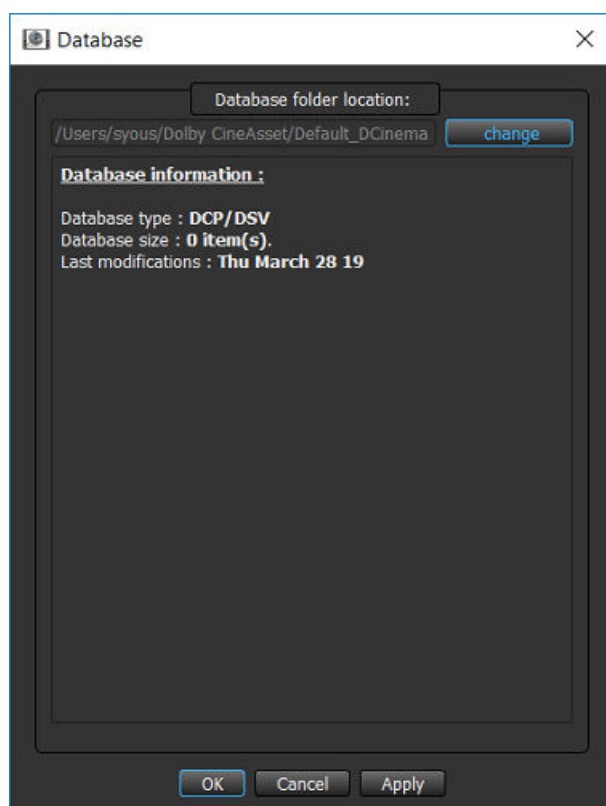
1. Open the **CineAsset** main window and click the **Database** tab.
2. Click **Change**.

Figure 3: Change button



3. In the **Database** window, click **change** to open an explorer window and browse for the new database folder.

Figure 4: Database folder location window



4. Select the database folder, and then click **Select Folder** in the explorer window.
5. In the **Database** window, click **Apply**, and then click **OK** to finalize the database change.

5.2 Drop-in folders

When media is placed into a drop-in folder, it is automatically imported to the CineAsset database. For each drop-in folder, you can define different encoding profiles, and each drop-in folder can be used with video files or image sequences.

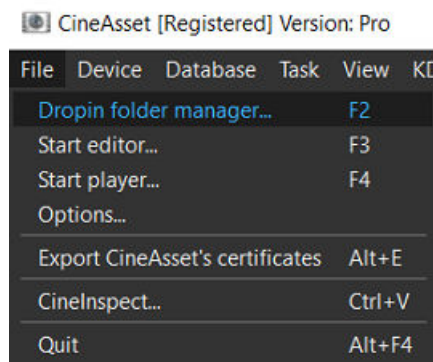
5.2.1 Creating a drop-in folder

You can use the **Drop-in folder manager** window to create a new drop-in folder.

Procedure

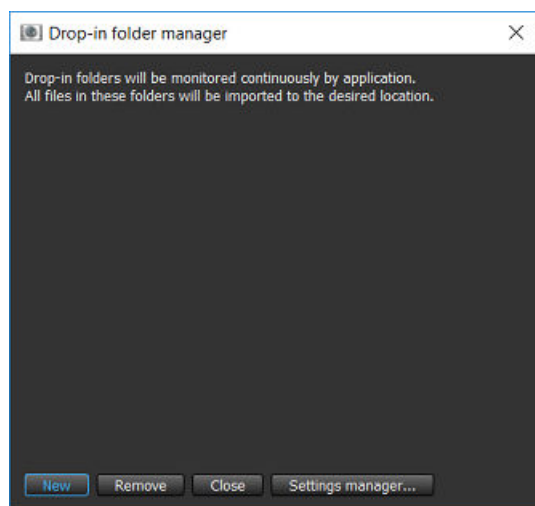
1. Open the **CineAsset** main window, click **File**, and then click **Dropin folder manager**.

Figure 5: File menu



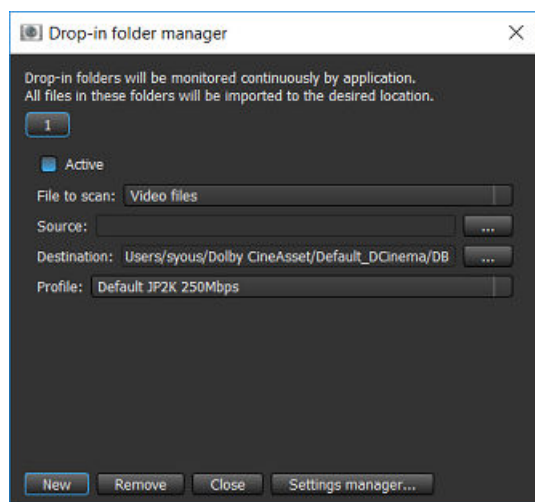
2. In the **Drop-in folder manager** window, click **New**.

Figure 6: Drop-in folder manager



3. With the new options provided, select either **Video Files** or **Picture Folders** for the new drop-in folder.

Figure 7: Drop-in folder manager



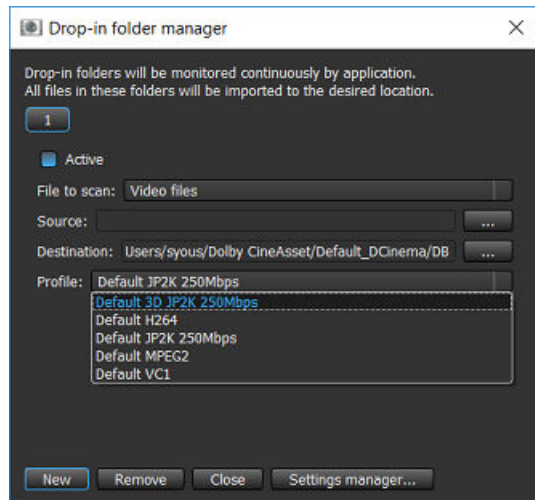
4. Click the browse button (...) next to the **Source** text box, and select a folder for the drop-in folder.
5. Click the browse button (...) next to the **Destination** text box, and choose a destination for the encoded DCP.

If this setting is unchanged, the DCP is added to the database.

6. Choose a profile using the **Profile** drop-down box to define the encoding parameters for media added to the drop-in folder.

You can also generate a new profile using **Settings manager**.

Figure 8: Drop-in folder manager



7. When you finish, click **Close**.

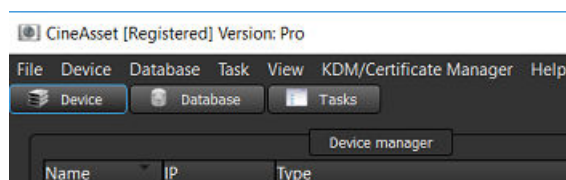
5.3 Creating a new group

You can use the **Device Manager** section in the **CineAsset** main window to create a new group to identify any connected devices.

Procedure

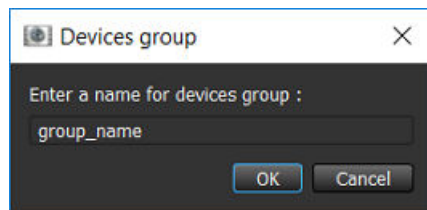
1. In the **CineAsset** main window, click the **Device** tab.

Figure 9: Devices tab



2. Click **New group** in the bottom-left section of the **Device** tab.
3. In the **Devices group** window, enter a name for the new group, and then click **OK**.

Figure 10: Devices group window



5.4 Connecting a new device

You can connect a new device, such as a digital cinema server, to the CineAsset database.

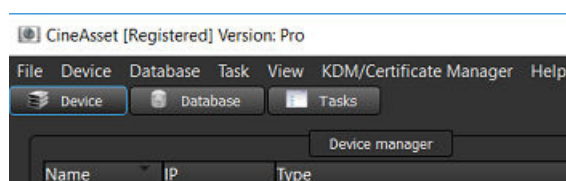
About this task

After you connect a new device, you can load and play content, as well as manage content on that device (or digital cinema server).

Procedure

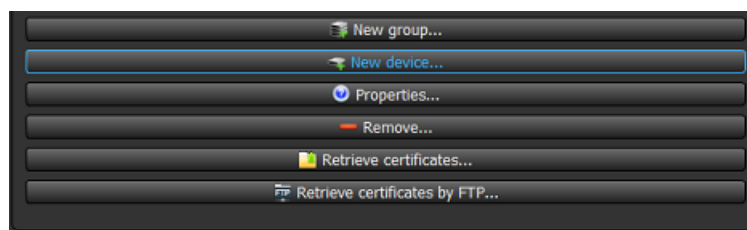
1. In the **CineAsset** main window, click the **Device** tab.

Figure 11: Device tab



2. Click **New device**.

Figure 12: New device button

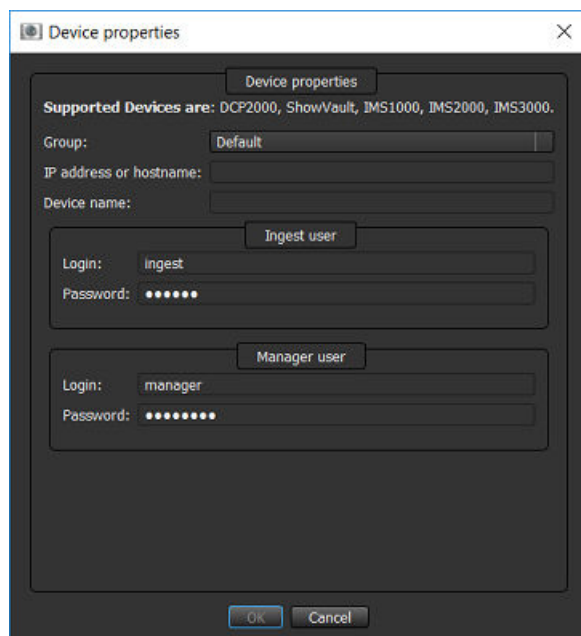


3. In the **Device properties** window, enter the necessary information:
 - a) In the **IP address or hostname** field, enter the IP address for the new device.
 - b) In the **Device name** field, enter a new name for the device.
 - c) From the **Group** list, select which group the new device is added to.
 - d) Enter an **Ingest user** log-in and password, and then enter a **Manager user** log-in and password.

The default password for **Ingest user** is **ingest** and the default password for **Manager user** is **password**.

- e) Click **OK**.

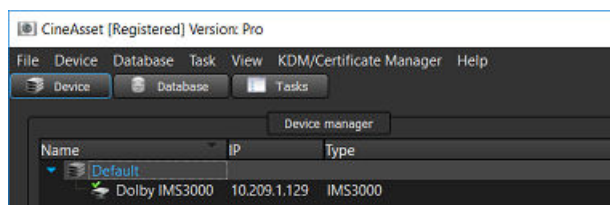
Figure 13: Device properties



Results

The new device appears in the **CineAsset** main window.

Figure 14: New device listed



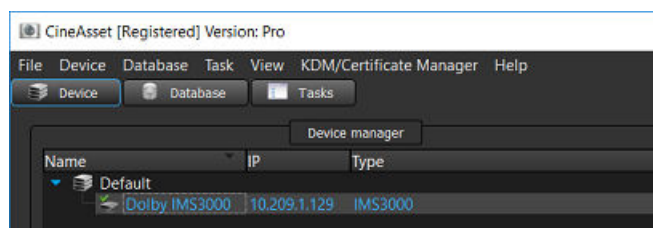
5.5 Editing a device

You can use the **Device Manager** section in the **CineAsset** main window to edit the information for a connected device.

Procedure

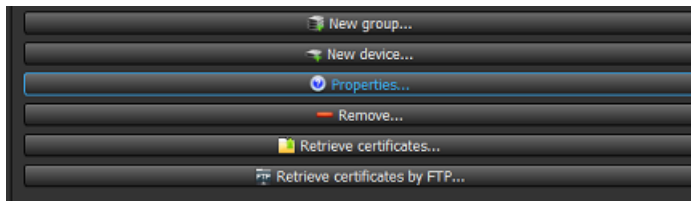
1. In the **CineAsset** main window, click the **Device** tab.
2. In the **Device Manager** section, select the device.

Figure 15: Device selected



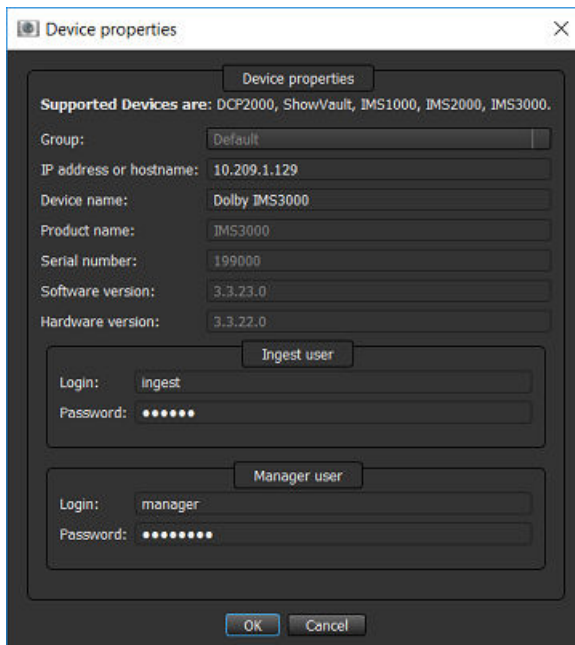
3. Click **Properties**.

Figure 16: Properties button



4. In the **Device properties** window, edit the parameters and then click **OK**.

Figure 17: Device properties



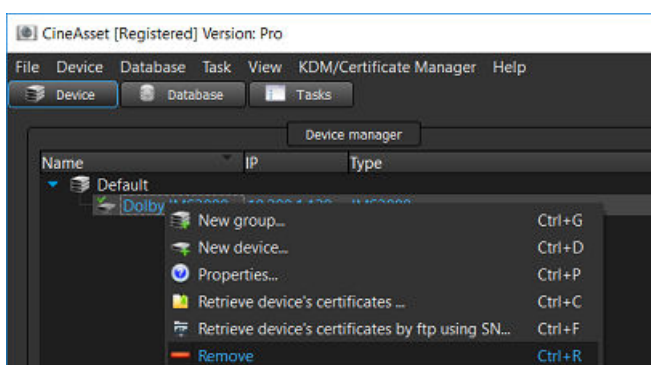
5.6 Removing an existing group or device

You can use the **Device Manager** section in the **CineAsset** main window to remove an existing group or a connected device.

Procedure

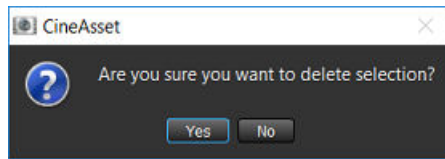
1. In the **CineAsset** main window, right-click on the group or device to be removed, and click **Remove**.

Figure 18: Remove group or device



2. In the removal confirmation window, click **Yes** to confirm the removal of the group or device.

Figure 19: Confirm removal of group or device



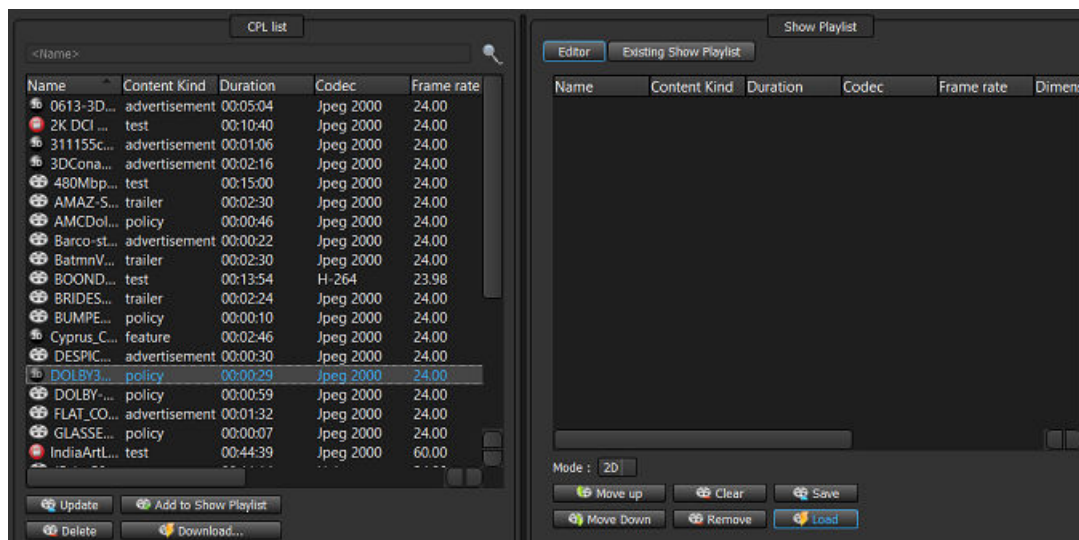
5.7 Controlling a device with transport controls

You can use the transport controls in the **Device status** section in the **CineAsset** main window to control playback on connected devices.

Procedure

1. In the **CineAsset** main window **Device** tab, select the connected device, add a composition playlist (CPL) to the SPL, and then click **Load**.

Figure 20: CineAsset main window



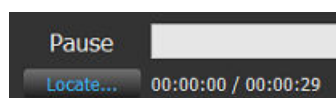
2. Use the transport control buttons to control content playback.

Figure 21: Transport control buttons



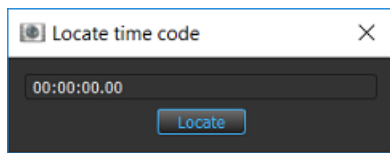
3. To locate to a specific timecode location:
 - a) In the **Device status** section, click **Locate**.

Figure 22: Locate button



- b) In the **Locate time code** window, enter a timecode location and then click **Locate**.

Figure 23: Locate time code window



4. After you finish with playback, click **Eject**.

5.8 Loading an SPL

You can load an SPL and perform playback in the **CineAsset** main window.

Procedure

1. In the **CineAsset** main window, select the connected device.
2. Click the **Existing Show Playlist** tab in the **Show Playlist** section.
3. Select an SPL from the list, and click **Load**.

Results

The SPL loads in the **CineAsset** main window and on the connected device.

5.9 Creating a new SPL

You can create an SPL in the **CineAsset** main window.

Procedure

1. In the **CineAsset** main window **Device** tab, select the connected device.
2. Click the **Editor** tab in the **Show Playlist** section.
3. Select the content from the **Cpl list** section, and click **Add to Show Playlist**.
You can add one or multiple CPLs to the SPL.
4. Use the **Move up** and **Move down** buttons to rearrange the order of content in the SPL.
5. When you finish, click **Save**.
6. In the **Save SPL** window, enter a name for the SPL, and then click **OK**.

Results

The new SPL is created and added to the connected device.

Managing content with CineAsset

The **CineAsset** main window enables you to manage the database of DCPs by importing and exporting content, viewing content properties, and viewing tasks for various operations.

- [Importing a DCP or CPL into the CineAsset database](#)
- [Downloading content from a device into the CineAsset database](#)
- [Deleting content from a device](#)
- [Exporting a DCP from the CineAsset database](#)
- [Exporting a .mov file from the CineAsset database](#)
- [Exporting an image sequence file from the CineAsset database](#)
- [Exporting a .wav file from the CineAsset database](#)
- [Exporting audio to a raw data file from the CineAsset database](#)
- [Viewing DCP properties](#)
- [Viewing a log file for a task](#)
- [Canceling a pending or running task](#)
- [Removing a completed task](#)
- [Restarting a task](#)

6.1 Importing a DCP or CPL into the CineAsset database

You can import a DCP or CPL from an external location into the CineAsset database.

About this task

You can add an existing DCP to the CineAsset database by creating a copy of it or a link to its original location.

Procedure

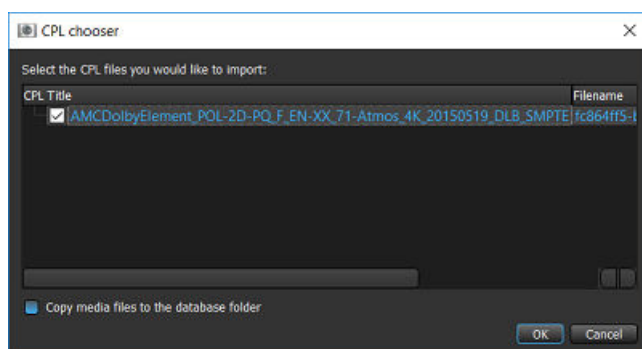
1. In the **CineAsset** main window **Database** tab, click **Add existing DCP**.

Figure 24: Add existing DCP



2. In the explorer window, find and select the DCP, and then click **Select Folder**.
3. In the **CPL chooser** window that appears, select the specific CPL(s) you want to import.

Figure 25: CPL chooser window



4. Select the **Copy media files to the database folder** check box to copy the media to the database folder.



Important:

If unselected, this leaves the media at the original location and creates a link instead.

5. Click **OK**.

6.2 Downloading content from a device into the CineAsset database

You can download content into the CineAsset database from any connected device.

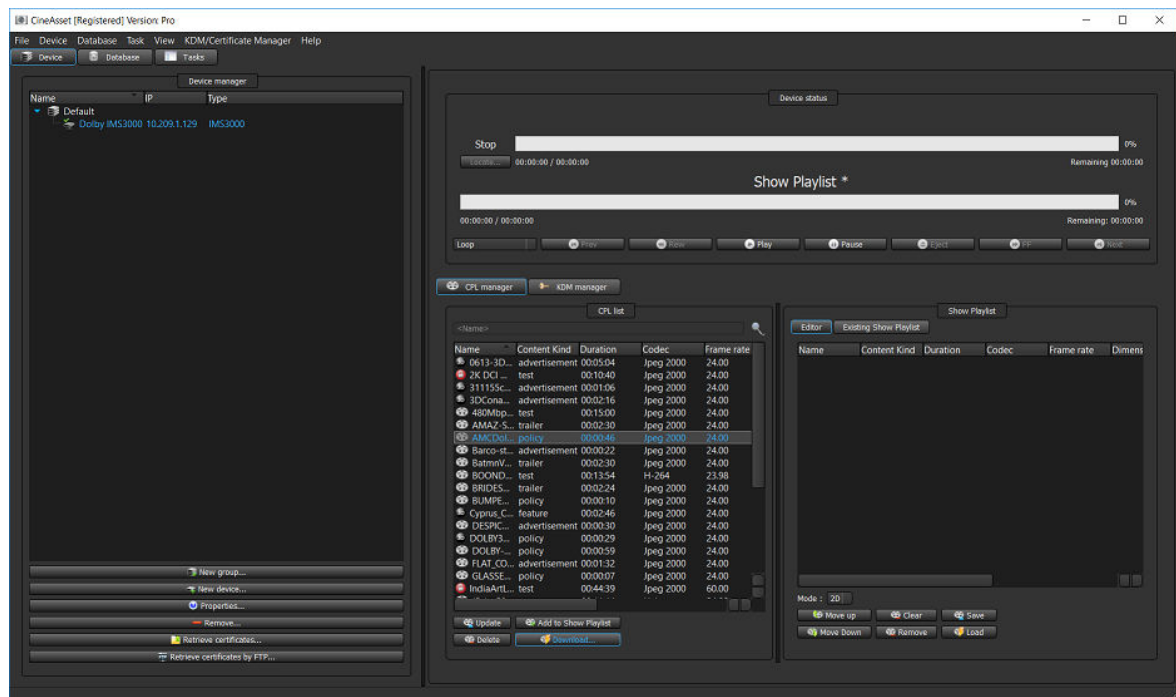
About this task

You cannot download an encrypted DCP from a connected server.

Procedure

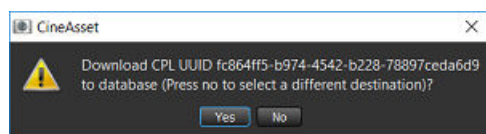
1. In the **CineAsset** main window **Device** tab, select a connected device and the content, and then click **Download**.

Figure 26: Download content from a device



2. In the download content confirmation window, click **Yes**.

Figure 27: Download content confirmation



Results

The content downloads to the database folder and displays in the **Database** tab.

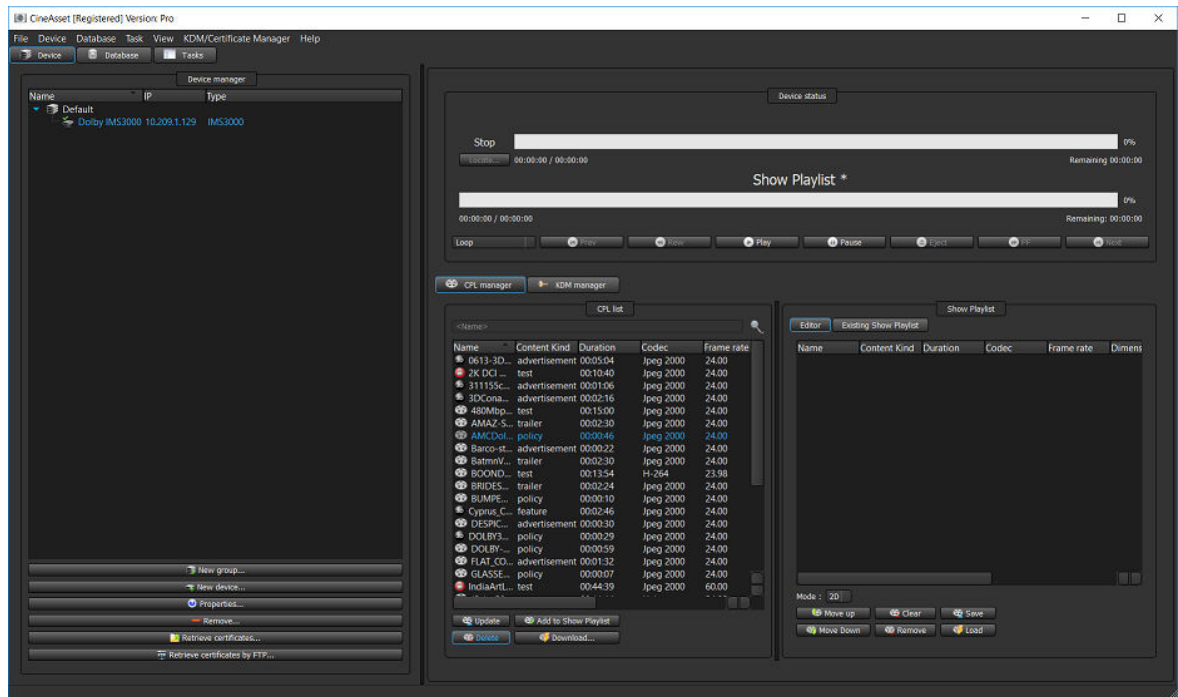
6.3 Deleting content from a device

You can delete content from any device connected to Dolby CineAsset.

Procedure

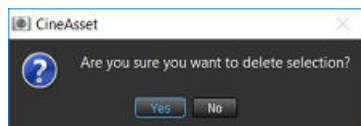
1. In the **CineAsset** main window **Device** tab, select a connected device and the content, and then click **Delete**.

Figure 28: Delete content from device



2. In the delete content confirmation window, click **Yes**.

Figure 29: Delete content confirmation



6.4 Exporting a DCP from the CineAsset database

You can export a DCP from the CineAsset database to an external location.

About this task

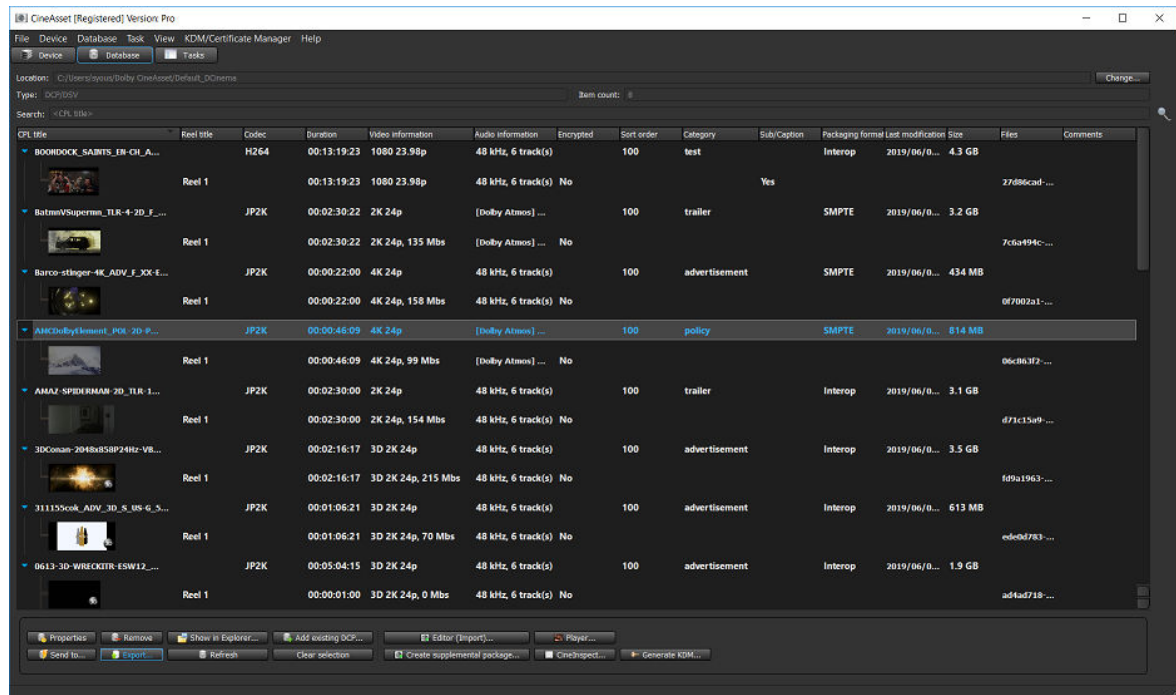
When you export content out of the CineAsset database, you have the option to modify the DCP export format.

- Important:** Exporting a DCP is not considered a complete backup of a DCP. If you remove an encrypted DCP from the CineAsset database, you must generate a Distribution KDM for that DCP, to reimport it into the CineAsset database.

Procedure

1. In the **CineAsset** main window **Database** tab, select the DCP from the list.
2. Click **Export**.

Figure 30: CineAsset main window: Database tab



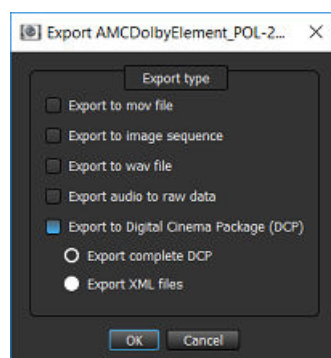
3. In the export options window:
 - a) Select **Export to Digital Cinema Package (DCP)**.
 - b) To export the complete DCP, select **Export complete DCP**.
 - c) To export a supplemental DCP, select **Export supplemental**.

**Important:**

This option appears only if you export a supplemental package.

- d) To export only the XML files, select **Export XML files**.
- e) Click **OK**.

Figure 31: Export options window



4. In the explorer window, select a destination and then click **Select Folder**.

Results

The DCP exports from the CineAsset database to a new location.

6.5 Exporting a .mov file from the CineAsset database

You can export a .mov file from the CineAsset database to an external location.

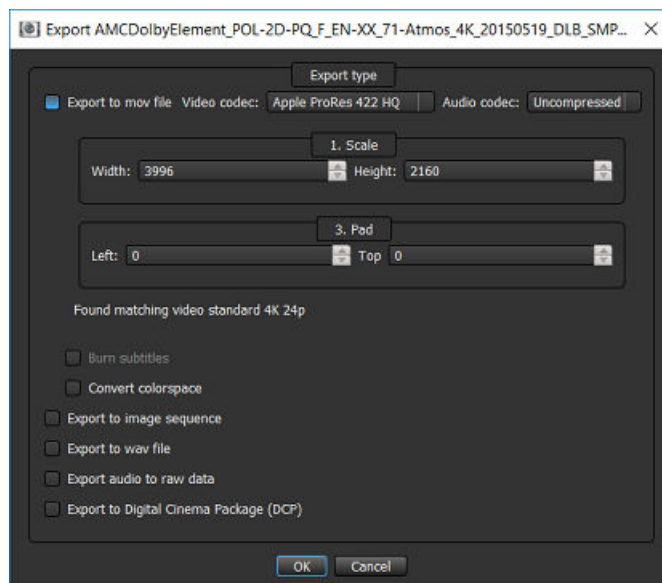
About this task

When you export a .mov file from the CineAsset database, you have the option to modify the video and audio codecs.

Procedure

1. In the **CineAsset** main window **Database** tab, select the DCP from the list.
2. Click **Export**.
3. In the export options window:
 - a) Select **Export to mov file**.
 - b) From the **Video codec** list, select a video codec.
 - c) From the **Audio codec** list, select an audio codec.
 - d) In the **Scale** field, adjust the width and height.
 - e) In the **Pad** field, adjust the left and top positions.
 - f) If needed, select **Convert colorspace** to modify the color-space conversion settings.
 - g) Click **OK**.

Figure 32: Export .mov file



4. In the explorer window, select a destination and then click **Select Folder**.

Results

The .mov file exports from the CineAsset database to a new location.

6.6 Exporting an image sequence file from the CineAsset database

You can export an image sequence file from the CineAsset database to an external location.

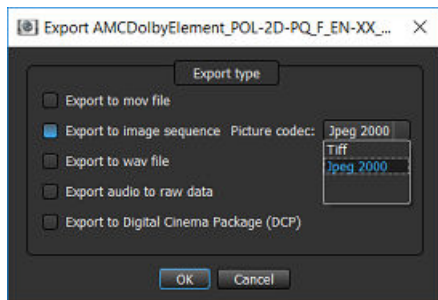
About this task

When you export an image sequence file from the CineAsset database, you have the option to modify the picture codec export format.

Procedure

1. In the **CineAsset** main window **Database** tab, select the DCP from the list.
2. Click **Export**.
3. In the export options window:
 - a) Select **Export to image sequence**.
 - b) From the **Picture codec** list, select the picture codec export format.
 - c) Click **OK**.

Figure 33: Export image sequence file



4. In the explorer window, select a destination and then click **Select Folder**.

Results

The image sequence file exports from the CineAsset database to a new location.

6.7 Exporting a .wav file from the CineAsset database

You can export a .wav file from the CineAsset database to an external location.

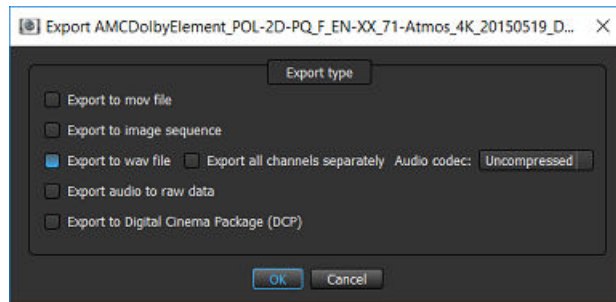
About this task

When you export a .wav file from the CineAsset database, you have the options to modify the audio codec format and to export all channels separately.

Procedure

1. In the **CineAsset** main window **Database** tab, select the DCP from the list.
2. Click **Export**.
3. In the **Export options** window:
 - a) Select **Export to wav file**.
 - b) To export all channels separately, select **Export all channels separately**.
 - c) From the **Audio codec** list, select the audio codec export format.
4. Click **OK**.

Figure 34: Export to .wav file



5. In the explorer window, select a destination and then click **Select Folder**.

Results

The .wav file exports from the CineAsset database to a new location.

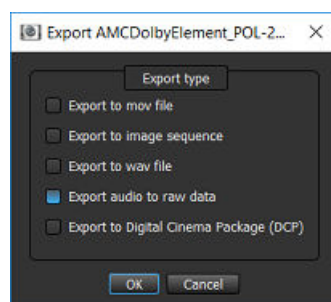
6.8 Exporting audio to a raw data file from the CineAsset database

You can export audio to a raw data file from the CineAsset database to an external location.

Procedure

1. In the **CineAsset** main window **Database** tab, select the DCP from the list.
2. Click **Export**.
3. In the export options window:
 - a) Select **Export audio to raw data**.
 - b) Click **OK**.

Figure 35: Export audio to raw data



4. In the explorer window, select a destination and then click **Select Folder**.

Results

The file exports from the CineAsset database to a new location.

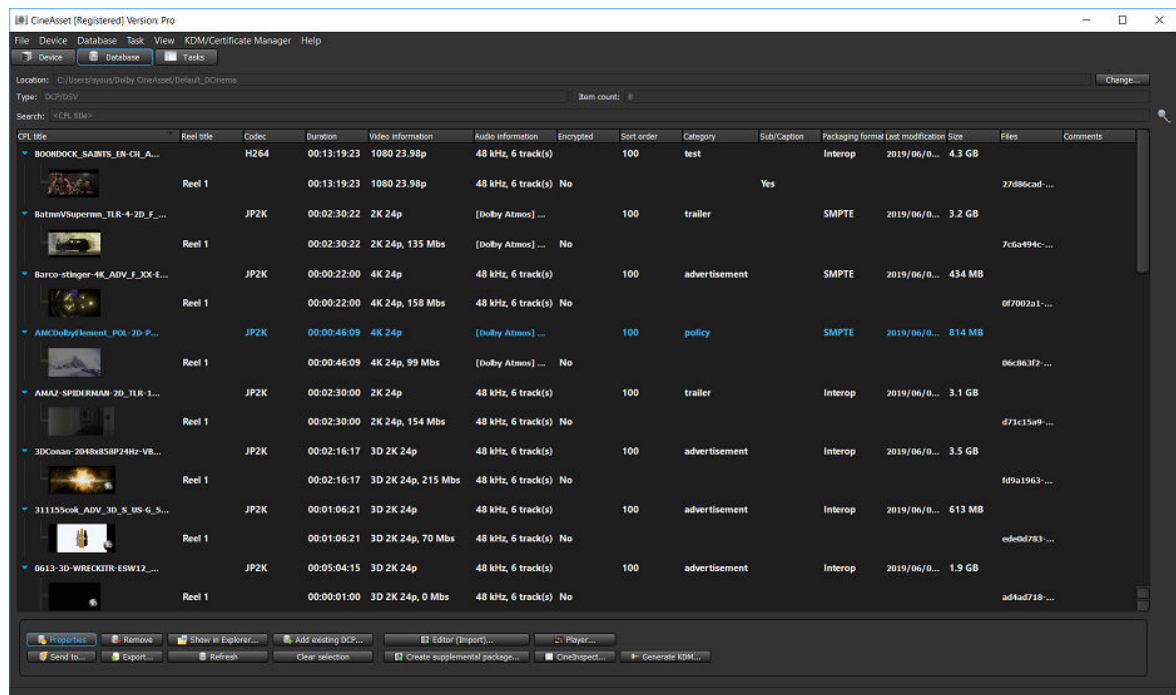
6.9 Viewing DCP properties

You can view the properties for a DCP and modify certain parameters, including the DCP metadata.

Procedure

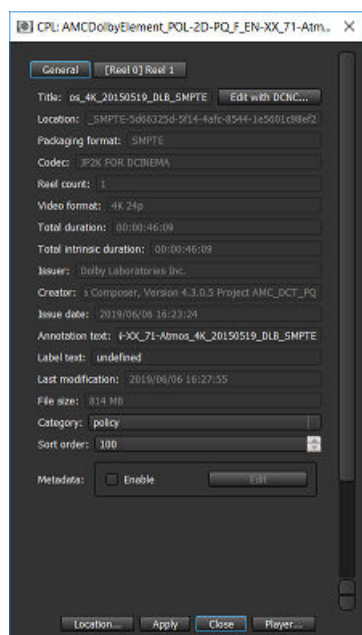
1. In the **CineAsset** main window **Database** tab, select the DCP and then click **Properties**.

Figure 36: CineAsset main window



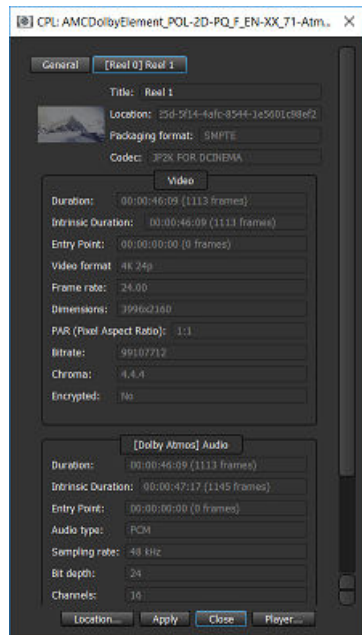
2. In the **Properties** window, click each **Reel** tab to view the properties of the specific reels.

Figure 37: Properties window



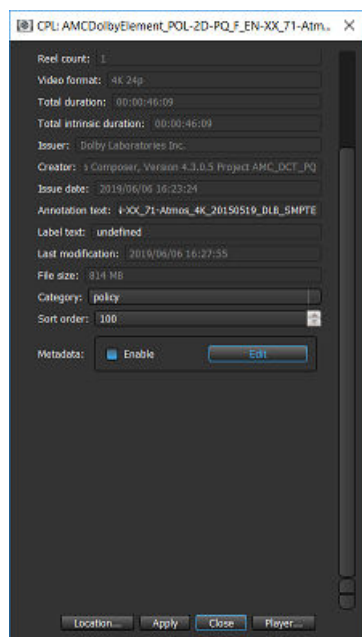
3. Click **Location** to open an explorer window and view the location of the DCP on the system.
You can also view the location of the DCP using the **Show in Explorer/Finder** button in the **Database** tab.
4. Click **Player** to open the DCP in the **CineAsset Player** main window, if needed.

Figure 38: Properties window



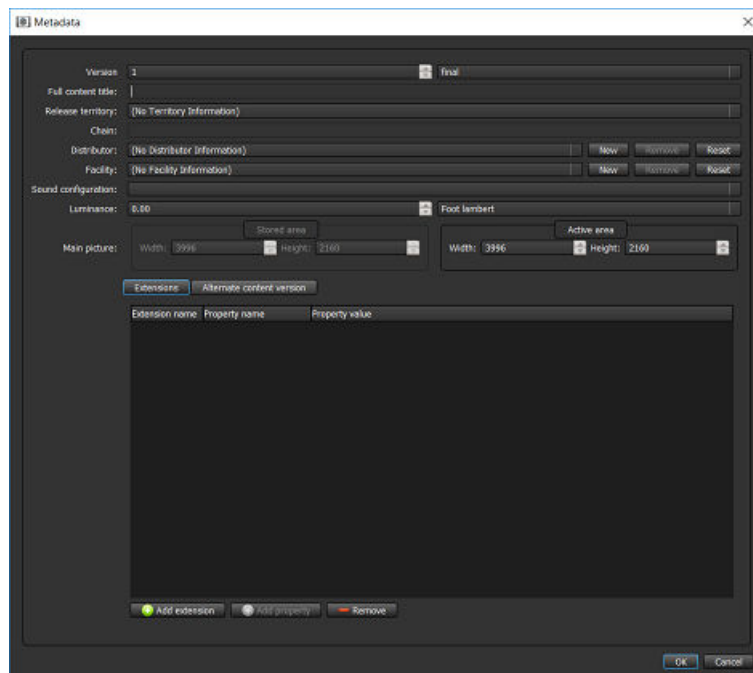
5. To view the metadata for the DCP, select the **Enable** check box, and then click **Edit** in the **General** tab.

Figure 39: Properties window



6. In the **Metadata** window, view the DCP metadata information, and then click **OK**.
You can view metadata only for SMPTE DCPs. Interop DCPs do not contain extra CPL metadata.

Figure 40: Metadata window



6.10 Viewing a log file for a task

You can view a log file for a specific task for most operations performed with Dolby CineAsset.

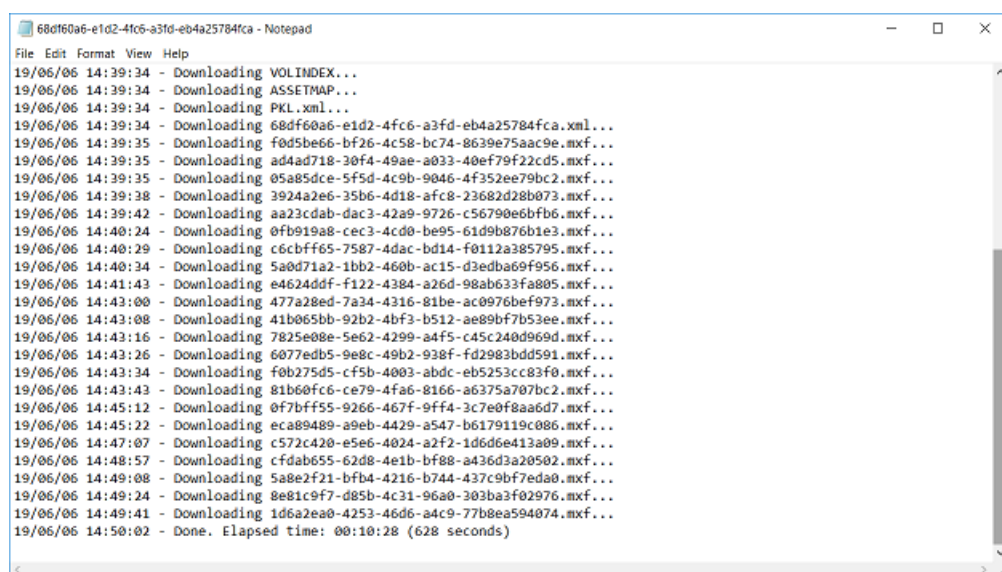
Procedure

1. Open the **CineAsset** main window and click the **Tasks** tab.
2. Select the task and click **Show log**.

Results

The window appears with log information for the task.

Figure 41: Log information window



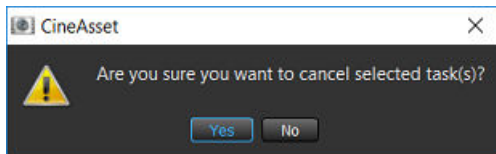
6.11 Canceling a pending or running task

You can cancel a pending or running task.

Procedure

1. In the **CineAsset** main window, click the **Tasks** tab.
2. Select the task and then click **Cancel**.
3. In the window that appears, click **Yes** to confirm the task cancellation.

Figure 42: Confirm cancel task



6.12 Removing a completed task

You can remove a completed or canceled task from the **CineAsset** main window **Tasks** tab.

Procedure

1. Open the **CineAsset** main window and click the **Tasks** tab.
2. Select the task and click **Remove**.

6.13 Restarting a task

You can restart a failed task, and you can also restart a canceled task.

Procedure

1. Open the **CineAsset** main window and click the **Tasks** tab.
2. Select the task and click **Restart**.
3. If necessary, click **Send to editor** to open the selected task in the **CineAsset** main window, where you can edit and regenerate the task.

Configuring DCP project settings

The **Project settings** window enables you to select or customize settings with content that you use to create a DCP. The **Project settings** window appears when you first open the **CineAsset Editor** main window.

- [Modifying the video compression](#)
- [Setting the DCP standard, audio configuration, and encryption](#)
- [Generating a 3D DCP](#)
- [Setting the scaling parameters for a composition](#)
- [Adding the image sequence frame rate for a composition](#)
- [Overlaying an image to a composition](#)
- [Burning an image into a composition](#)
- [Adding frames to a composition](#)
- [Modifying extra attributes for a DCP](#)

7.1 Modifying the video compression

You can set the video compression type and settings such as the bit rate, video codec, or rule.

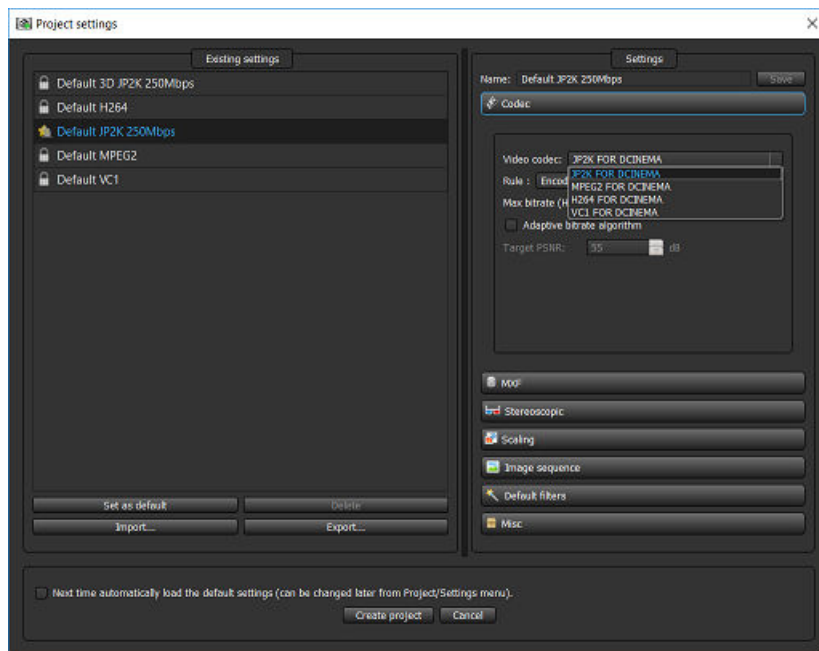
About this task

Dolby CineAsset does not include a VC-1 encoder. To use the VC-1 codec, the source file must also be VC-1. For JPEG 2000, the maximum bit rate is 500 Mb/s. For MPEG-2 encoding, the maximum bit rate is 80 Mb/s. Available compression types are JPEG 2000, MPEG-2, H.264, and VC-1.

Procedure

1. In the **Project settings** window **Codec** tab, select a video compression type from the **Video codec** list.

Figure 43: Project settings window



2. Change the rule and group of pictures, as needed.

Important:

The **Rule** option allows you to control the encoding process. The **Encode if necessary** option re-encodes only source files that do not match the project settings. **Encode all files** instructs CineAsset to re-encode any source file, regardless of the project settings.

Encode all files except I-Only (MPEG only) instructs CineAsset to only re-encode long group of pictures MPEG files. The **Rule** option allows you to force re-encode JPEG 2000 source files.

3. Select the **Adaptive bitrate algorithm** check box to enable **Target PSNR**.

Important:

When unchecked (default), CineAsset uses normal variable bit rate (VBR), based on maximum bit rate. When checked, this reduces file size while maintaining the desired quality.

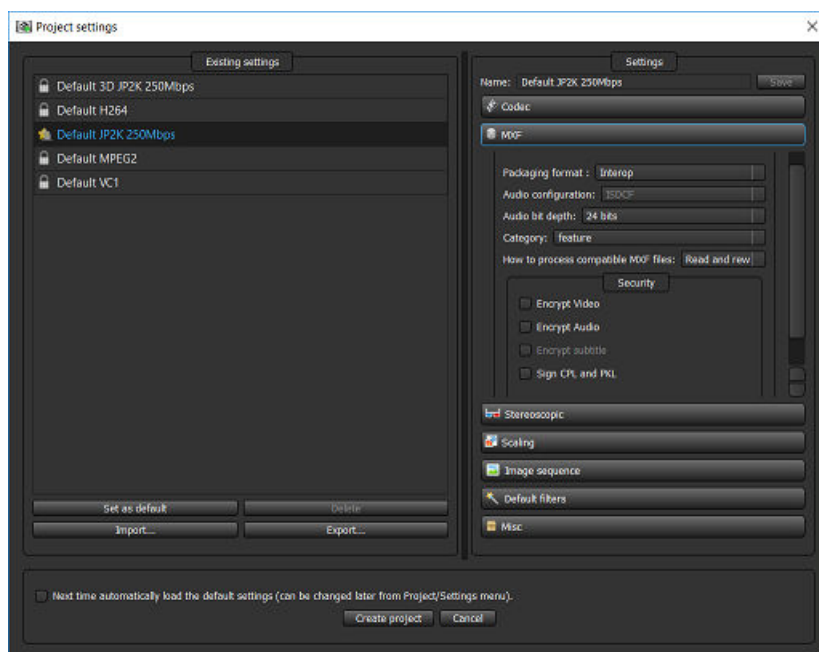
7.2 Setting the DCP standard, audio configuration, and encryption

You can set the DCP standard, audio configuration, and video and audio encryption. You can also sign the CPL and packing list (PKL) and set the category for the DCP.

Procedure

1. In the **Project settings** window, click the **MXF** tab.

Figure 44: Project settings window



2. From the **Packaging format** list, select the packaging format for the DCP.
3. For a SMPTE DCP: From the **Audio configuration** list, select the audio configuration.

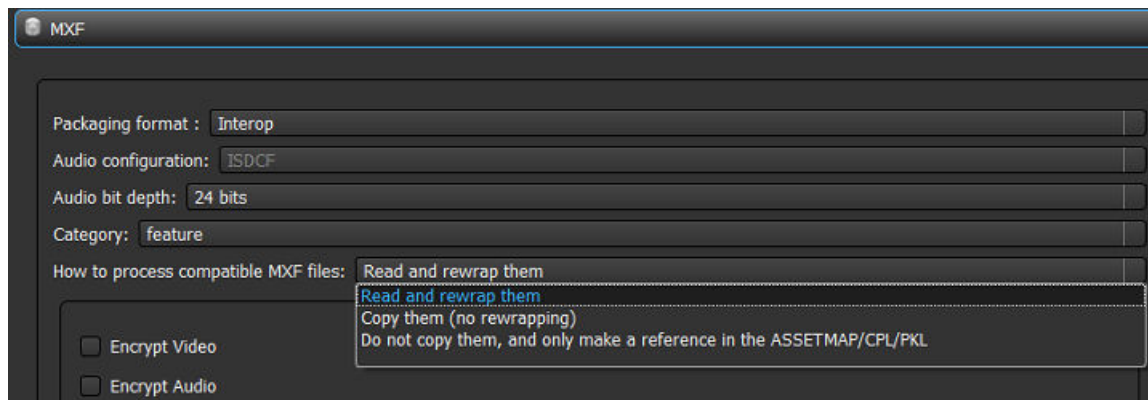
Tip:

Hovering over the configuration displays the audio-track labels.

4. From the **Audio bit depth** list, select the resolution for the sound data.
5. From the **How to process compatible MXF files** list, select an option to configure the Material Exchange Format (MXF) processing.

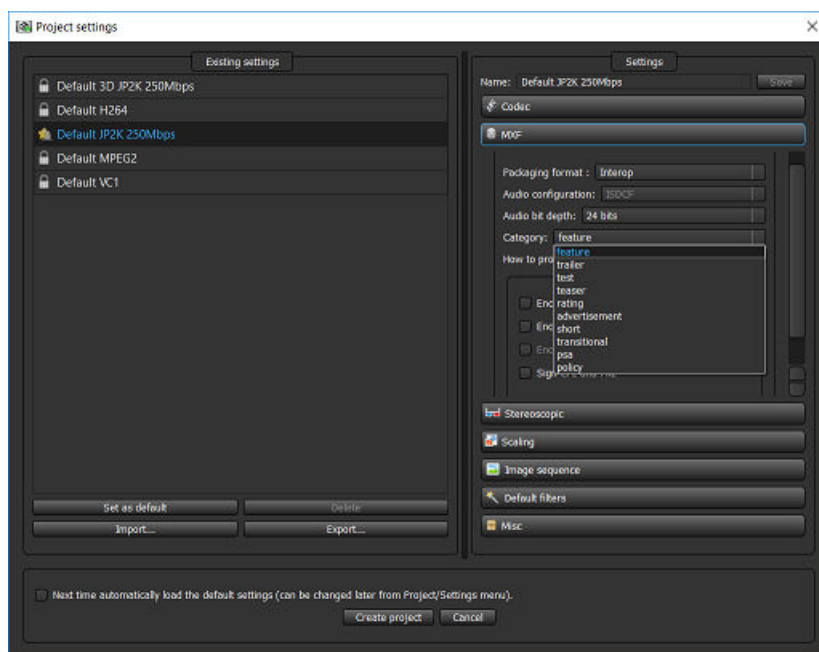
The **Read and rewrap them** option is the default setting and it configures how to process the MXF files as input. If you do not use MXF files as input files for a project, then this option has no effect. The **Copy them (no rewrapping)** option copies the MXF files as it. The **Do not copy them, and only make a reference in the ASSETMAP/CPL/PKL** option implies that the files are referenced in the ASSETMAP/CPL/PKL but the actual MXF files are not copied.

Figure 45: Process MXF files



6. From the **Category** list, set the type of content.

Figure 46: Project settings window



7. Select **Encrypt Audio** or **Encrypt Video** check boxes to encrypt the DCP.

i Tip:

For a SMPTE DCP, you can also encrypt the subtitles using the **Encrypt subtitle** check box.

8. As an option, use the **Sign CPL and PKL** check box to sign the CPL and PKL.

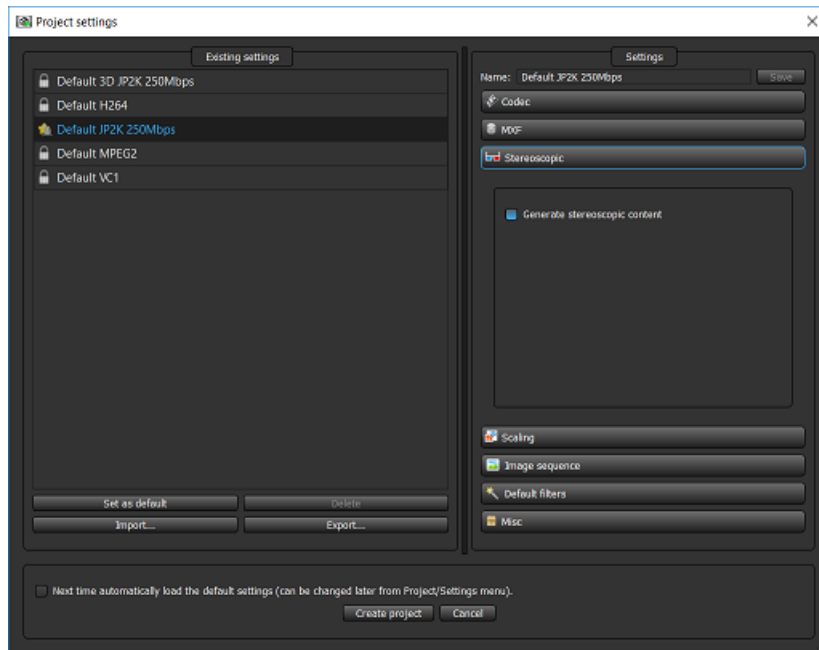
7.3 Generating a 3D DCP

You can generate a 3D DCP.

Procedure

1. After you modify the previous settings for the DCP, click the **Stereoscopic** tab.
2. Select **Generate stereoscopic content**.

Figure 47: Project settings window



3. Continue to modify the rest of the project settings for the DCP.
4. After you finish, click **Create project** to open the project in the **CineAsset Editor** main window.

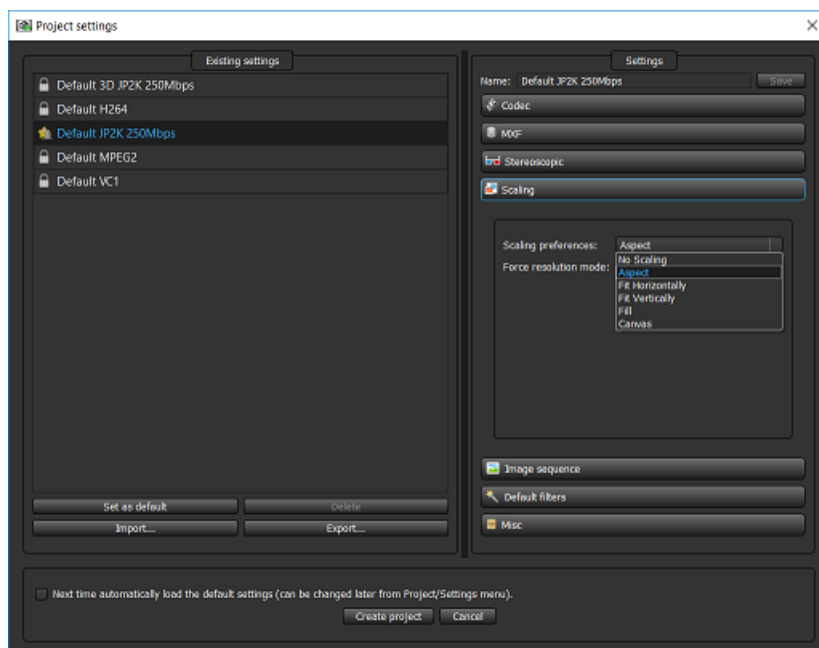
7.4 Setting the scaling parameters for a composition

You can set the scaling parameters and force resolution mode for a composition.

Procedure

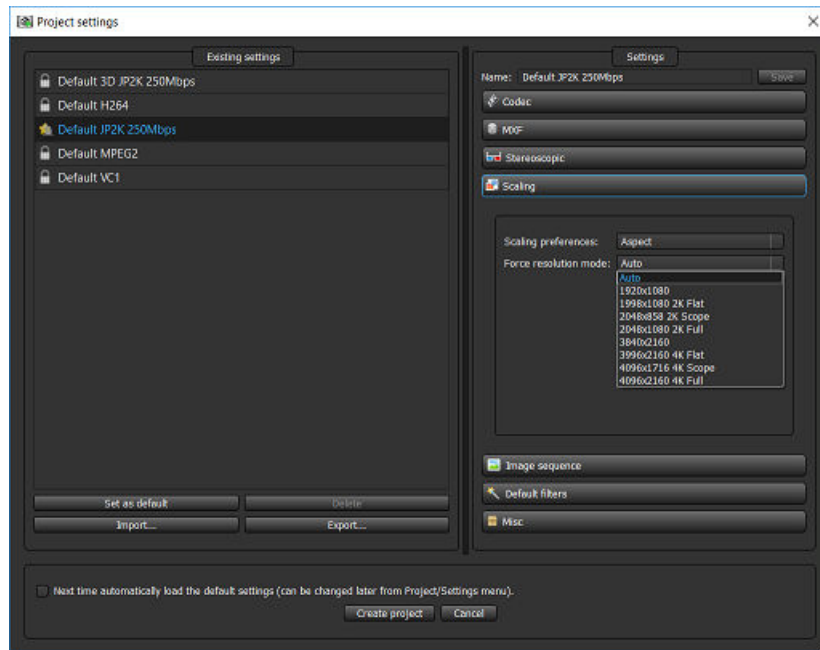
1. In the **Project settings** window **Scaling** tab, set the **Scaling preferences** from the list.

Figure 48: Project settings window



2. Set the **Force resolution mode** from the list.

Figure 49: Project settings window



7.5 Adding the image sequence frame rate for a composition

You can set the frame rate applied when adding image sequences to the **CineAsset Editor** main window **Timeline** section.

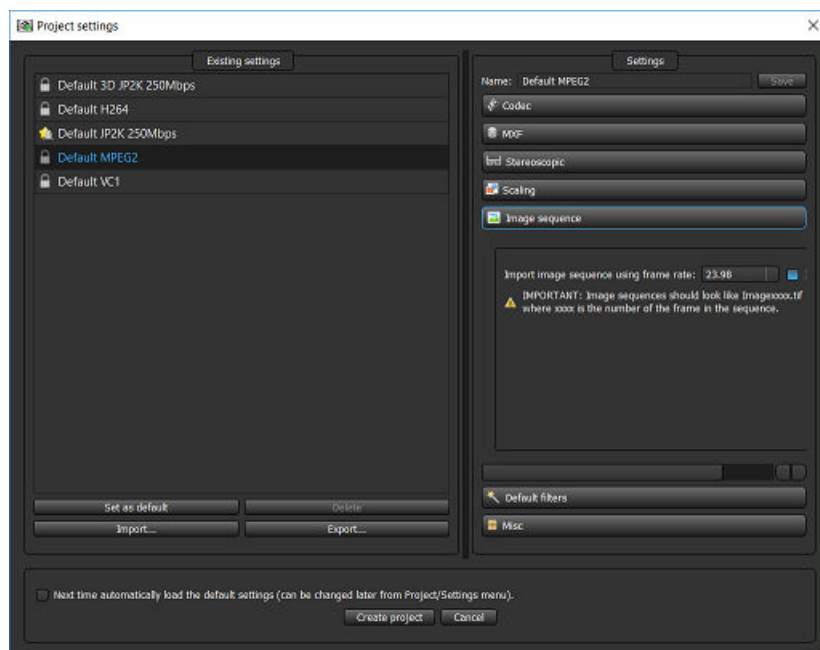
About this task

You can add an image sequence frame rate when working with H.264 and MPEG2 compositions.

Procedure

1. In the **Project settings** window **Image sequence** tab, set the frame rate for the image sequence using the drop-down menu.

Figure 50: Project settings window



2. Click the **Interlaced** check box to interlace the image sequences.

7.6 Overlaying an image to a composition

You can overlay a PNG image file on the video.

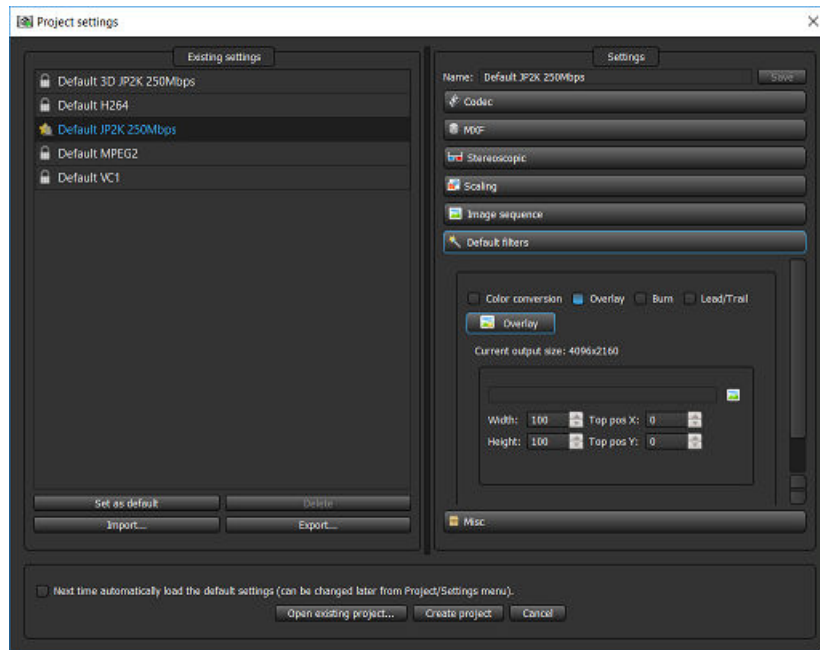
About this task

Once added, the image appears during the playback of the DCP.

Procedure

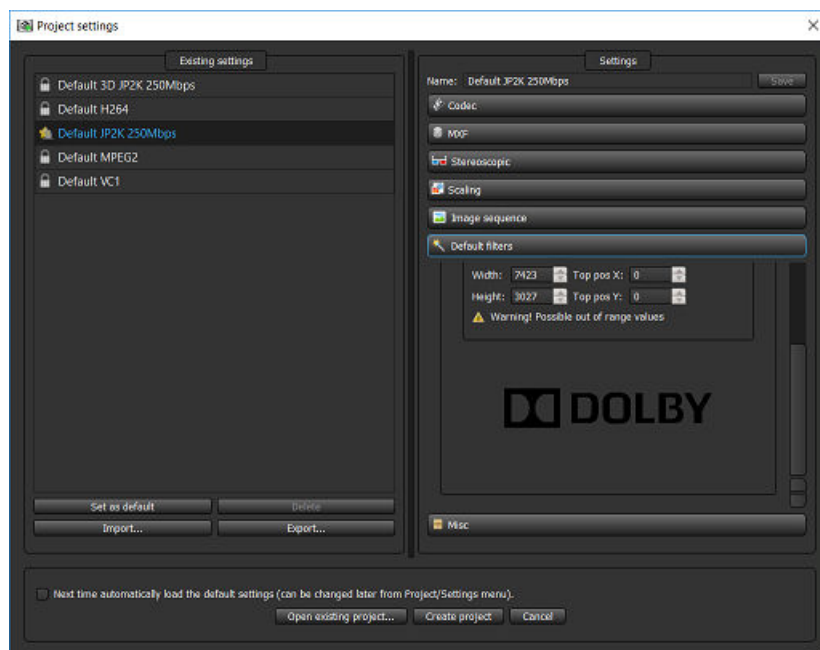
1. In the **Project settings** window **Default filters** tab, select **Overlay**.

Figure 51: Overlay filter



2. Click the picture icon to browse for and select the PNG image file.
3. After you select the PNG image file, adjust the **Width** and **Height** settings to change the size of the PNG image.

Figure 52: Overlay PNG image



4. Adjust the **Top pos X** and **Top pos Y** settings to indicate where the overlay is to be displayed.

i Tip:

Setting both to zero positions the PNG image in the upper-left corner.

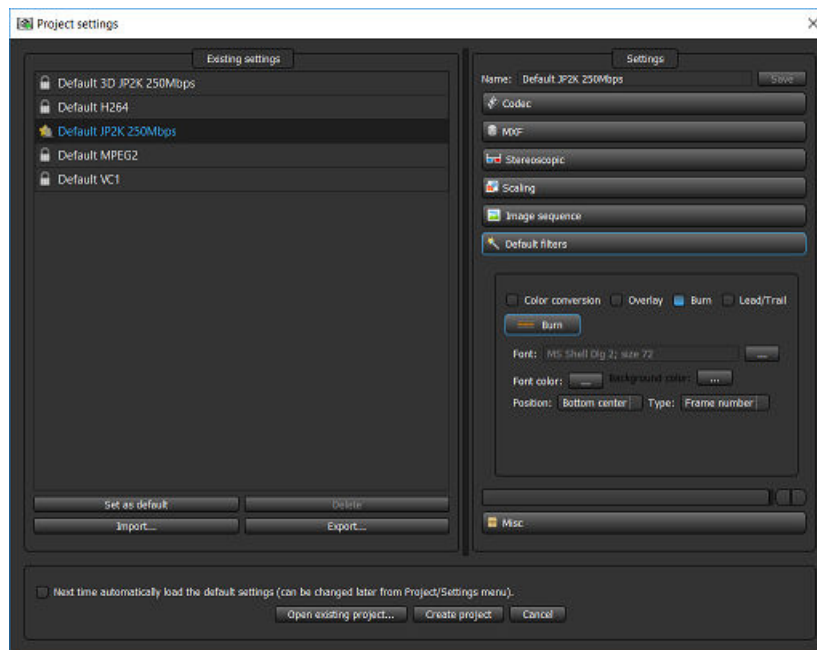
7.7 Burning an image into a composition

You can burn and edit a frame number, timecode, or editable user text on each frame of the DCP.

Procedure

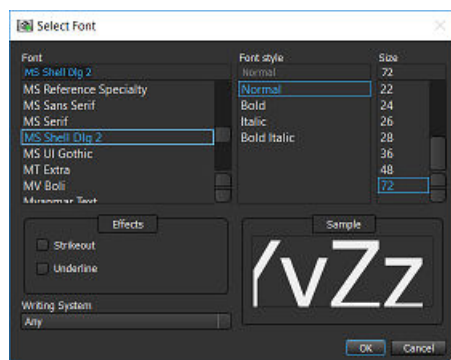
1. In the **Project settings** window **Default filters** tab, select the **Burn** filter.

Figure 53: Burn filter



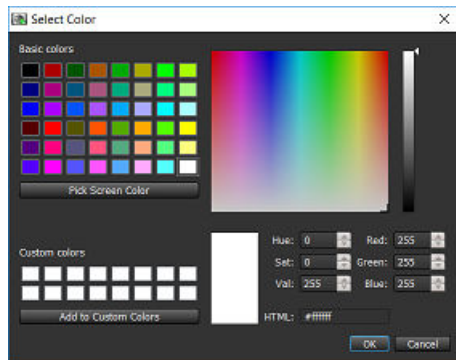
2. Click the browse button (...) in the **Font** field.
3. In the **Select Font** window, select a font, a font style, and a font size.

Figure 54: Select Font window



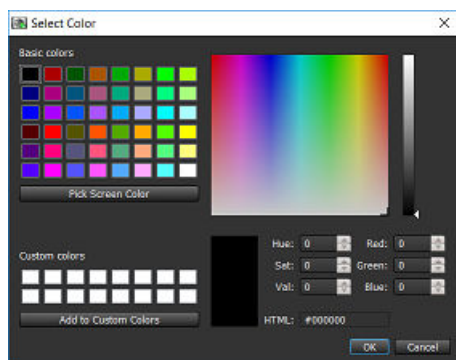
4. Select **Strikeout** or **Underline**, if needed, and select a language, and then click **OK**.
5. In the **Default filters** tab, click **Font color**.
6. In the **Select Color** window, select a font color, adjust any color variables, and then click **OK**.

Figure 55: Select Color window



7. In the **Default filters** tab, click **Background color**.
8. In the **Select Color** window, select a background color, adjust any color variables, and then click **OK**.

Figure 56: Select Color window



9. In the **Default filters** tab, use the **Position** drop-down menu to select the position of the text on each frame, and then use the **Type** drop-down menu to select the type of text.

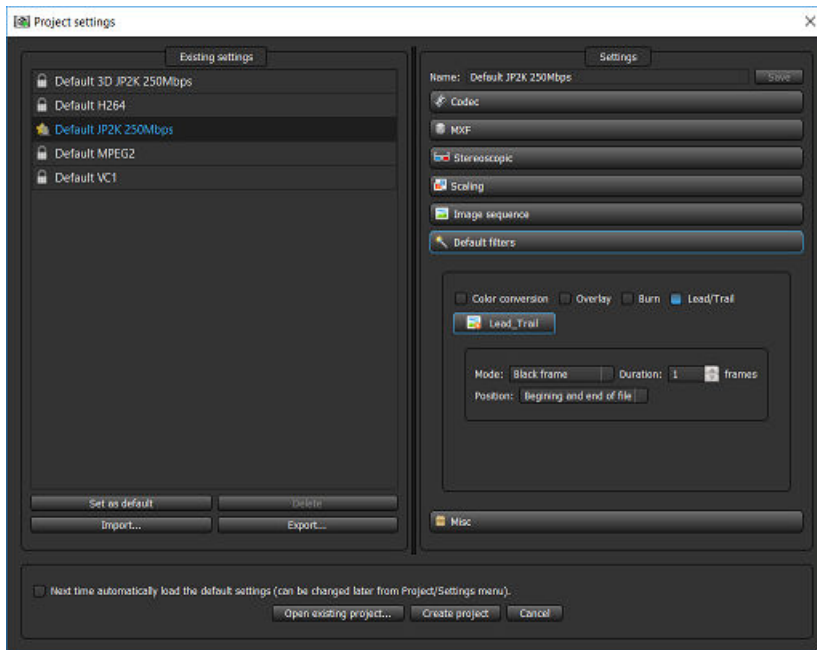
7.8 Adding frames to a composition

You can use the Lead/Trail filter in the **Project settings** window **Default filters** tab to add blank frames or custom frames to the beginning, end, or both ends of a composition.

Procedure

1. In the **Project settings** window **Default filters** tab, click **Lead/Trail**.

Figure 57: Project settings window



2. Choose between adding a black frame or a custom user frame using the **Mode** list.
3. Select the number of frames to add to the DCP using the **Duration** list.
4. Position the frames in the DCP using the **Position** list.

7.9 Modifying extra attributes for a DCP

You can modify any extra attributes for the DCP. You can import the DCP to different fps formats, burn subtitles into video, add a selected number of audio tracks, and set the annotation text.

Procedure

1. In the **Project settings** window, click on the **Misc** tab.
2. To import the DCP to a different format, select **Import 25 fps AV files as 24 fps AV files**, or select **Import 23.98/29.97 fps AV files as 24/30 fps AV files**.
3. Choose to burn subtitles into the DCP.
4. Choose to enable a custom MXF or CPL file name.

When checked, **Enable custom MXF file name** allows you to define a custom file name for the MXF files. When not checked (default), the MXF file names are automatically generated with a universally unique identifier (UUID).

When checked, **Enable custom CPL file name** allows you to define a custom file name for the CPL file. When not checked (default), the CPL file names are automatically generated with a UUID.

5. From the **Number of audio track(s)** list, select the number of audio tracks for the DCP.
6. Choose to modify the annotation text or label text.



Remember:

By default, this option is selected and has label text set to the CPL title (like annotation text). When unselected, it makes the label text value editable.

8

Building a DCP with CineAsset Editor

CineAsset Editor enables you to edit an existing DCP or build a new DCP. It takes content files from the CineAsset database and enables you to edit specific options for the DCP. CineAsset Editor also takes original content from other sources to create a new DCP. CineAsset Editor includes the **Project settings** window, which defines the DCP settings.

- [Opening the CineAsset Editor main window](#)
- [Changing the project viewing mode](#)
- [Starting a new project](#)
- [Saving a project](#)
- [Opening an existing project](#)
- [Changing the file-access method](#)
- [Building a Dolby Atmos SMPTE DCP](#)
- [Naming a DCP](#)
- [Editing metadata for a DCP](#)
- [Working with reels](#)
- [Modifying subtitles for a DCP](#)
- [Creating a supplemental package](#)
- [Setting a profile as default](#)

8.1 Opening the CineAsset Editor main window

You can launch the **CineAsset Editor** main window directly from the CineAsset folder in Microsoft Windows, Mac OS X, or Linux.

About this task

You can also launch the **CineAsset Editor** main window from the App Launcher in Microsoft Windows, Mac OS X, or Linux.

Procedure

1. In Microsoft Windows: launch the **CineAsset Editor** main window from the **Start** menu by clicking **CineAsset Editor** under the *Dolby Laboratories, CineAsset* folder.
2. In Mac OS X: launch the **CineAsset Editor** main window from the *Applications* folder by clicking **CineAsset Editor** under the *Dolby Laboratories, CineAsset* folder.
3. In Linux RedHat/CentOS: launch the **CineAsset Editor** main window from the *Sound & Video* folder in the **Applications** menu by clicking **Dolby Laboratories, CineAsset**.

What to do next

If you have not done so, configure your DCP settings using the **Project settings** window.

Related information

[Configuring DCP project settings](#) on page 43

8.2 Changing the project viewing mode

You can alternate between Tabbed mode and Windowed mode when working on multiple projects.

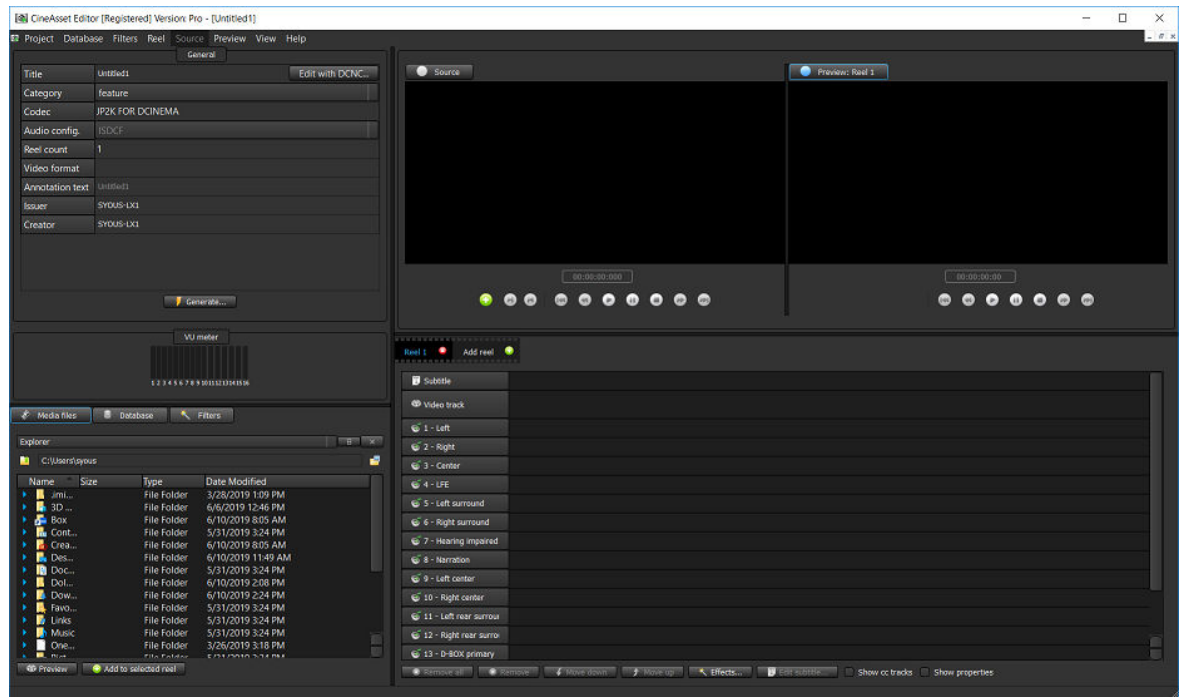
About this task

By default, the **CineAsset Editor** main window opens in Windowed mode.

Procedure

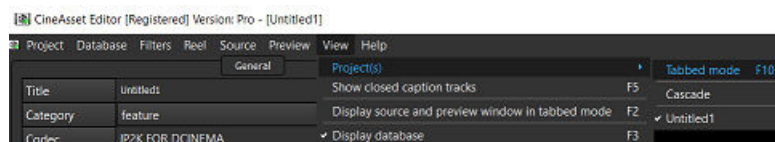
1. In the **CineAsset Editor** main window, open a project.

Figure 58: Windowed mode



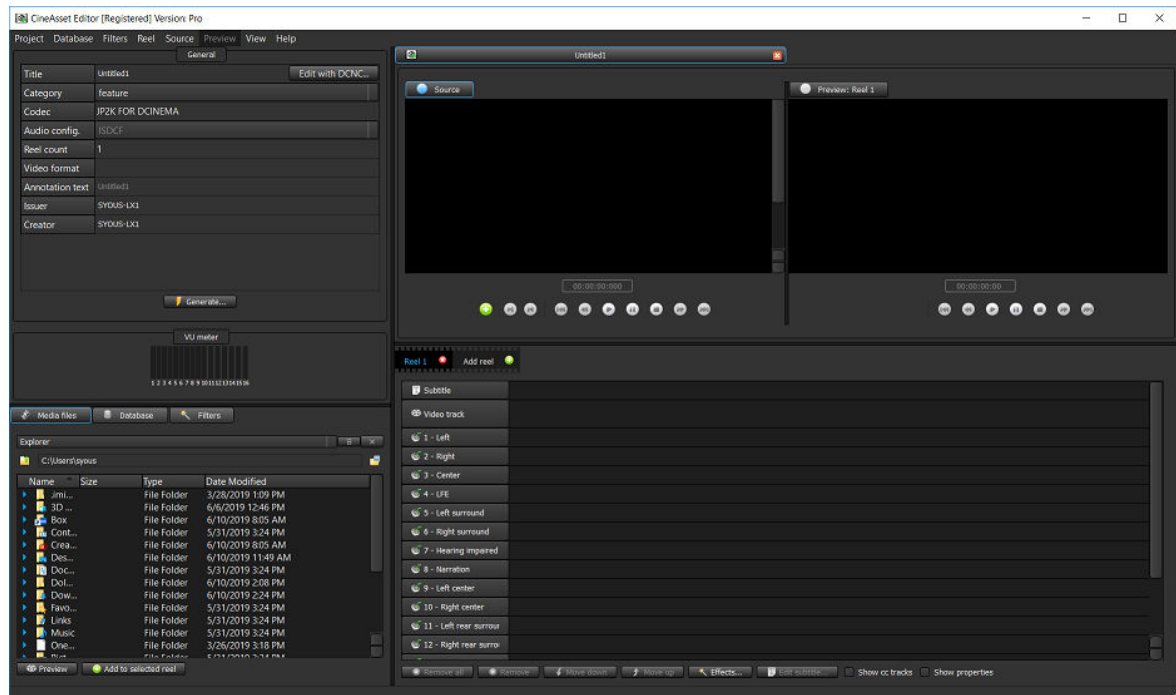
2. Click **View**, click **Projects**, and then click **Tabbed mode**.

Figure 59: Tabbed mode selection



After you click **Tabbed mode**, the **CineAsset Editor** main window changes to Tabbed mode.

Figure 60: Tabbed mode



8.3 Starting a new project

You can start a new project in the **CineAsset Editor** main window.

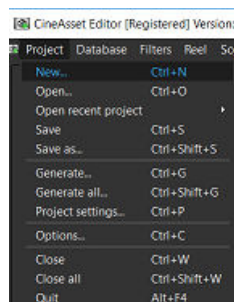
About this task

When you open the **CineAsset Editor** main window for the first time, the **Project settings** window appears instead. To open a project directly in the **CineAsset Editor** main window, select **Next time automatically load the default settings (can be changed later from Project/Settings menu)**.

Procedure

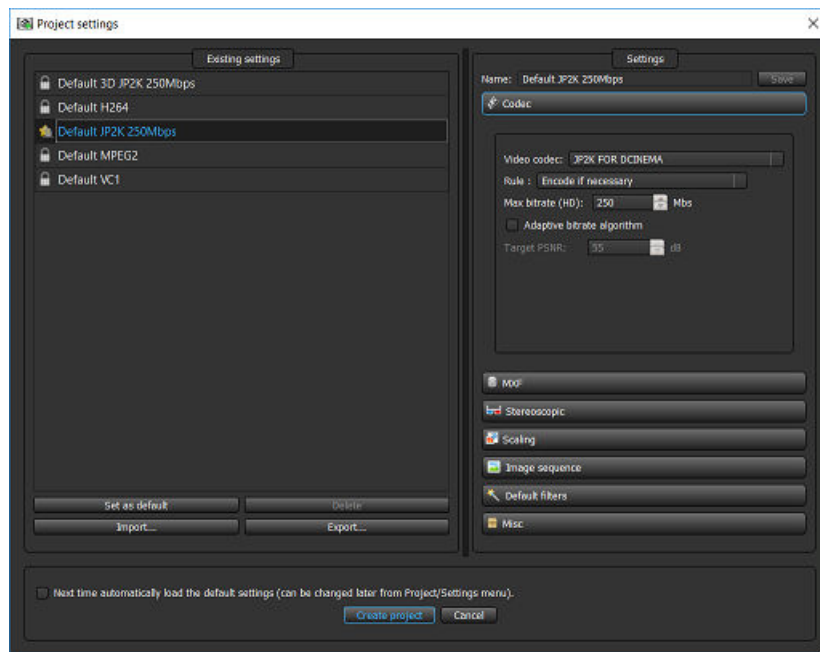
1. In the **CineAsset Editor** main window menu, click **Project** and then click **New**.

Figure 61: New project



2. In the **Project settings** window, modify the DCP settings, and then click **Create project**.

Figure 62: Project settings window



Results

The **CineAsset Editor** main window displays again, with the new DCP settings.

Related information

[Configuring DCP project settings](#) on page 43

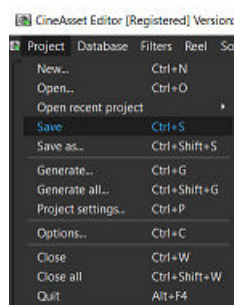
8.4 Saving a project

You can save a project to a CineAsset project file with a *.ca* extension.

Procedure

1. In the **CineAsset Editor** main window menu, click **Project** and then click **Save**.

Figure 63: Save project



2. In the explorer window, select a location to save the project, and then click **Save**.

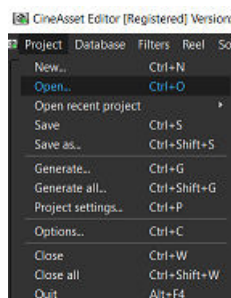
8.5 Opening an existing project

You can open an existing CineAsset project file.

Procedure

1. In the **CineAsset Editor** main window menu, click **Project** and then click **Open**.

Figure 64: Open a project



2. In the explorer window that appears, browse for and select the CineAsset project file, and then click **Open**.

Results

The CineAsset project file opens in the **CineAsset Editor** main window.

8.6 Changing the file-access method

You can use the **Explorer** drop-down menu to change the file-access method. You can change the file-access method to **FTP Explorer** from the default method of **Explorer**.

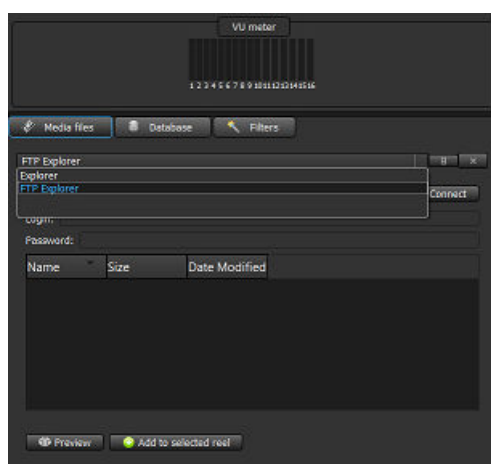
About this task

If you have content (image sequences only) stored on a fast network-attached storage (NAS) device, we recommend accessing the content by File Transfer Protocol (FTP) using the **CineAsset Editor** main window **FTP Explorer**. Accessing data by FTP is faster than using the default file-access method.

Procedure

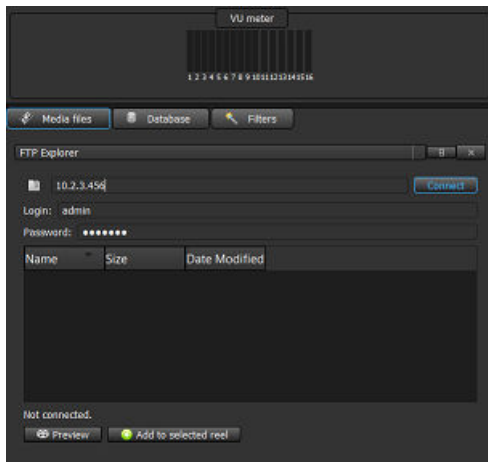
1. In the **CineAsset Editor** main window, click the **Explorer** list in the bottom-left section, and select **FTP Explorer**.

Figure 65: Change file-access method



2. Enter the IP address and credentials for the FTP, and then click **Connect**.

Figure 66: FTP explorer credentials



8.7 Building a Dolby Atmos SMPTE DCP

You can build a SMPTE-compliant DCP with Dolby Atmos.

Procedure

1. Open the **Project settings** window, and then click the **MXF** tab.
2. From the **Packaging format** list, select **SMPTE**.
3. Use the other options to specify the configuration for your Dolby Atmos SMPTE DCP.
4. Configure any other settings for the DCP, and then click **Create project**.
5. In the **CineAsset Editor** main window, load the video and audio files onto the **Timeline** section.
6. Add the Dolby Atmos MXF to the **Dolby Atmos track** on the **Timeline** section.
7. Continue to edit any other video and audio options on the **Timeline** section.
8. Name your DCP, add any metadata, and then generate the DCP.

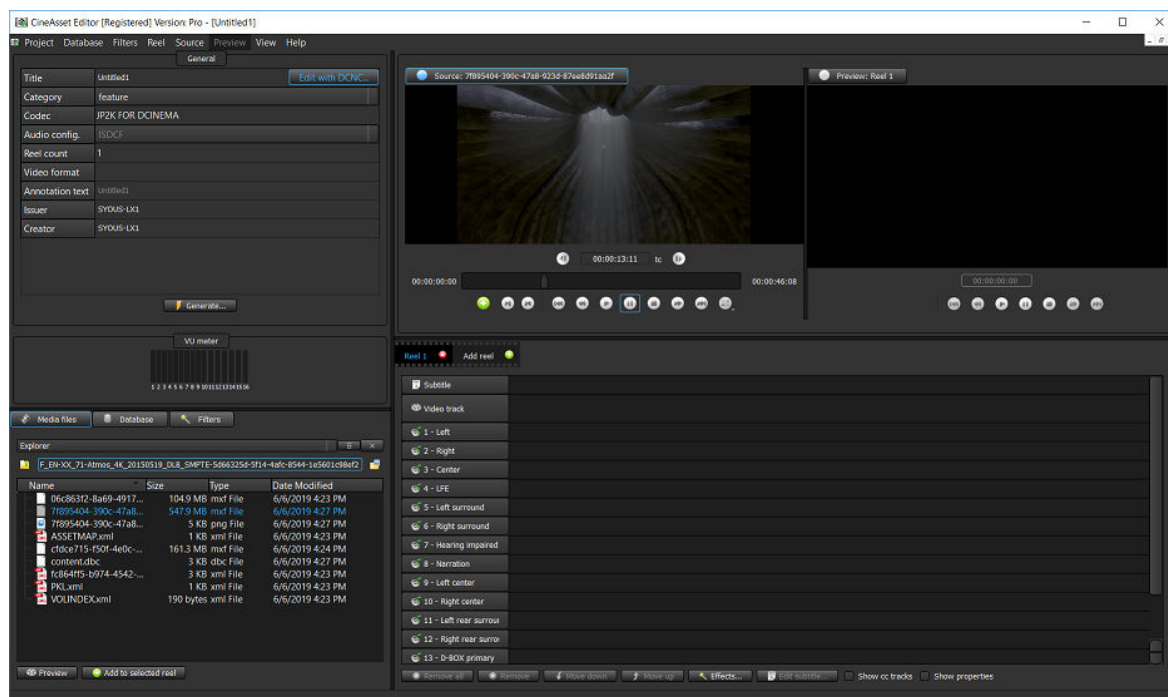
8.8 Naming a DCP

You can name the DCP to ensure it is in compliance with the latest DCNC version.

Procedure

1. With the DCP open in the **CineAsset Editor** main window, click **Edit with DCNC** in the **General** section.

Figure 67: CineAsset Editor main window



2. In the DCNC window:

- Enter the title for the DCP in the **Film Title** field.
- Select the DCP parameters using the drop-down menus.

When the DCP title is DCNC compliant, the clip title changes color to reflect the selected parameters.

If the clip title is not DCNC compliant, then the title is shown in white letters.

- After you finish, click **OK**.

Figure 68: Digital Cinema Naming Convention window

Clip Title: **Untitled1**

Film Title: **Untitled**

Content Type: **(No Content Type Information)** | Version:

Optional Content Modifiers:

☐ Temp ☐ Pre ☐ RedBand Chain:

Identifier: **(No Identifier)** Luminance: **(No Luminance)** Frame Rate, if not 24: **(No FrameRate)**

☐ Dolby Vision ☐ Eclair Color

Projector Aspect Ratio: **(No Projector Aspect Ratio Information)**

Optional Interior Aspect Ratio: **None**

Language Audio: **(No Language Audio Information)**

Language Subtitle: **(No Subtitles Information)** | ☐ Burnt

Optional: ☐ CCAP ☐ OCAP

Territory: **(No Territory Information)**

Rating: **(No Rating Information)**

Audio Type: **(No Audio)** | ☐ HI ☐ VI ☐ SL

Optional Immersive Sound Formats:

Optional Motion Simulator Formats:

Resolution: **(No Resolution Information)**

Studio: **(No Studio Information)** | **New** **Remove** **Reset**

Date: **(No Date Information)** | **New** **Remove** **Reset**

Fidelity: **(No Fidelity Information)**

Package Standard: **(No Package Standard)** | **New** **Remove** **Reset**

Package Type: **(No Package Type Information)** | Version:

OK **Cancel**

3. In the **CineAsset Editor** main window **General** section, change the category of the DCP using the **Category** drop-down menu.
4. From the **Audio Config.** list, change the audio configuration.
5. In the **Issuer** and **Creator** fields, enter information for the issuer and creator of the DCP.
6. If needed, enter information in the **Video MXF file name** and **Audio MXF file name** fields.

The **Video MXF file name** and **Audio MXF file name** fields appear only if you enabled editing the MXF file names in the **Project settings** window, in the **Misc** tab.

7. In the **CPL file name** field, enter a new name for the CPL file.
8. After you finish, click **Generate** in the **General** section.

8.9 Editing metadata for a DCP

You can enable and edit the CPL metadata when you work with a SMPTE standard DCP.

Procedure

1. In the **CineAsset Editor** main window, load the SMPTE-compliant DCP.
2. Click the **Enable Metadata** check box in the **General** section, and then click **Edit**.
3. In the **Metadata** window, edit the metadata using the available options.
4. When you finish, click **OK**.
5. Click **Generate** in the **General** section.

8.10 Working with reels

You can add, copy, remove, and edit reels in the **Timeline** section.

Procedure


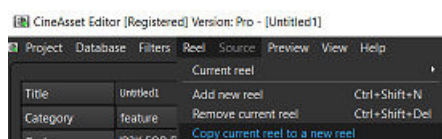
1. In the **CineAsset Editor** main window, click **Add reel**.
 2. Navigate for the content and add it to the **Timeline** section.
 3. Add new reels, as needed.
-  **Tip:** Use the **Reel** tabs to navigate between the reels.
4. To copy a reel, click **Reel**, and then click **Copy current reel to a new reel**.

Figure 69: Copy reel



5. To remove a file from a current reel, select the file and click **Remove**.
6. To clear a current reel, select the reel and click **Remove all**.
7. To verify properties, edit nondestructive in/out points, and add main markers to a CPL, select the **Show properties** check box.
 - a) Use the **Properties** tab to display the information about the audio and video so that you can verify that all scaling, cropping, or padding settings are correct.
 - b) Use the **Non destructive in/out points** tab to edit the entry point and duration after the audio and video are added to the **Timeline** section. Use the **Media** drop-down list to select the track to edit. If you select **Video**, all video tracks are edited. If you select **Audio**, all audio tracks are edited. After editing an in, out, or duration value, you must press the Enter key to apply the change.

- c) Use the **Main Markers** tab to add main markers the your CPL.

8.11 Modifying subtitles for a DCP

You can modify the subtitle attributes for a DCP.

Procedure

1. In the **CineAsset Editor** main window, use the **Browser** section to navigate the system for a video file, and add it to the **Timeline** section.
2. Use the **Browser** section to navigate the system for an XML subtitle package, and add it to the **Timeline** section.
3. Click **Edit subtitle**.
4. Click each **Spot Number** to display the text and font.
The **Spot Number** field lists the spot numbers available for modification.
5. Select the text and change the font for the subtitle.
From here, you can change the string, horizontal, and vertical alignment. You can also change the text and font.
6. To modify subtitle text:
 - a) To change the text, go to the **String** field and add or delete any words, as needed.
 - b) To align the text, go to the **H-Align** and **V-Align** fields and choose from the alignment options.
7. To change the time when the subtitle appears in the clip:
 - a) Go to the **Time In/Time Out Offset** field.
 - b) Add or subtract the time.
 - c) Click **Done** to save all work.
8. When you finish, click **Done**.

You can undo all work performed using **Reset**.

9. Click **Yes** to confirm the modifications.

8.12 Creating a supplemental package

You can create a supplemental package for a DCP that is currently in the CineAsset database.

Procedure

1. Open the **CineAsset** main window and click the **Database** tab. Select the DCP, and then click **Create supplemental package**.
2. In the new window that appears, wait for the validation output scan to finish, and then click **Continue**.
3. In the **CineAsset Editor** main window that appears, remove any DCP assets you want to replace from the **Timeline** section, and add new DCP assets to the **Timeline** section.
4. In the **General** section of the **CineAsset Editor** main window, enter a new name for the new supplemental package.
5. In the **CineAsset Editor** main window, scroll to **Project > Save** to save the project.
6. In the explorer window that appears, find a location and save the project.
7. After the project is configured and saved, click **Generate** in the **General** section of the **CineAsset Editor** main window.
8. In the **Generation** window that appears, scroll down and click **OK**.
9. In the **Project New Supplemental Package** window that appears, make sure any items in the window are checked, and click **OK**.

Results

After the supplemental package is created, it appears in the database with an arrow, indicating that it is a supplemental package.

8.13 Setting a profile as default

You can set any profile to default, so every time the **CineAsset Editor** main window opens, the default settings configuration is automatically loaded.

Procedure

1. Open the **Project settings** window.
2. Select a profile in the **Existing settings** section, and then click **Set as default**.
A star icon indicates the default profile.
3. To save a current settings configuration to a default profile:
 - a) Enter a name for the profile in the **Name** field at the top of the **Settings** section, and then click **Save**.

Results

The new profile appears in the **Existing settings** section.

9

Playing back content with CineAsset Player

CineAsset Player enables you to view content and perform playback of a DCP. In addition, you can modify the CineAsset Player settings for content playback and content validation (through CineInspect).

- [Playing back a DCP](#)
- [Playing back a multimedia file](#)
- [Playing back separated video and audio files](#)
- [Creating a playlist with CineAsset Player](#)
- [Loading and playing a playlist with CineAsset Player](#)
- [Modifying CineAsset Player settings](#)

9.1 Playing back a DCP

You can open and play back a DCP.

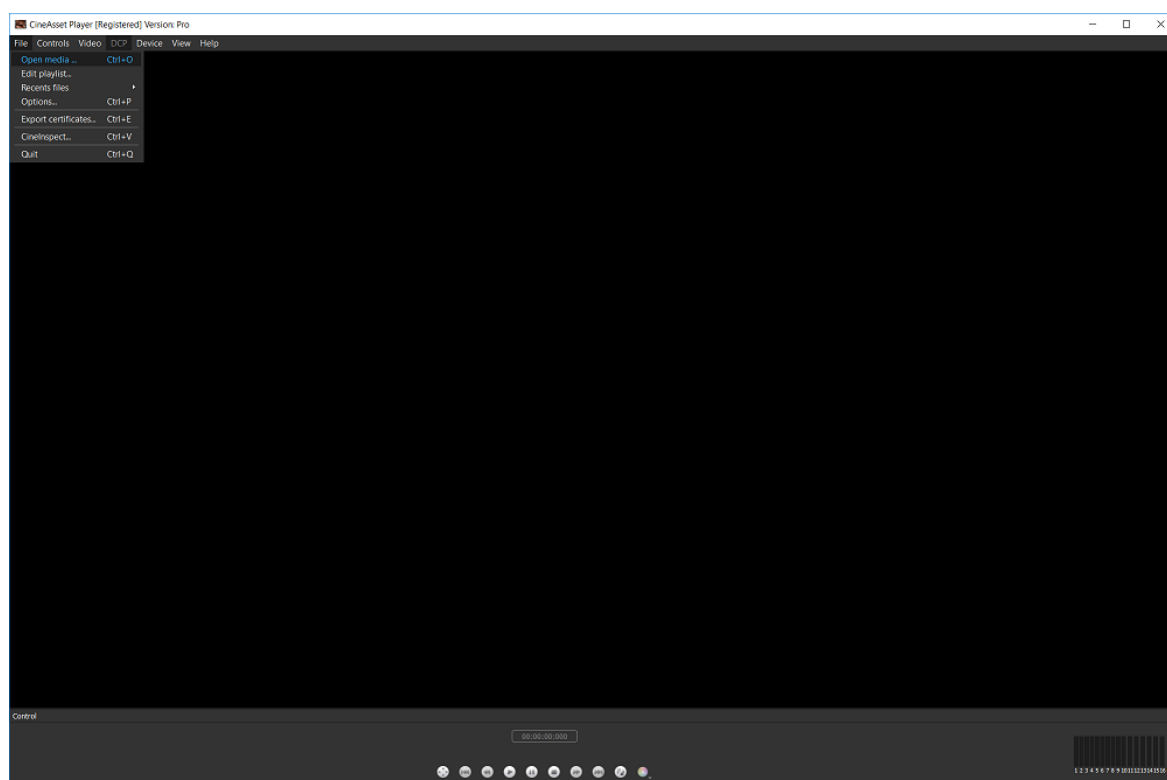
Procedure

1. At the top-left section of the **CineAsset Player** main window, click **File**, and then select **Open media** in the drop-down menu.

i **Tip:**

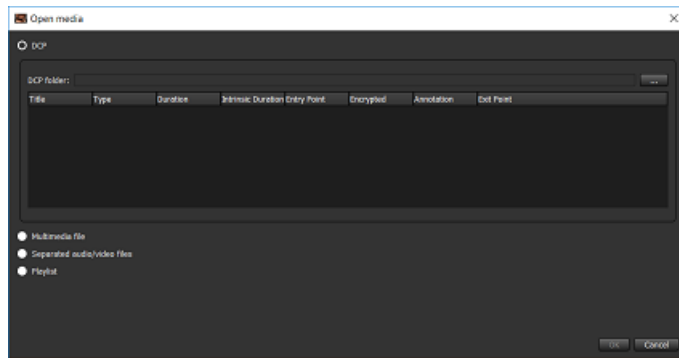
You can also open a DCP by dragging and dropping a file or folder into the **CineAsset Player** main window.

Figure 70: CineAsset Player main window



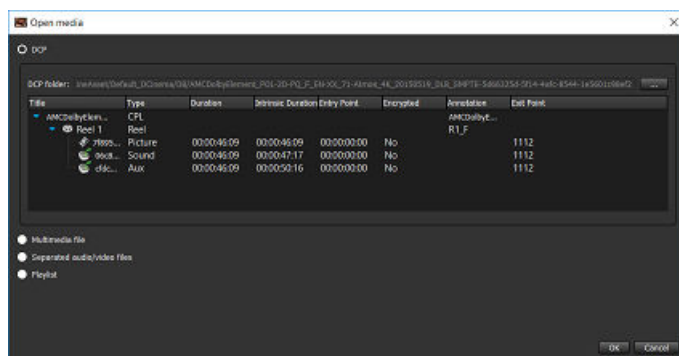
2. In the **Open media** window, select **DCP**.

Figure 71: Open media window



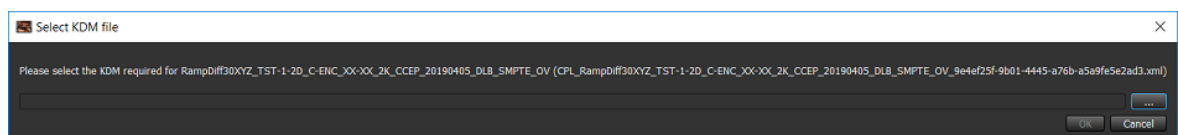
3. Browse to the DCP by using the browse (...) button at the top-right section of the **Open media** window.
4. For an encrypted DCP, browse for the KDM using the browse (...) button at the top-right section of the **Open media** window.
5. After you find the DCP and KDM, click **OK**.

Figure 72: Open media window



If you drag and drop an encrypted DCP onto the **CineAsset Player** main window, you will need to locate the corresponding KDM in this window:

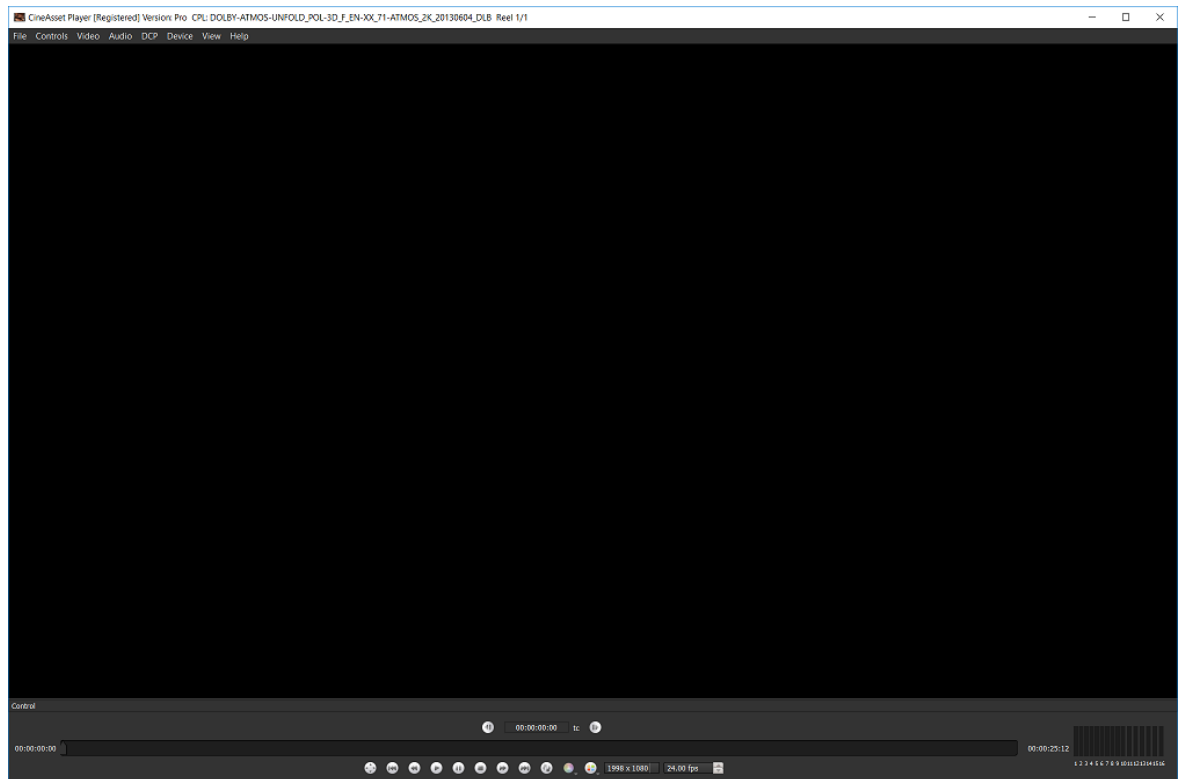
Figure 73: KDM search window



The DCP opens in the **CineAsset Player** main window.

6. Click **Play** to play back the DCP.

Figure 74: CineAsset Player main window



9.2 Playing back a multimedia file

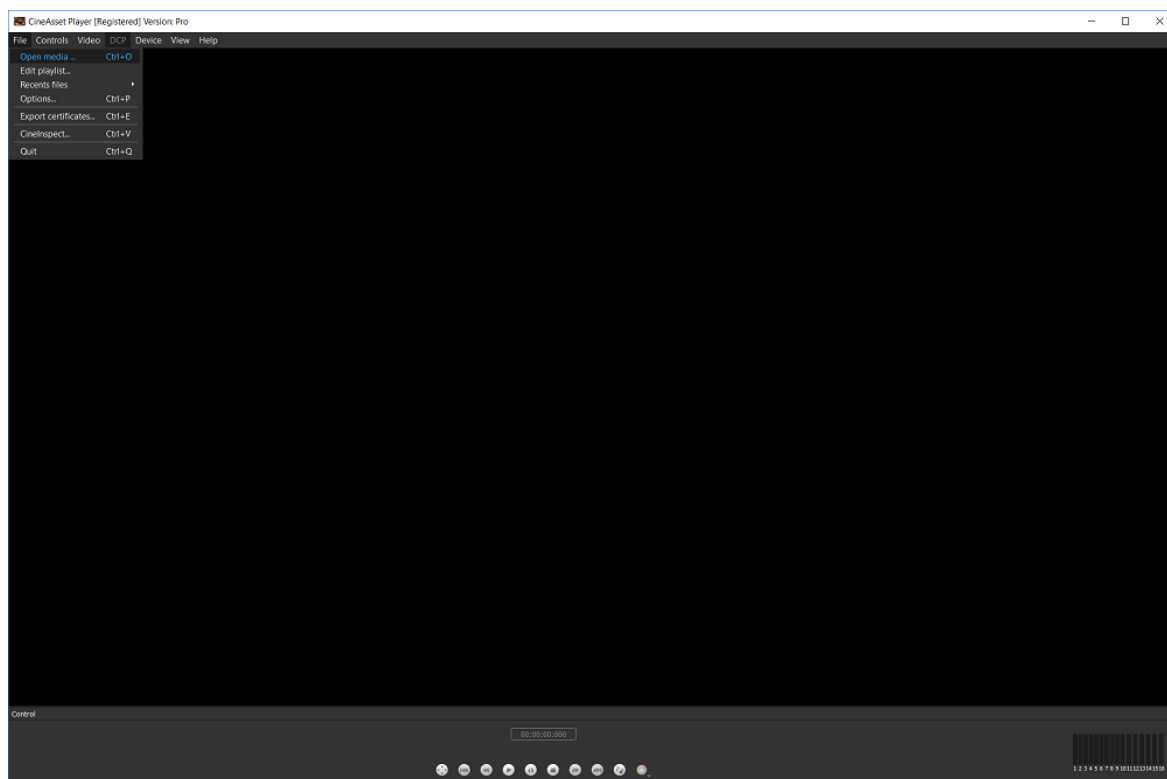
You can open and play back a multimedia file.

Procedure

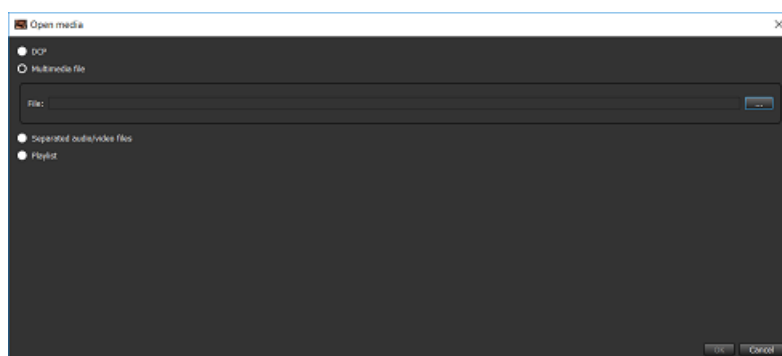
1. At the top-left section of the **CineAsset Player** main window, click **File**, and then select **Open media** in the drop-down menu.

Tip:

You can also open the multimedia file by dragging and dropping a file or folder into the **CineAsset Player** main window.

Figure 75: CineAsset Player main window

2. In the **Open media** window, select **Multimedia file**.

Figure 76: Open media window

3. Browse to the multimedia file by using the browse (...) button at the top-right section of the **Open media** window.
4. After you find the multimedia file, click **OK**.
The multimedia file opens in the **CineAsset Player** main window.
5. Click **Play** to play back the multimedia file.

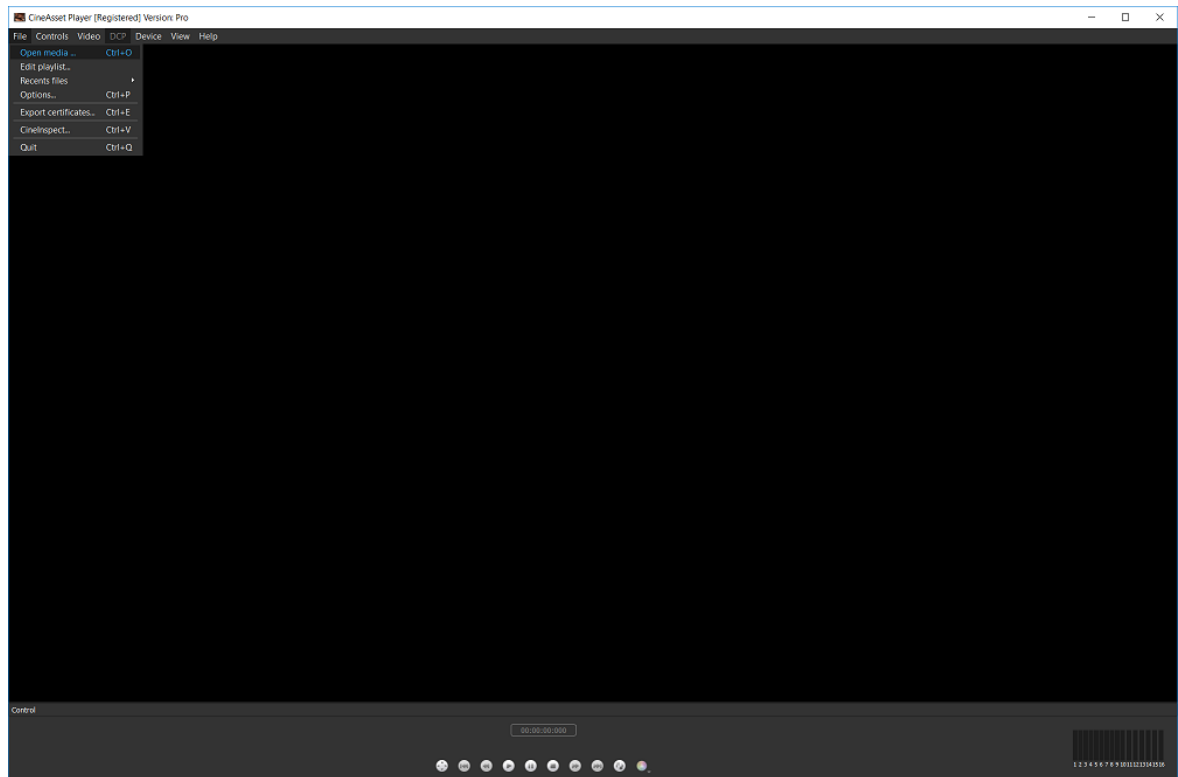
9.3 Playing back separated video and audio files

You can simultaneously open and play back separated video and audio files.

Procedure

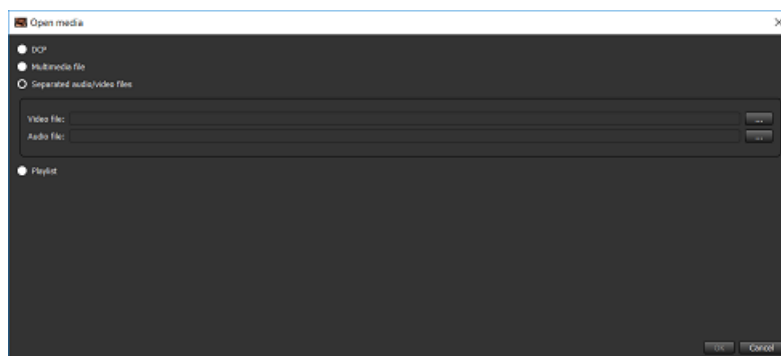
1. At the top-left section of the **CineAsset Player** main window, click **File**, and then select **Open media** in the drop-down menu.

Figure 77: CineAsset Player main window



2. In the **Open media** window, select **Separated audio/video files**.

Figure 78: Open media window



3. Browse to the separated video and audio files using the browse (...) buttons in the **Open media** window.
4. After you find the separated video and audio files, click **OK**.

The separated video and audio files open in the **CineAsset Player** main window.

5. Click **Play** to play back the separated video and audio files simultaneously.

9.4 Creating a playlist with CineAsset Player

You can use CineAsset Player to create a playlist containing multiple and varying CPL files.

Procedure

1. In the **CineAsset Player** main window, click **File**, and then click **Edit playlist**.
2. In the **Edit Playlist** window, click **New** to begin creating a new playlist.
3. Click **Add**.
4. To select a DCP, select the **DCP** radio button, and then search for the file.
5. To select a multimedia file, select the **Multimedia file** radio button, and then search for the file.
6. To select separate audio and video files, select the **Separated audio/video files** radio button, and then search for the files.
7. Click **OK**.
8. In the **Edit Playlist** window, use **Move up** and **Move down** to arrange the sequence of CPLs added in the playlist.
9. To remove a CPL from the playlist, click **Remove**.
10. When you finish, click **Save**.

9.5 Loading and playing a playlist with CineAsset Player

You can use CineAsset Player to load and play a playlist containing CPLs.

Procedure

1. In the **CineAsset Player** main window, click **File**, and then click **Edit playlist**.



Tip:

You can also drag and drop the playlist onto the **CineAsset Player** main window, or you can use the **Open media** window to open the playlist.

2. In the **Edit Playlist** window, click **Open** to open the playlist.
3. In the explorer window, browse for and then open the playlist.
4. In the **Edit Playlist** window, click **Play** to begin playback of the playlist.

9.6 Modifying CineAsset Player settings

CineAsset Player allows you to modify the DCP playback and DCP validation settings.

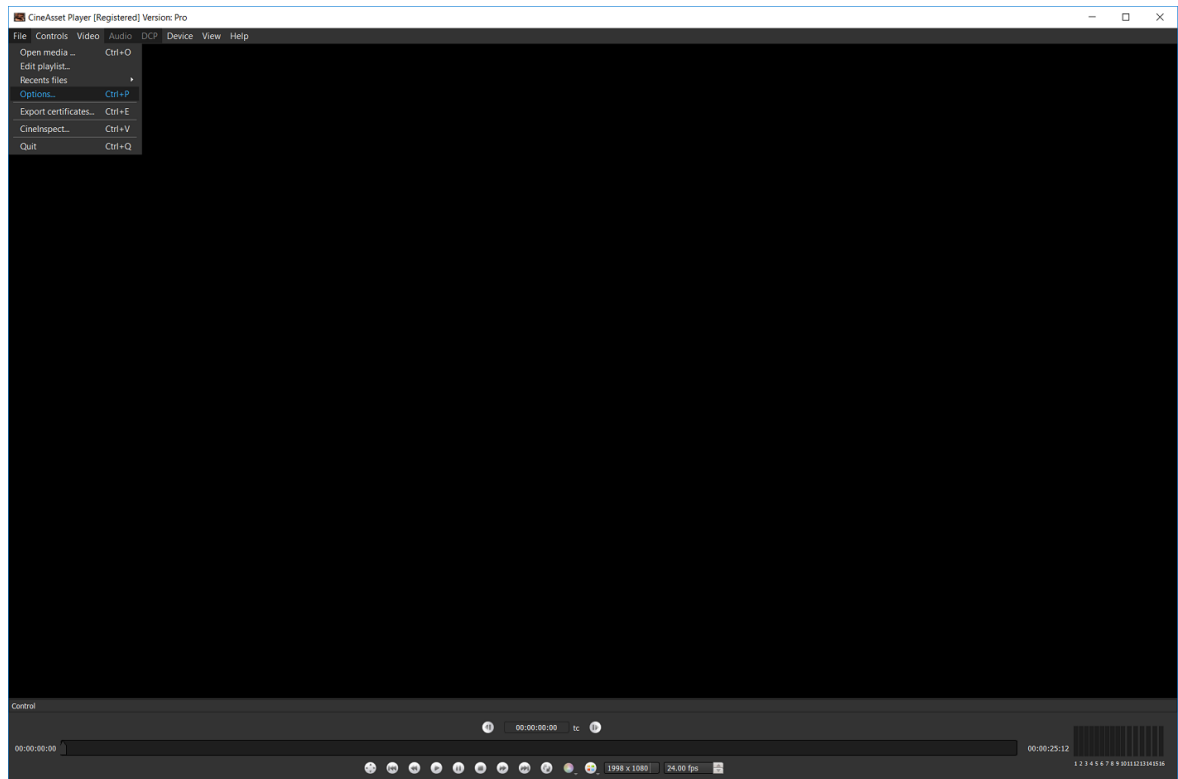
9.6.1 Modifying CineAsset Player playback settings

You can modify the CineAsset Player DCP playback settings.

Procedure

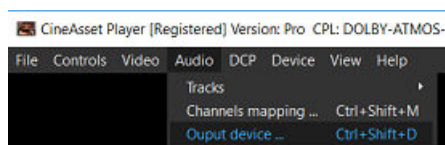
1. In the **CineAsset Player** main window, click **File**, and then click **Options**.

Figure 79: CineAsset Player main window



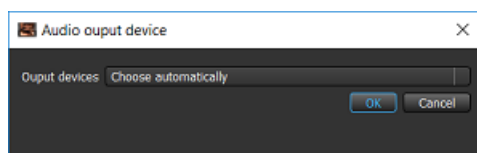
2. In the **Options** window, select one or all of the settings you want to modify:
 - a) To allow frames to drop during playback, select the **Drop frame allowed** check box.
 - b) To use the DeckLink option, select the **Auto detect DeckLink card** check box.
 - c) To disable GPU color conversion, unselect the **Use GPU for color conversion** check box.
 - d) To run a validation check each time the DCP is opened, select the **Enable dcp validation check** check box.
3. To change the output audio device, click **Audio** in the **CineAsset Player** main window.

Figure 80: Output device



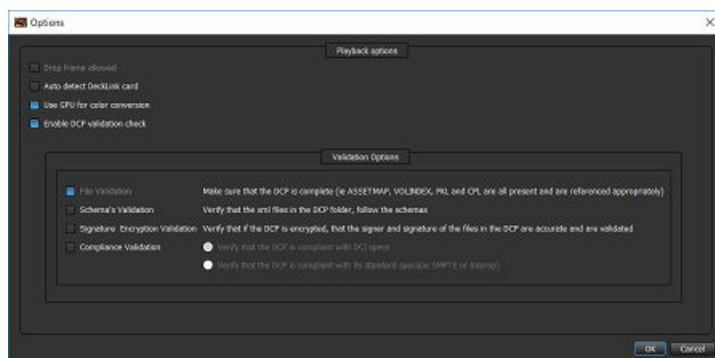
4. In the **Audio output device** window, from the **Output devices** list, select your source audio device, and then click **OK**.

Figure 81: Audio output device window



5. After you finish, click **OK**.

Figure 82: Options window



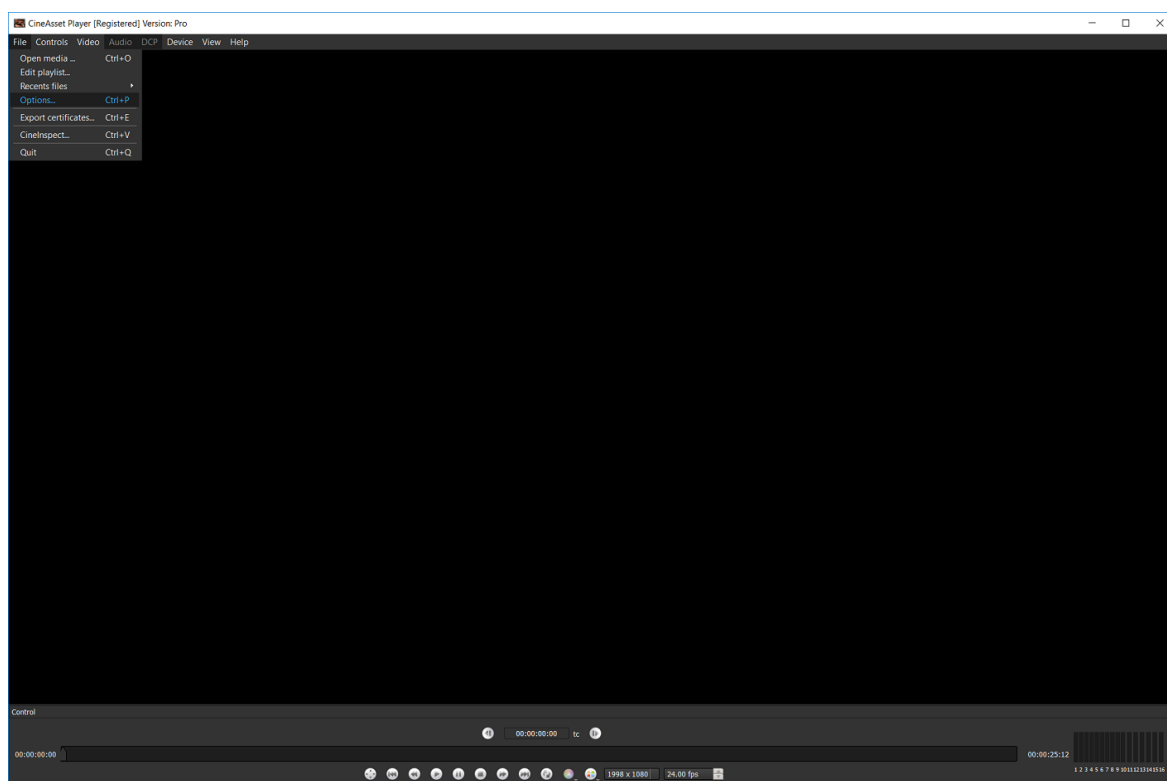
9.6.2 Modifying CineAsset Player DCP validation settings

You can modify the CineAsset Player DCP validation settings.

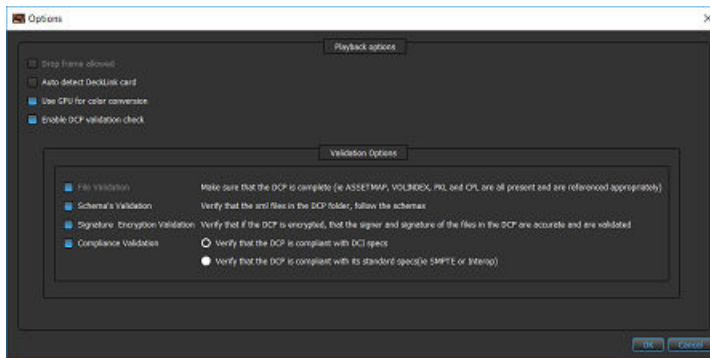
Procedure

1. In the **CineAsset Player** main window, click **File**, and then click **Options**.

Figure 83: CineAsset Player main window



2. In the **Options** window, select one or all of the settings you want to modify:
 - a) To verify the DCP components, select the **File Validation** check box.
 - b) To verify that the XML files follow the appropriate schema, select the **Schema's Validation** check box.
 - c) To verify that the encrypted DCP includes a valid signature, select the **Signature Encryption Validation** check box.
 - d) To verify that the DCP complies with Digital Cinema Initiatives, LLC (DCI) or standard specifications, select the **Compliance Validation** check box.
3. After you finish, click **OK**.

Figure 84: Options window

10

Modifying the viewing options with CineAsset Player

CineAsset Player enables you to modify the viewing options while playing back a DCP.

- [Adding color conversion](#)
- [Adding custom color conversion](#)
- [Selecting an image resolution layer](#)
- [Changing the playback frame rate](#)
- [Enabling side-by-side mode for a 3D DCP](#)
- [Changing the JPEG 2000 image quality](#)
- [Disabling playback to a standard computer monitor](#)
- [About the HD-SDI output](#)

10.1 Adding color conversion

You can add real-time color conversion while playing back a DCP.

About this task

The **XYZ'/YCxCz to RGB** option converts the color space from XYZ to red green blue (RGB), and the **XYZ'/YCxCz to RGB legal range** option converts the color space from XYZ to RGB legal range.

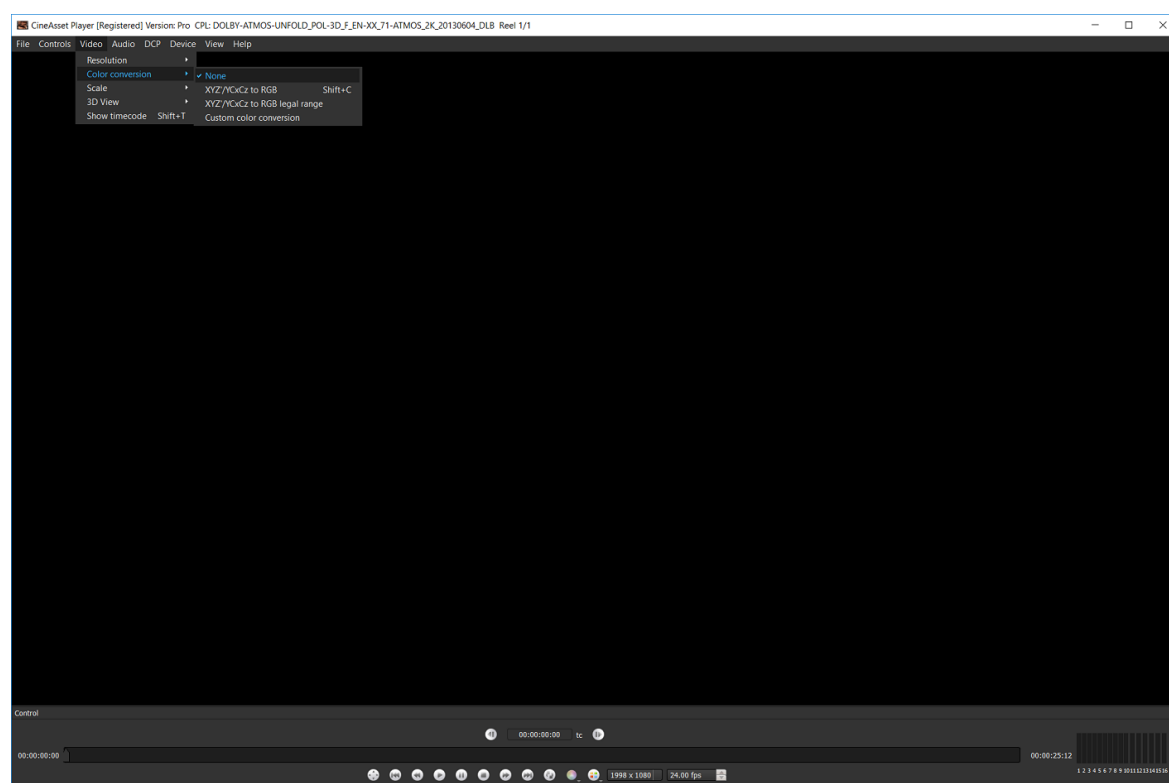
Prerequisites

Load the DCP in the **CineAsset Player** main window.

Procedure

In the **CineAsset Player** main window, click **Video**, click **Color conversion**, and then select either **XYZ'/YCxCz to RGB** or **XYZ'/YCxCz to RGB legal range**.

Figure 85: CineAsset Player main window



Results

The color conversion automatically applies to the DCP.

10.2 Adding custom color conversion

You can add custom color conversion while playing back a DCP.

Prerequisites

Load the DCP in the **CineAsset Player** main window.

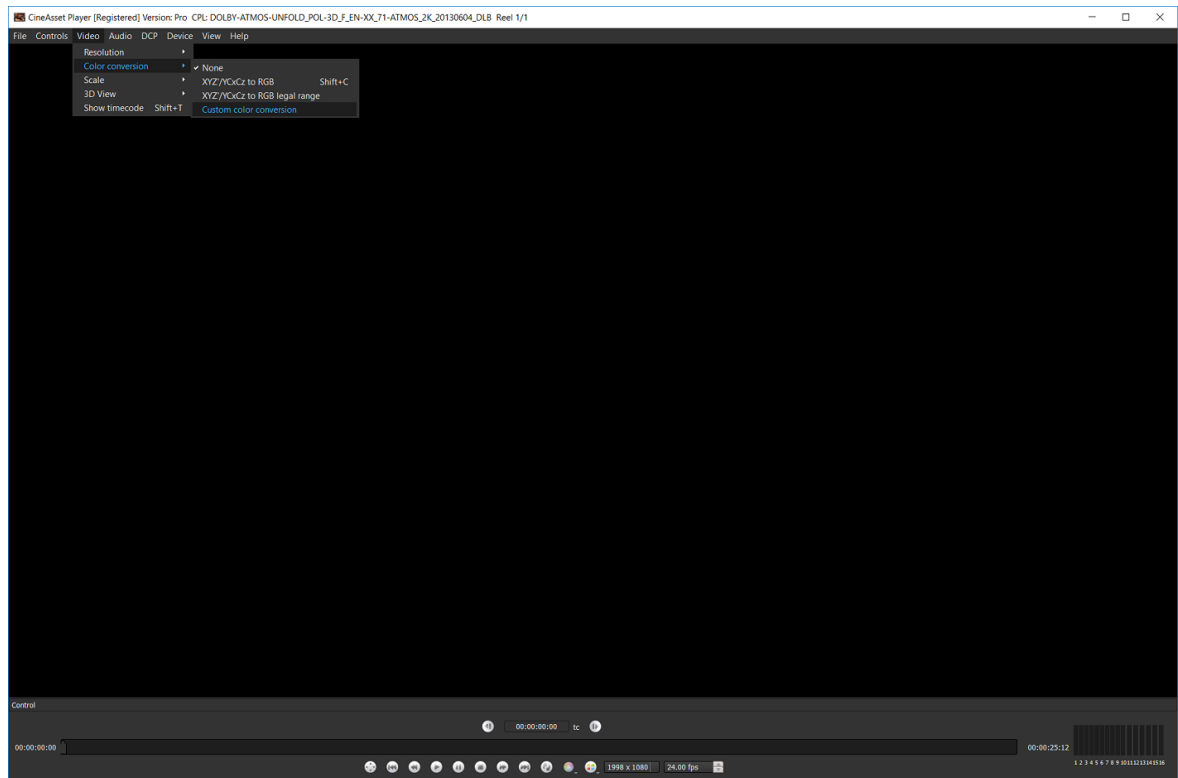
About this task

This option converts the color space to a user-defined setting.

Procedure

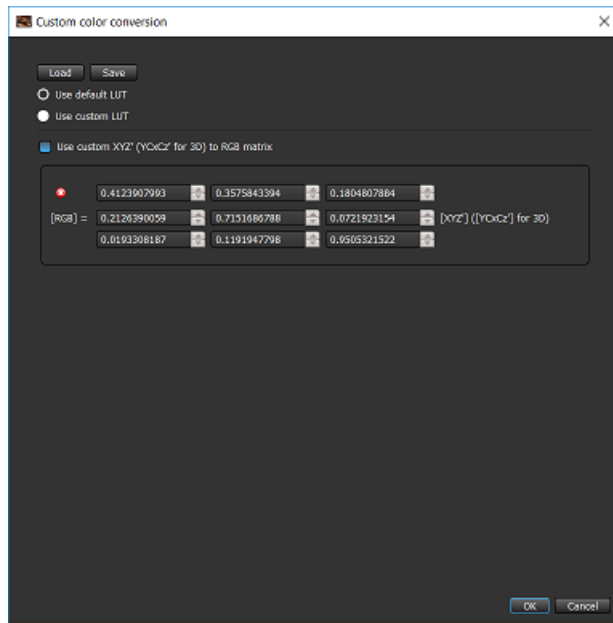
1. In the **CineAsset Player** main window, click **Video**, click **Color conversion**, and then click **Custom color conversion**.

Figure 86: CineAsset Player main window



2. In the **Custom color conversion** window, choose one of these options:
 - **Use default LUT**
 - **Use custom LUT**
3. After you select an option, modify the settings accordingly.
4. If desired, click **Use custom XYZ' (YCxCz for 3D) to RGB matrix**.

Figure 87: Custom color conversion window



5. After you finish, click **Save** first, and then click **OK**.

10.3 Selecting an image resolution layer

You can select an image resolution layer for a DCP.

About this task

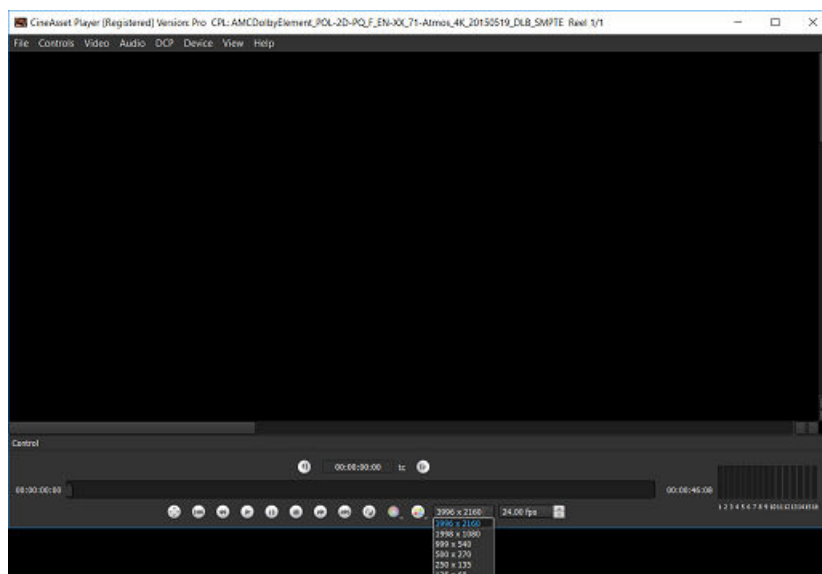
CineAsset Player supports the multiple resolution layers of JPEG 2000–encoded DCPs.

Prerequisites

Before selecting a new image resolution layer, make sure the DCP is loaded and is not playing.

Procedure

In the **CineAsset Player** main window, click the JPEG 2000 image resolution drop-down menu, and select an image resolution.

Figure 88: CineAsset Player main window**Results**

The DCP automatically updates to the new image resolution layer.

10.4 Changing the playback frame rate

You can change a DCP playback frame rate prior to playing a loaded DCP.

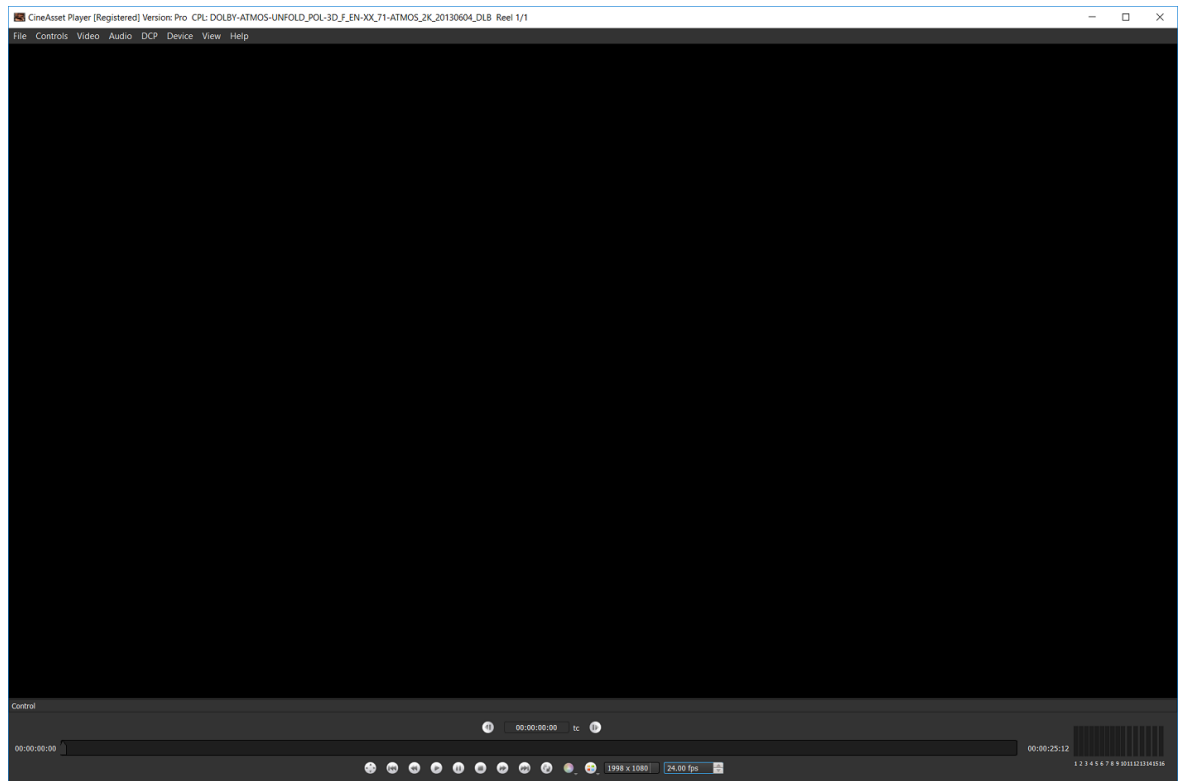
Prerequisites

Make sure the DCP is loaded in the **CineAsset Player** main window.

Procedure

1. In the **CineAsset Player** main window, click in the playback frame-rate adjustment field, and then enter a new frame rate.

You can also use the up and down arrows to find a new frame rate.

Figure 89: CineAsset Player main window

2. After you enter a new frame rate, press the Enter key.

Results

The DCP automatically updates to the new playback frame rate.

10.5 Enabling side-by-side mode for a 3D DCP

You can enable side-by-side mode when playing back a 3D DCP.

About this task

You can enable side-by-side mode only for a 3D DCP. When this mode is selected, the **CineAsset Player** main window splits the view and/or DCP playback into two sections. You can also enable left eye only and right eye only.

Procedure

1. Load the 3D DCP in the **CineAsset Player** main window.
2. Click **Video**, click **3D View**, and then click **Side by side**.
The **CineAsset Player** main window splits into two sections.

Figure 90: CineAsset Player main window

10.6 Changing the JPEG 2000 image quality

You can change the JPEG 2000 image quality for slower computers.

Prerequisites

Before changing the JPEG 2000 image quality, make sure the DCP is loaded and is not playing.

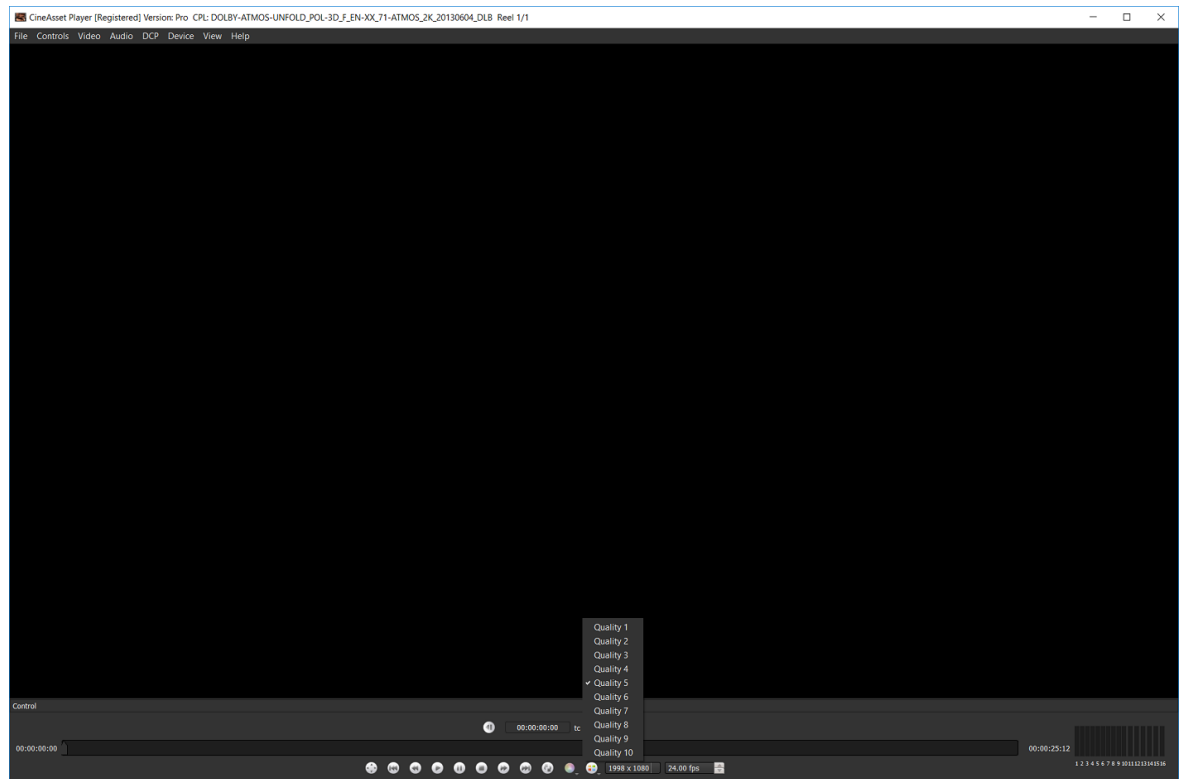
About this task

The image-quality setting can save processing power by reducing the rendering quality. The JPEG 2000 image-quality selection range is from 10 (best quality) to 1 (lowest quality). The default setting is 5.

Procedure

In the **CineAsset Player** main window, click the **JP2K image quality** list, and then select an image-quality setting.

Figure 91: CineAsset Player main window



Results

The image-quality setting updates automatically in the **CineAsset Player** main window.

10.7 Disabling playback to a standard computer monitor

You can disable playback to a standard computer monitor in the **CineAsset Player** main window when using HD-SDI output.

Procedure

1. In the **CineAsset Player** main window, click **Device** and select the card.
2. Uncheck **Enable local preview**.

10.8 About the HD-SDI output

Dolby CineAsset Player supports certain Blackmagic Design DeckLink series cards for HD-SDI output.

⚠ Attention: Specific performance depends on the host computer. We cannot guarantee full-quality, real-time playback when using these output cards. Currently, 4K playback on serial digital interface (SDI) is not supported.

11

Validating a DCP with CineInspect

We recommend you validate each DCP using CineInspect. You can choose from various validation levels to inspect each nonencrypted or encrypted DCP. You also have the option to export the inspection results after the validation process.

- [About the CineInspect DCP inspection process](#)
- [Validating a DCP](#)
- [Exporting a log file](#)

11.1 About the CineInspect DCP inspection process

CineInspect has four levels of validation. The higher levels perform more checks, but take more time and are more thorough. For the higher levels of validation (as in, compliance validation), two options are provided when inspecting a DCP.

DCI specification validation performs these checks:

- Checks *ASSETMAP.xml*. CineAsset can read **ASSETMAP** (without *.xml*), but this is considered an error with DCI.
- Checks *VOLINDEX.xml*. CineAsset can read **VOLINDEX** (without *.xml*), but this is considered an error with DCI.
- If an encrypted PKL/CPL is not signed, an error appears. If an unencrypted PKL/CPL is not signed, a warning appears instead of an error.
- Verify the CPL key ID if SMPTE DCP. No verification for Interop DCP.
- An error appears if a DCP is Interop (because DCI requires a SMPTE DCP).
- Checks the DCP for all JPEG 2000 frames that can be extracted/read (that is, with no corrupted data). Note that this does not perform any additional testing. For example, for bit rate, no check is performed to verify that the code stream complies with DCI specification compression requirements.
- Checks if the universal label (UL) of MXF files are valid.
- Checks if UUID valid (complies with UUID specification).

Standard specification validation performs these checks (on Interop or SMPTE DCP):

- Checks *ASSETMAP.xml*. Gives a warning only if *.xml* is missing.
- Checks *VOLINDEX.xml*. Gives a warning only if *.xml* is missing.



Important:

DCI specification validation performs more checks and is stricter than standard specification validation (for example, errors instead of warnings).

11.2 Validating a DCP

You can validate a DCP in the **CineInspect** main window.

About this task

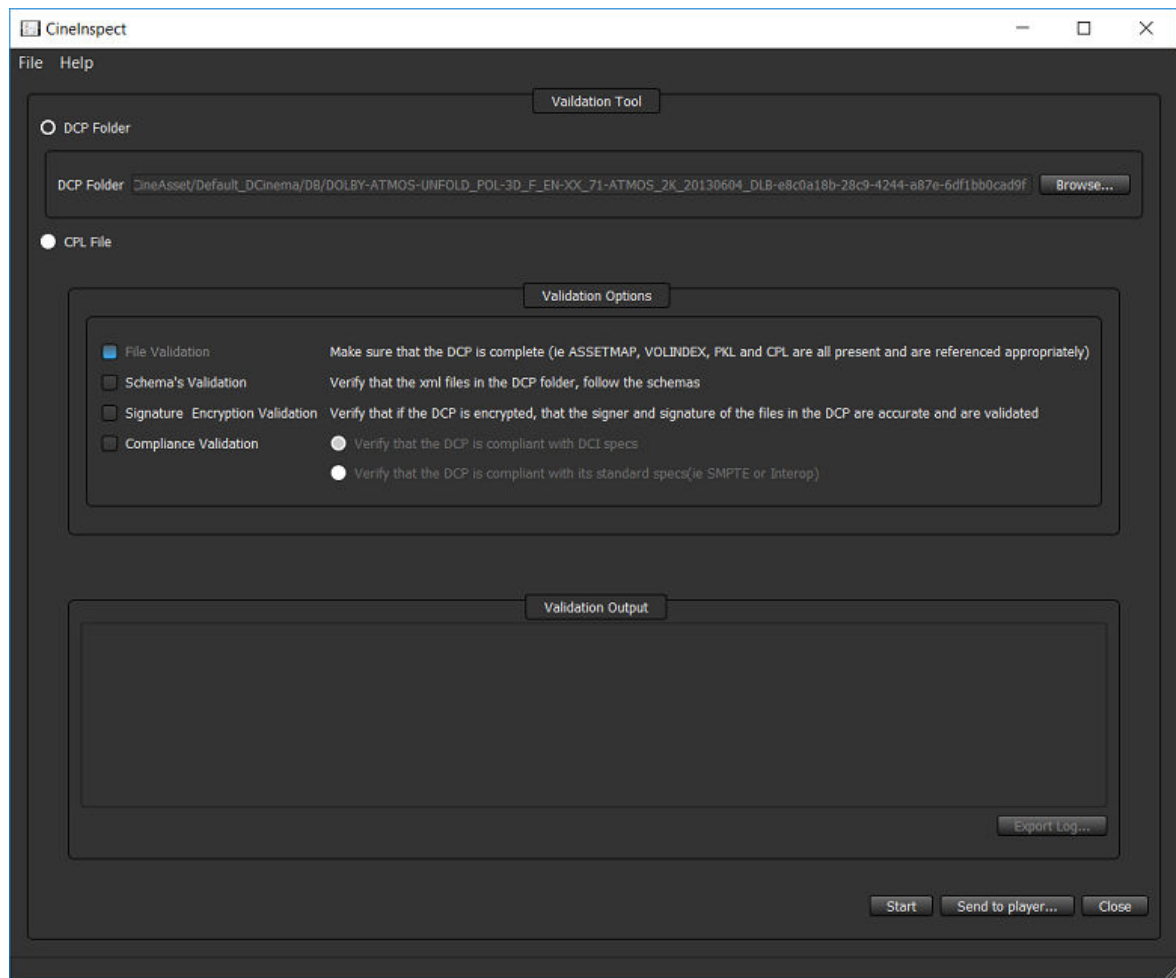
CineInspect enables you to validate an unencrypted or encrypted DCP (even if no KDM is provided).

In addition to a DCP, you can also validate a CPL.

Procedure

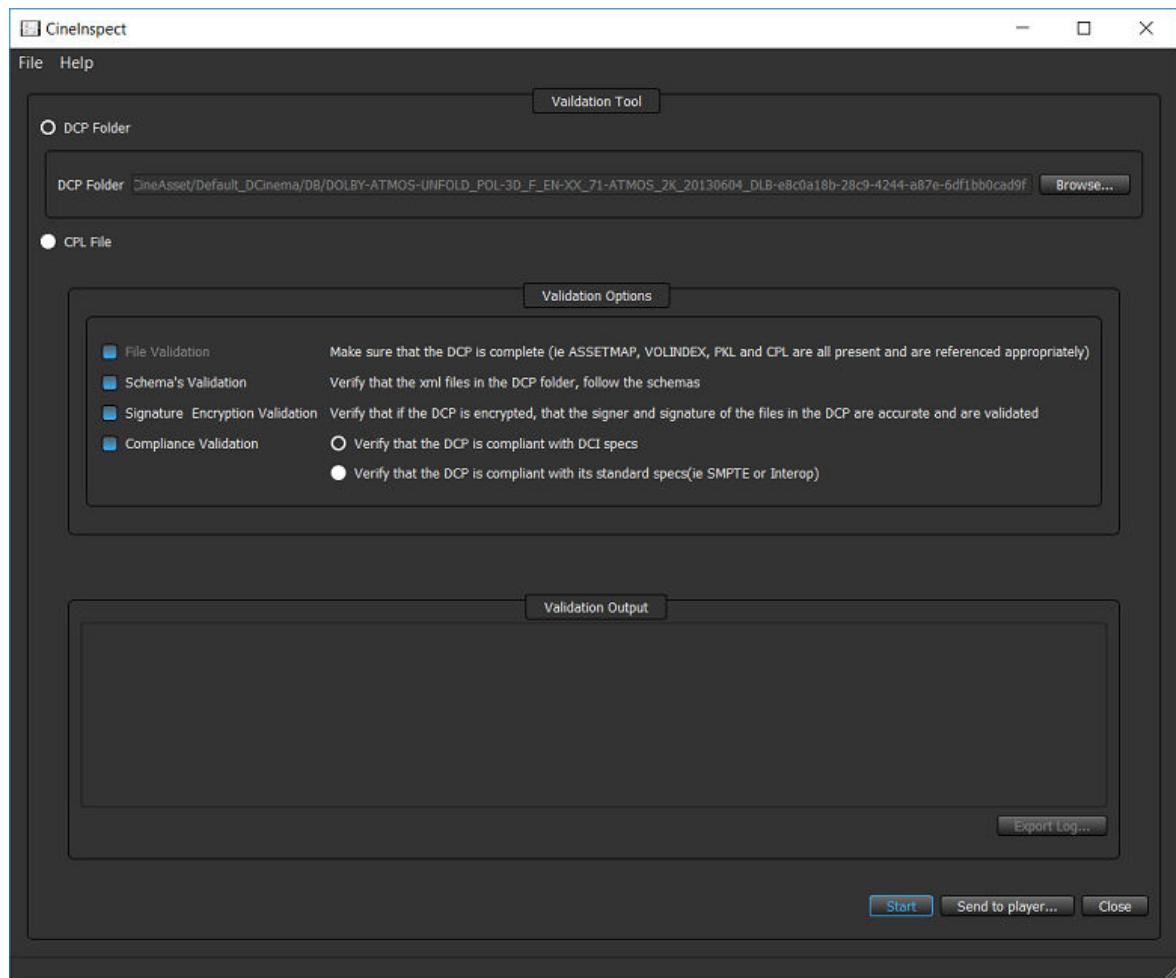
1. Open the **CineInspect** main window. Browse for and load the DCP.

Figure 92: CineInspect main window



2. Select options for the validation process, and then click **Start**.

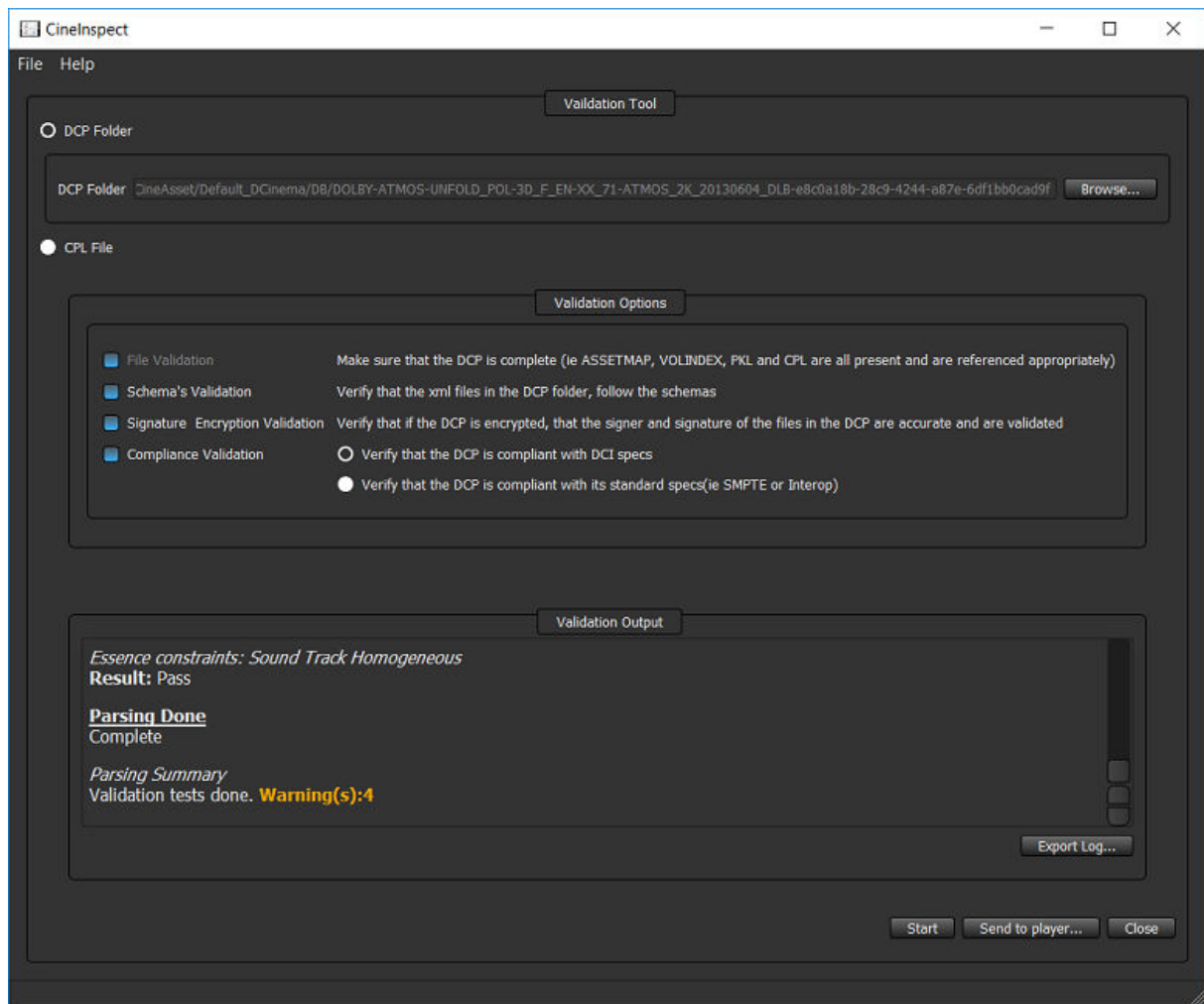
Figure 93: CineInspect main window



Results

CineInspect runs the DCP validation test and then displays the results in the **Validation Output** section.

Figure 94: CinelInspect main window



11.3 Exporting a log file

You can export log files after CinelInspect validates a DCP.

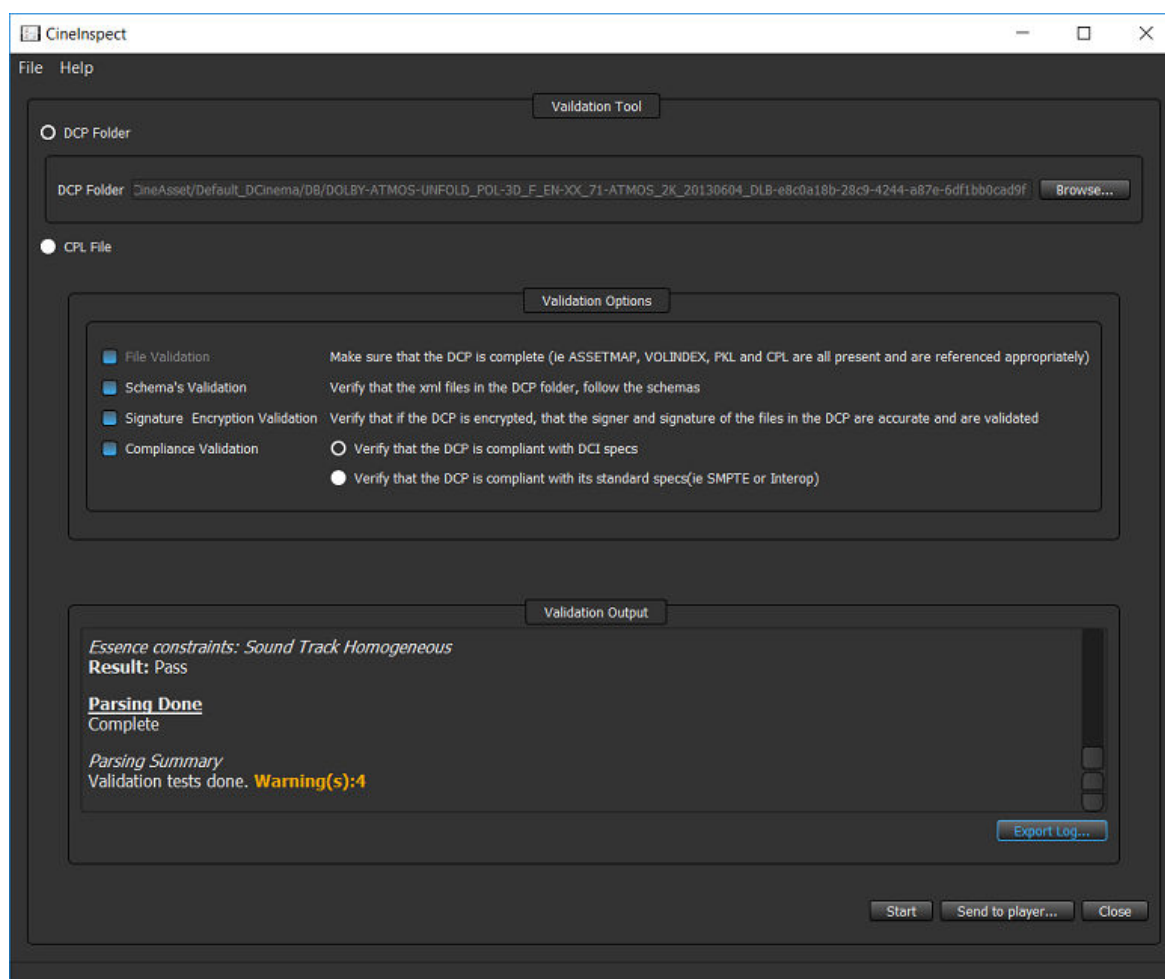
About this task

After you export the log file, you can send the validated DCP to CineAsset Player for a visual review.

Procedure

1. In the **CinelInspect** main window, click **Export Log**.

Figure 95: CineInspect main window



2. In the dialog that appears, select a location to save the log file, enter a new name for the log file, and then click **Save**.

**Remember:**

CineInspect automatically names the log file according to the current date and content title of the CPL.

3. In the **CineInspect** main window, click **Close**.

12

Working with certificates and KDMs

When you build a DCP with encrypted content, you must generate a KDM. Each encrypted DCP requires a KDM for playback on the target device.

- [Exporting certificates from CineAsset](#)
- [Adding a certificate to CineAsset](#)
- [Retrieving a certificate from a connected device](#)
- [Retrieving a certificate from an FTP site](#)
- [Removing a certificate](#)
- [Generating a KDM with CineAsset](#)
- [Generating a KDM for a dual-projector setup](#)
- [Managing KDMs generated by CineAsset](#)
- [Managing KDMs on connected devices](#)
- [Importing a Distribution KDM](#)

12.1 Exporting certificates from CineAsset

You can export certificates with CineAsset. An exported certificate can be given to other content owners to generate a KDM. This allows their encrypted content to open with your copy of Dolby CineAsset.

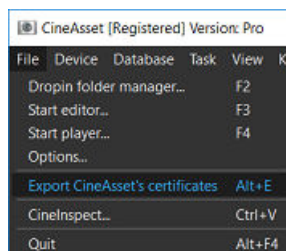
About this task

The CineAsset certificates include Interop cert 1, SMPTE cert 1, and SMPTE cert 2.

Procedure

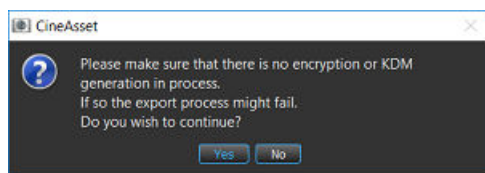
1. In the **CineAsset** main window, click **File**, and then click **Export CineAsset's certificates**.

Figure 96: CineAsset main window



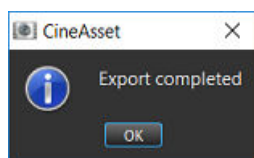
2. Confirm the export certificate warning, and then click **Yes**.

Figure 97: Export certificate warning



3. In the explorer window that appears, select a folder to export the certificates to, and then click **Select Folder**.
4. Click **OK** to confirm that the certificate was exported.

Figure 98: Export certificate complete



12.2 Adding a certificate to CineAsset

You can add a certificate, as well as view a certificate and its associated properties.

About this task

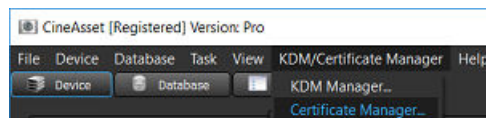
After you add a certificate, you can access it with the **Certificate Manager** window from the **KDM Generate Options** window when generating a KDM.

The **Certificate Manager** window includes two tabs: **Server** and **Projector**. Use the **Server** tab to manage certificates for digital cinema servers and the **Projector** tab to manage the certificates of projectors.

Procedure

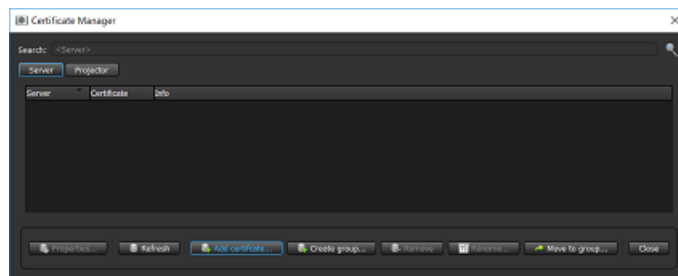
1. In the **CineAsset** main window, click **KDM/Certificate Manager**, and then click **Certificate Manager**.

Figure 99: CineAsset main window



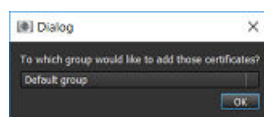
2. In the **Certificate Manager** window, click **Add certificate**.

Figure 100: Certificate Manager window



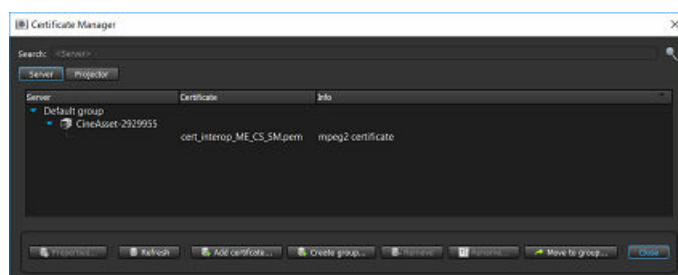
3. In the explorer window that appears, find and select the Privacy-enhanced Electronic Mail (PEM) certificate file, and then click **Open**.
4. In the **Dialog** window that appears, select the group that receives the certificate, and then click **OK**.

Figure 101: Dialog window



5. In the **Certificate Manager** window, click **Close**.

Figure 102: Certificate Manager window



Results

The PEM certificate is added to CineAsset.

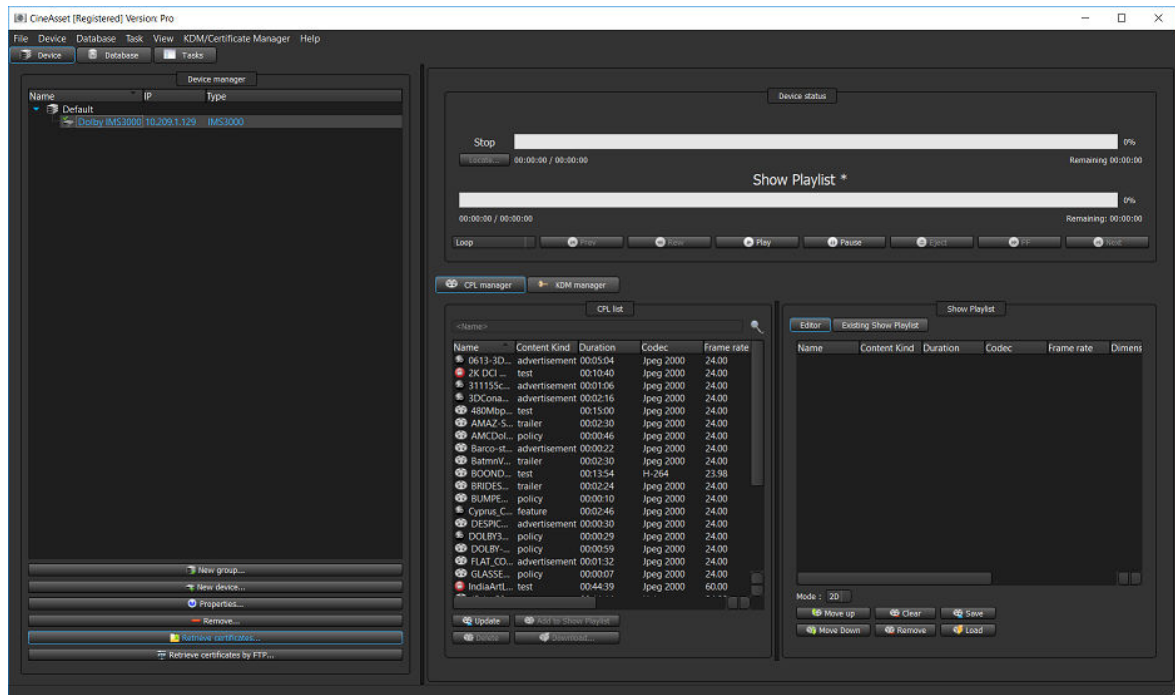
12.3 Retrieving a certificate from a connected device

You can retrieve a certificate from any connected device listed in the **Device manager** section in the **CineAsset** main window.

Procedure

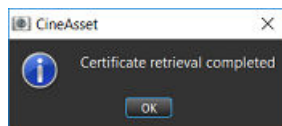
1. In the **CineAsset** main window **Device manager** section, select the connected device, and then click **Retrieve certificates**.

Figure 103: CineAsset main window



2. Confirm the certificate retrieval and then click **OK**.

Figure 104: Certificate retrieval complete



12.4 Retrieving a certificate from an FTP site

You can retrieve a Dolby server certificate from an FTP site.

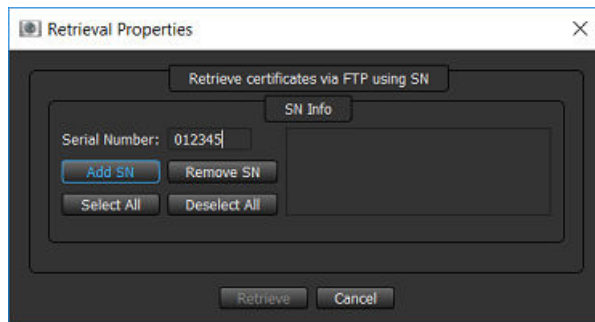
Procedure

1. In the **CineAsset** main window **Device manager** section, select the connected device, and then click **Retrieve certificates by FTP**.
2. In the **Retrieval Properties** window:
 - a) Enter the serial number into the **Serial Number** field, and click **Add SN**.

- b) Click **Retrieve**.

Results

Figure 105: Retrieval Properties window



The certificates download from the FTP site and save to the selected destination folder.

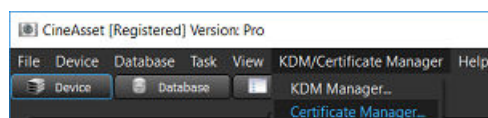
12.5 Removing a certificate

You can remove a certificate previously imported into CineAsset.

Procedure

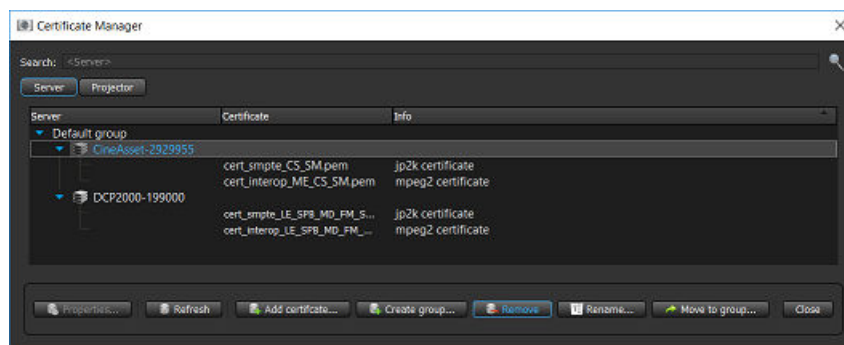
1. In the **CineAsset** main window, click **KDM/Certificate Manager**, and then click **Certificate Manager**.

Figure 106: CineAsset main window



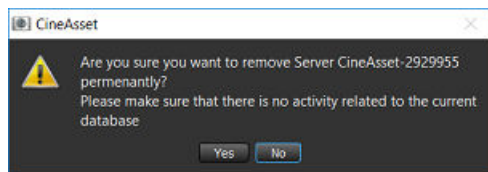
2. In the **Certificate Manager** window, select the certificate, and then click **Remove**.

Figure 107: Certificate Manager window



3. In the certificate removal confirmation window, click **Yes** to confirm the removal.

Figure 108: Certificate removal confirmation window



12.6 Generating a KDM with CineAsset

You must generate a KDM for each encrypted DCP you build.

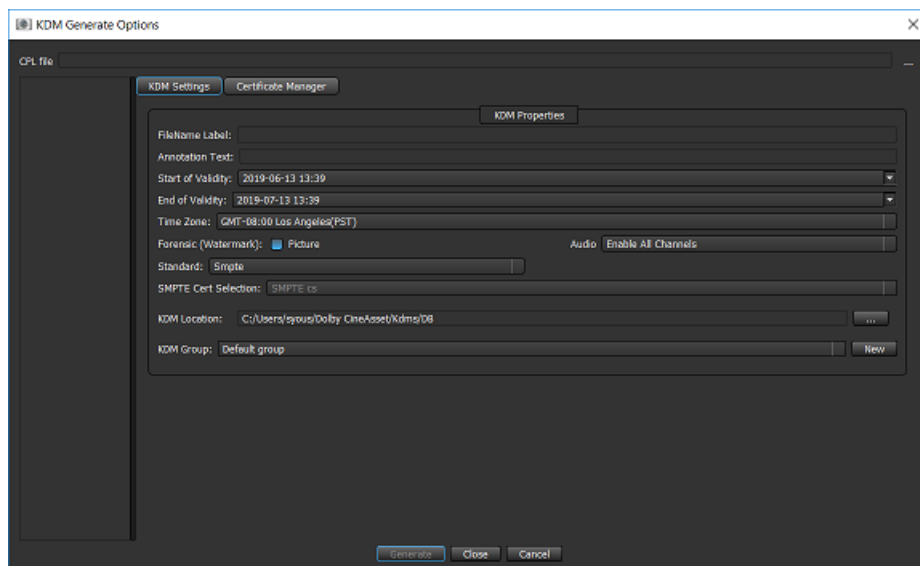
About this task

CineAsset generates encrypted DCPs and creates KDMs for any DCP encrypted by CineAsset. To generate a KDM for a specific server, the certificates from that server must be used.

Procedure

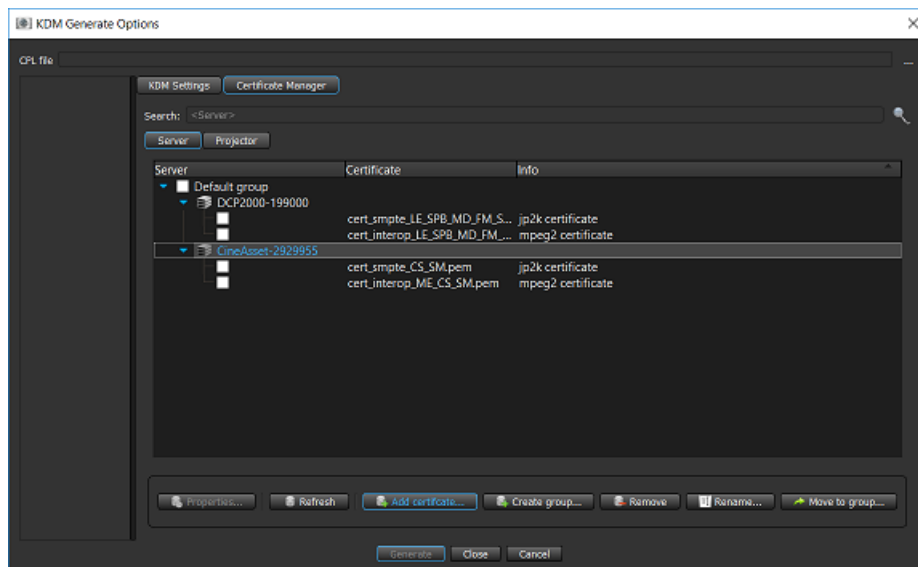
1. In the **CineAsset** main window **Database** tab, select your encrypted DCP and click **Generate KDM**. Each encrypted DCP is displayed with a green lock icon in the **Database** tab.
2. In the **KDM Generate Options** window, select the start and end dates for the KDM using the **Start of Validity** and **End of Validity** drop-down boxes.

Figure 109: KDM Generate Options window



3. From the **Time Zone** list, select the appropriate time zone.
4. From the **Standard** list, choose the package standard.
5. Click the **Certificate Manager** tab in the **KDM Generate Options** window, and then click **Add** to add a server certificate to the list.

Figure 110: KDM Generate Options window



6. In the window that appears, browse to and select the appropriate certificate PEM file.
7. Click **Open** to view the server in the server list.
8. Click the check box to select the newly added server, and then click **Generate** to generate a KDM for that server.

Results

The KDM generates and is accessible from the **KDM Manager** window.

12.7 Generating a KDM for a dual-projector setup

You can generate an encrypted KDM for a dual-projector setup.

Prerequisites

Add the primary and secondary projector certificates to CineAsset using the **Certificate Manager**.

Procedure

1. Set the KDM parameters in the **KDM Settings** tab.
2. In the **Certificate Manager Projector** tab, select the two certificates for the primary and secondary projectors, and then click **Generate**.

12.8 Managing KDMs generated by CineAsset

You can manage KDMs generated by CineAsset, as well as their associated properties.

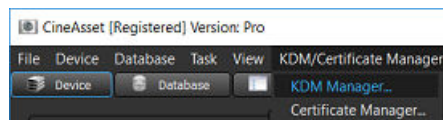
About this task

You can use the **KDM Manager** window to send a KDM to connected devices, or over a network via File Transfer Protocol, and view KDM properties.

Procedure

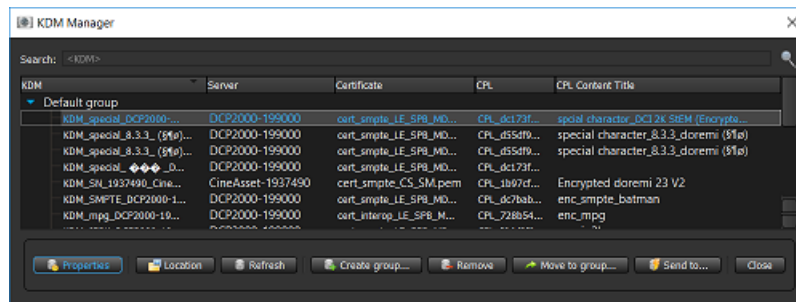
1. In the **CineAsset** main window, click **KDM/Certificate Manager**, and click **KDM Manager**.

Figure 111: CineAsset main window



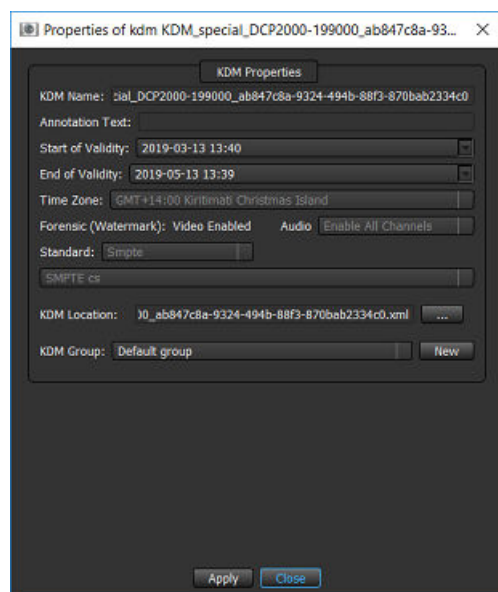
2. In the **KDM Manager** window, select the KDM, and then click **Properties**.

Figure 112: KDM Manager window



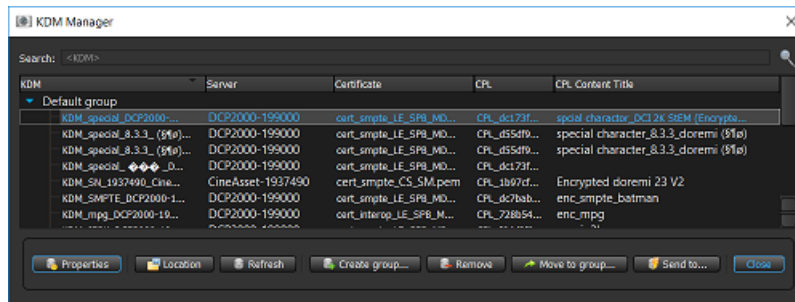
3. To manage the properties for the KDM:
 - a) To change the name of the KDM, enter a new name for the KDM in the **KDM Name** field.
 - b) Enter the annotation text in the **Annotation Text** field.
 - c) To change the start and end validity dates, use the **Start of Validity** and **End of Validity** lists.
 - d) After you finish, click **Apply** first, and then click **Close**.

Figure 113: KDM properties window



4. To view the KDM location, click **Location** in the **KDM Manager** window.
5. After you finish, click **Close**.

Figure 114: KDM Manager window



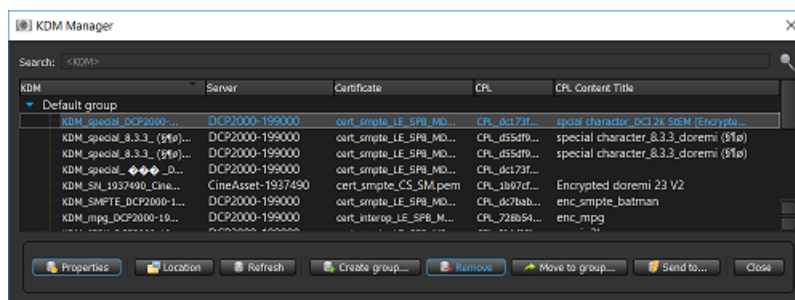
12.8.1 Removing a KDM

You can remove a KDM.

Procedure

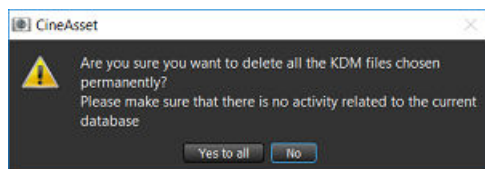
1. In the **CineAsset** main window, click **KDM/Certificate Manager**, and then click **KDM Manager**.
2. In the **KDM Manager** window, select the KDM, and then click **Remove**.

Figure 115: KDM Manager window



3. In the KDM removal confirmation window, click **Yes** to confirm the removal.

Figure 116: KDM removal confirmation window



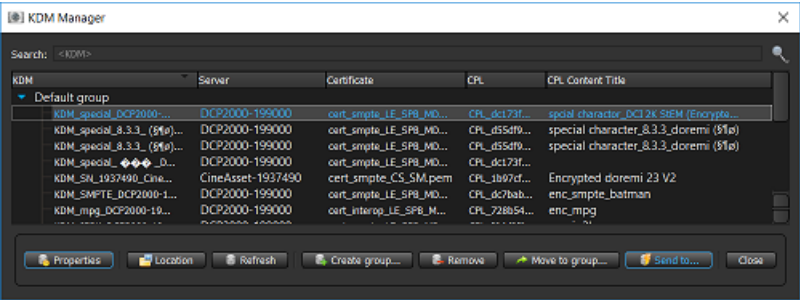
12.8.2 Sending a KDM to a connected device

You can send a KDM to a connected device.

Procedure

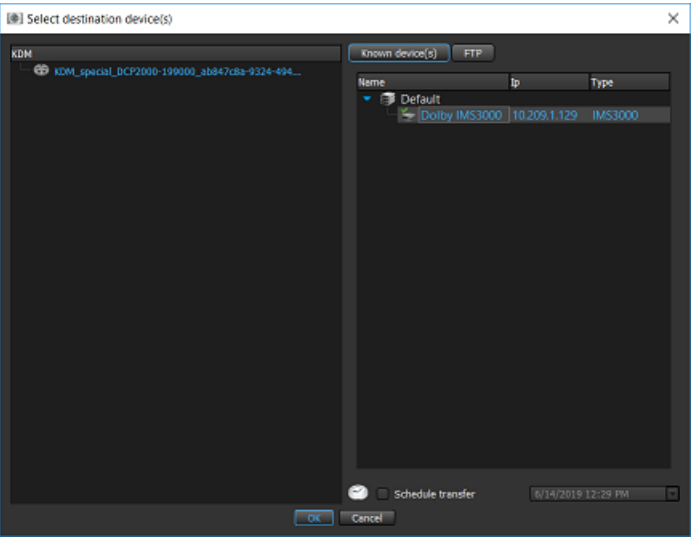
1. In the **CineAsset** main window, click **KDM/Certificate Manager**, and then click **KDM Manager**.
2. In the **KDM Manager** window, select the KDM and click **Send to**.

Figure 117: KDM Manager window



3. In the **Select destination device(s)** window:
 - a) Click the **Known device(s)** tab.
 - b) Select the KDM.
 - c) Select the connected device.
 - d) Click **OK**.

Figure 118: Select destination device(s) window



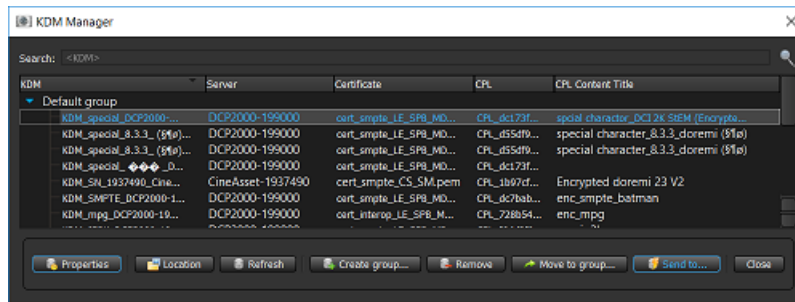
12.8.3 Sending a KDM using FTP

You can send a KDM over a network using the FTP method.

Procedure

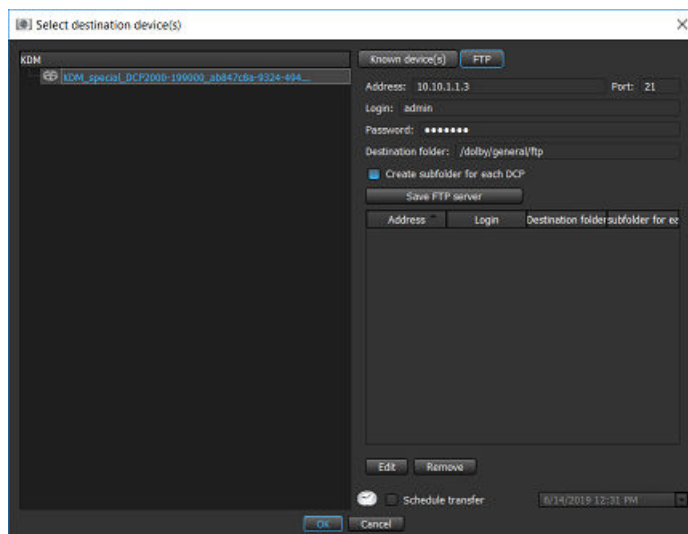
1. In the **CineAsset** main window, click **KDM/Certificate Manager**, and then click **KDM Manager**.
2. In the **KDM Manager** window, select the KDM, and then click **Send to**.

Figure 119: KDM Manager window



3. In the **Select destination device(s)** window:
 - a) Click the **FTP** tab.
 - b) Select the KDM.
 - c) Enter the FTP information.
 - d) To save the FTP information for future use, click **Save FTP server**.
 - e) Click **OK**.

Figure 120: Select destination device(s) window



Tip: After you add the FTP information, you can right-click on the KDM in the **Database** tab, and then click **Send to device(s)/FTP** to send the KDM (without having to re-enter the information).

12.9 Managing KDMs on connected devices

You can manage KDMs on connected devices.

Procedure

1. In the **CineAsset** main window **Device manager** section, select a connected device.
2. Click the **KDM manager** tab.
3. To delete a KDM on a connected device:
 - a) Select the KDM, and then click **Delete**.
 - b) In the window that appears, confirm the deletion operation, and then click **Yes**.
4. To download a KDM from a connected device:
 - a) Select the KDM and then click **Download**.

- b) In the window that appears, select a destination to download the KDM to, and then click **Select Folder**.
- 5. To upload the KDM from your workstation to a connected device:
 - a) Select the KDM, and then click **Upload**.
 - b) In the window that appears, browse for and select the KDM, and then click **Open**.
- 6. Click **Update** to refresh the **Kdm list** section.

12.10 Importing a Distribution KDM

You can import a Distribution KDM for encrypted content generated by a third-party mastering company.

Procedure

1. Export and then send your CineAsset certificates to the content owner so they can issue a Distribution KDM for the CineAsset dongle in use.
2. In the **CineAsset** main window **Database** tab, click **Add existing DCP** to locate the package folder or CPL you wish to work with, and then select **Open**.
3. When prompted, supply the location of your Distribution KDM.
The DCP is imported into your CineAsset database, allowing you to create a new KDM as needed.
4. To create new versions of a DCP, use **Create supplemental package** in the **CineAsset Editor** main window.

12.10.1 Distribution KDMs

In some cases, it may be necessary to work with encrypted DCPs created by external production facilities. A content owner may issue a distribution KDM for CineAsset based on the public certificate for the CineAsset security USB dongle.

CineAsset supports importing these encrypted DCPs and Distribution KDMs to create different versions of the content, or to create additional KDMs.

13

Exporting a DCP

Dolby CineAsset provides you with the option to export (or deliver) a DCP, and any associated files, to an external drive, a connected device, or an FTP site.

- [Exporting a DCP to an external drive](#)
- [Exporting a DCP to a connected device](#)
- [Exporting a DCP to an FTP site](#)

13.1 Exporting a DCP to an external drive

You can export a complete DCP to an external drive.

About this task

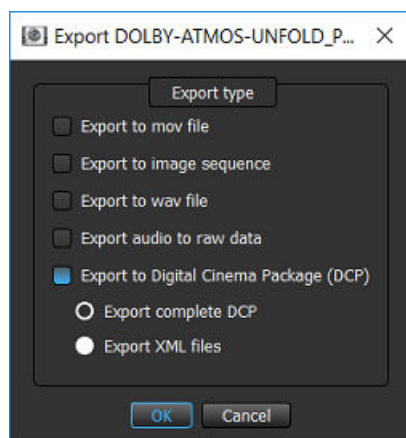
Exporting a DCP is not considered a complete backup of a DCP. If you remove an encrypted DCP from the CineAsset database, you must generate a Distribution KDM for that DCP, to re-import it into the CineAsset database.

Procedure

1. In the **CineAsset** main window **Database** tab, select the DCP, and then click **Export**.
2. In the **Export** window, select **Export to Digital Cinema Package (DCP)**, and then click **OK**.

Make sure **Export complete DCP** is selected to export the complete DCP.

Figure 121: Export window



3. In the explorer window, find and select an external drive, and then click **Select Folder**.

Results

The complete DCP exports to the external drive.

13.2 Exporting a DCP to a connected device

You can export (or transfer) a DCP in the CineAsset database to a connected device.

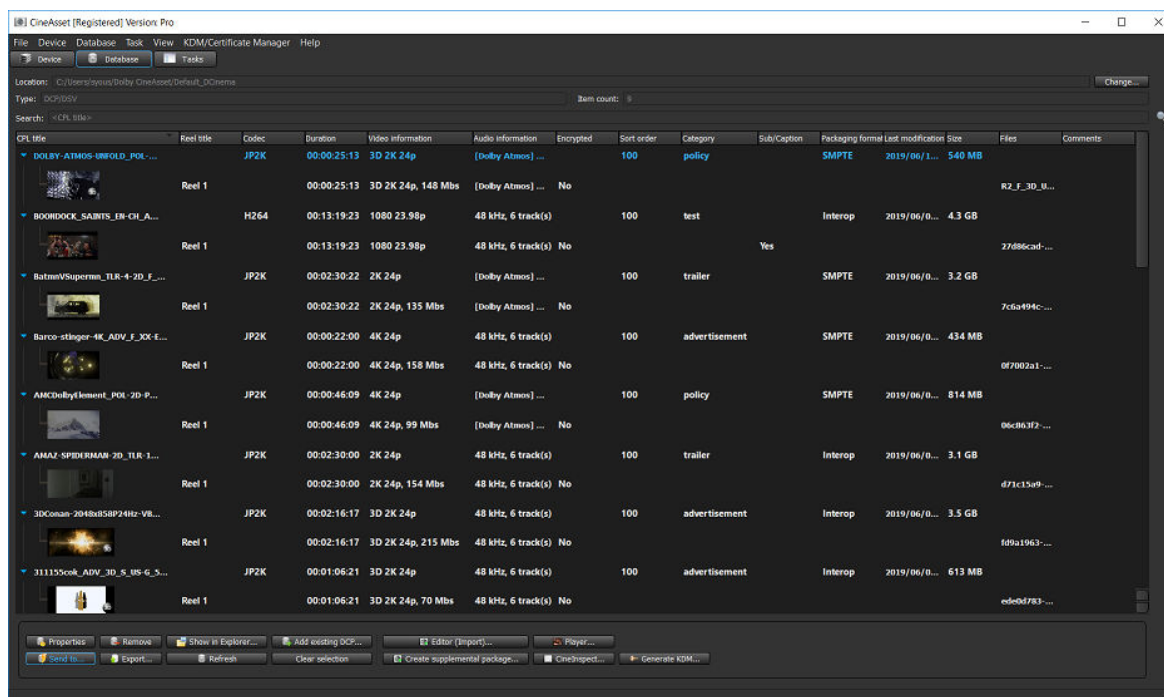
About this task

Exporting a DCP is not considered a complete backup of a DCP. If you remove an encrypted DCP from the CineAsset database, you must generate a Distribution KDM for that DCP, to re-import it into the CineAsset database.

Procedure

1. In the **CineAsset** main window **Database** tab, select a DCP, and then click **Send to**.

Figure 122: CineAsset main window

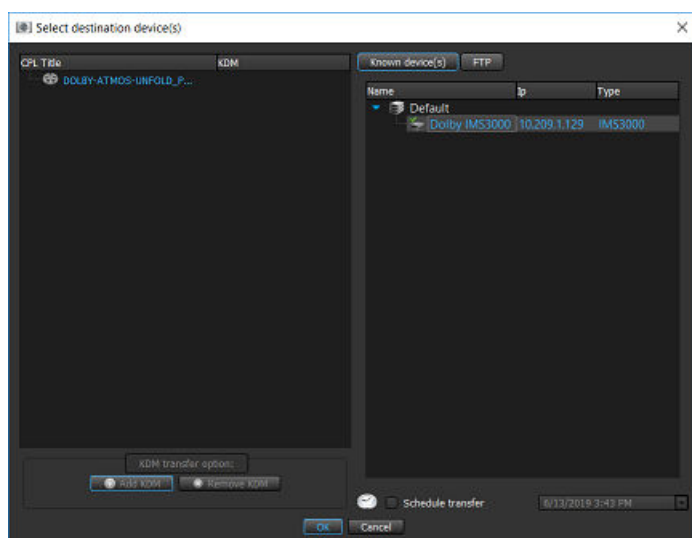


2. In the **Select destination device(s)** window, select the DCP in the left section.
3. If the DCP is encrypted, click **Add KDM** to select a KDM to send to the connected device along with the DCP.
4. Select the server to send the DCP to in the **Known device(s)** tab, and then click **OK**.

Tip:

You can also schedule the DCP export for a later time using the **Schedule transfer** check box and date/time drop-down menu.

Figure 123: Select destination device(s) window



Results

You can observe the status of the DCP export in the **CineAsset** main window **Tasks** tab.

13.3 Exporting a DCP to an FTP site

You can export (or transfer) a DCP in the CineAsset database to an FTP site.

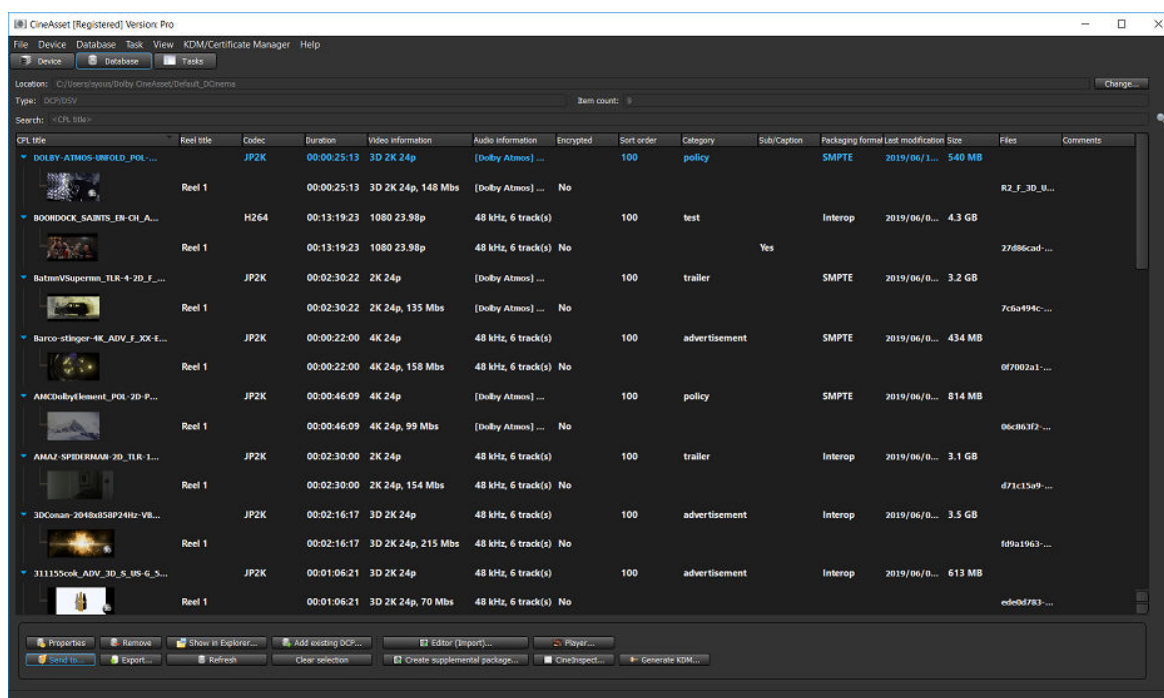
About this task

Exporting a DCP is not considered a complete backup of a DCP. If you remove an encrypted DCP from the CineAsset database, you must generate a Distribution KDM for that DCP, to re-import it into the CineAsset database.

Procedure

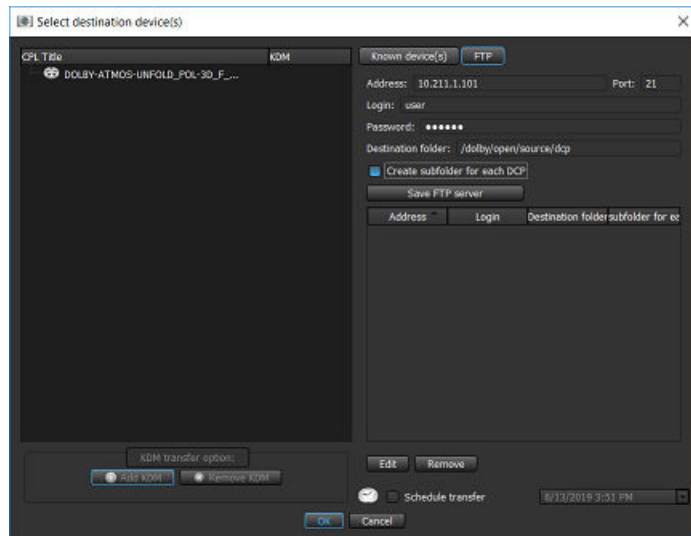
1. In the **CineAsset** main window **Database** tab, select a DCP, and then click **Send to**.

Figure 124: CineAsset main window



2. In the **Select destination device(s)** window:
 - a) Select a DCP in the left section.
 - b) If the DCP is encrypted, click **Add KDM** to select a KDM to send to the FTP site along with the DCP.
 - c) Select the **FTP** tab, and then enter the address, log-in name, and password.
 - d) In the **Port** field, enter the port number for the FTP site.
 - e) To schedule the DCP export for a later time, select the **Schedule transfer** check box and date/time drop-down menu.
 - f) Enter the destination folder on the FTP site where you want to place the DCP.
 - g) To save the configuration for future use, click **Save FTP server**.
 - h) Click **OK** to transfer the DCP to the FTP site.

Figure 125: Select destination device(s) window



Results

You can observe the status of the DCP export in the **CineAsset** main window **Tasks** tab.

Dolby CineAsset user interfaces

The Dolby CineAsset applications contain user interfaces that perform separate functions as you build a DCP.

- [CineAsset main window](#)
- [Project settings window](#)
- [CineAsset Editor main window](#)
- [CineAsset Player main window](#)
- [CineInspect main window](#)
- [Tool-bar icons](#)

14.1 CineAsset main window

The **CineAsset** main window displays all of the content and DCPs, all connected devices, and a list of tasks performed.

The **CineAsset** main window contains these separate function tabs:

- **Device** tab: Manages devices that are connected to CineAsset.
- **Database** tab: Manages the CineAsset database and transfers DCPs.
- **Tasks** tab: Displays the tasks list and the associated log information.

14.1.1 Device tab

The **Device** tab in the **CineAsset** main window contains three sections: **Device manager**, **Device status**, and **CPL manager/KDM manager**.

The **Device manager** section allows you to add and edit networked devices and organize them by groups. You can also use the **Device manager** section to retrieve certificates from external locations and import them into the **CineAsset** database.

The **Device status** section displays the current status of a selected device. The **Device status** section also provides transport controls for controlling the playback of a connected device.

These transport controls are available:

- **Loop**: Sets the DCP to play back on a continuous loop
- **Pause**: Pauses the DCP playback operation
- **Previous**: Moves the DCP playback operation to a previous time location
- **Fast-forward (FF)**: Moves the DCP playback operation to a future time location
- **Next**: Skips to the next DCP in the playlist
- **Play then rewind**: Sets the DCP to play back; after playback ends, rewinds to the beginning
- **Play then eject**: Sets the DCP to play back, and then ejects the DCP when finished
- **Locate**: Locates to a specific timecode location in the DCP



Important:

The transport controls apply to only the Dolby DCP-2000, Dolby DCP-2K4, Dolby IMB/Dolby ShowVault, Dolby IMS1000, Dolby IMS2000, or Dolby DC-Post.

The **CPL manager** section in the **CineAsset** main window manages the DCPs on connected devices, and it is the location where you create and load SPLs for playback. Within the **CPL manager** section, there are two subsections: **Cpl list** and **Show Playlist**.

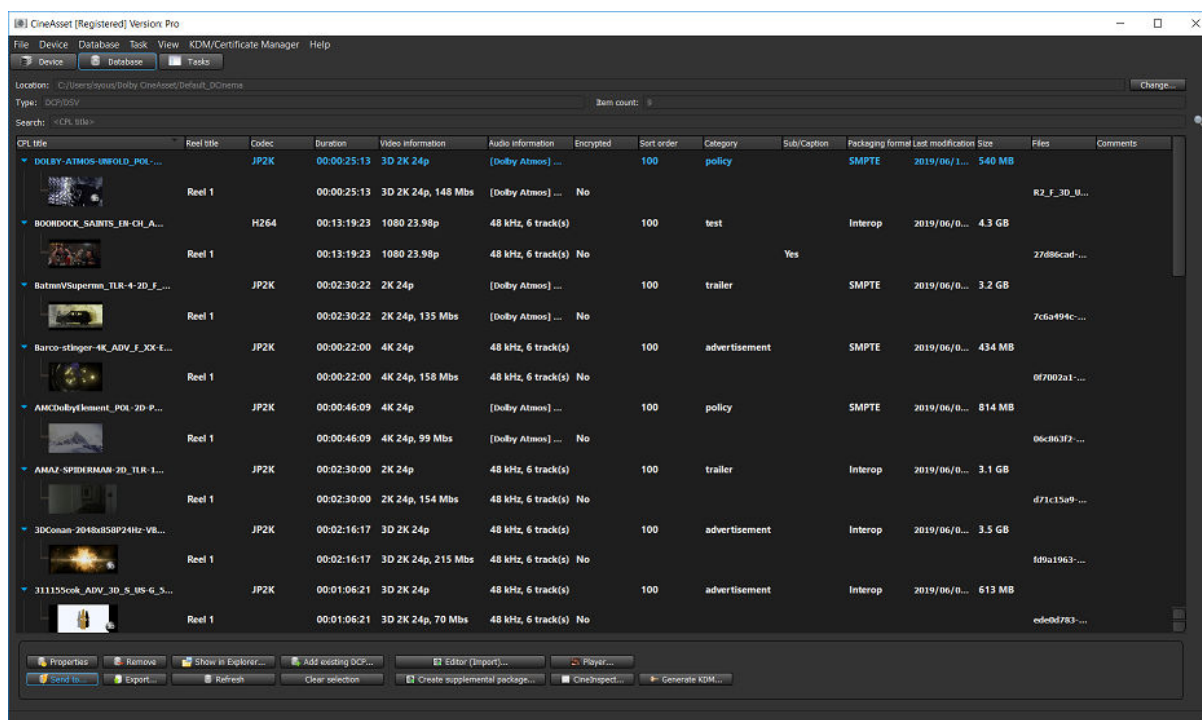
The **Cpl list** subsection displays all available clips on a device. The **Show Playlist** subsection displays all available SPLs on a device, and it also allows you to edit the SPLs.

The **KDM manager** section allows you to view, delete, upload, and download a KDM from a device connected to CineAsset.

14.1.2 Database tab

The **Database** tab in the **CineAsset** main window lists all the DCPs in the CineAsset database. You can transfer a DCP from the CineAsset database to a device connected to CineAsset. You can also create KDMs; delete, export, and import DCPs; and manage any accompanying assets.

Figure 126: Database tab



These content-descriptive markers are available in the **Database** tab:

- **Cpl title:** Displays the CPL title
- **Reel title:** Displays the reel number of the content file
- **Codec:** Displays the type of codec used to compress content
- **Duration:** Displays the total length of the clip
- **Video information:** Displays the type of video file
- **Encrypted:** Displays whether or not the content is encrypted
- **Audio information:** Displays the type of audio for the content file
- **Sort order:** Displays the content using numerical sequence
- **Category:** Identifies the type of content
- **Sub/Caption:** Identifies whether the content includes subtitles or captioning
- **Packaging format:** Identifies whether the content is SMPTE or Interop standard
- **Last modification:** Displays the most recent date and time the content was modified
- **Size:** Displays the total size of the content file
- **Files:** Displays the file names contained in the DCP
- **Comment:** Displays any additional notes

These buttons are available in the **Database** tab:

- **Properties:** Provides the properties for a selected DCP file
- **Remove:** Removes the DCP file from the CineAsset database
- **Show in Explorer:** Provides the location of the DCP file on your system
- **Add existing DCP:** Adds a DCP to the CineAsset database from another location on your system

- **Editor (Import):** Opens the **CineAsset Editor** main window to create a new package
- **Player:** Opens the selected DCP file in the **CineAsset Player** main window
- **Sent to:** Sends the selected DCP file to another location, either through FTP method or over the network
- **Export:** Exports the DCP file to another format and location
- **Refresh:** Refreshes the **Database** tab after new items are added or deleted
- **Clear selection:** Unselects any item previously selected
- **Create supplemental package:** Opens the **CineAsset Editor** main window and creates different versions
- **CineInspect:** Opens the selected DCP file in the **CineInspect** main window for validation
- **Generate KDM:** Generates a KDM for a selected DCP file

Figure 127: Database tab buttons

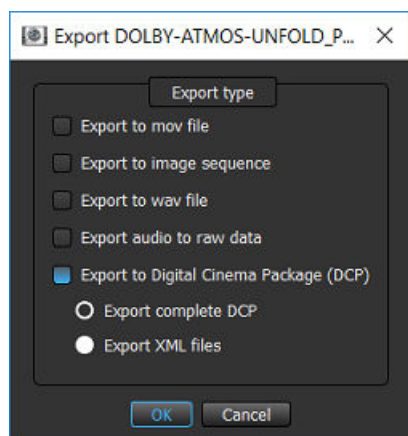


Export DCP options window

When you export a DCP, these options appear in the **Export options** window, depending on the type of asset you selected to export:

- **Export complete DCP:** Exports a complete DCP, including the MXF files
- **Export supplemental:** Exports a DCP without the MXF files and does not include them in the PKL and ASSETMAP
- **Export XML files:** Exports only the XML files (CPL, PKL, and ASSETMAP) and lists all the assets, including the linked assets, in case of a supplemental package

Figure 128: Export options window



14.1.3 Tasks tab

The **Tasks** tab displays the status of any tasks executed by CineAsset, such as transferring a DCP to a device or creating a new DCP. You can also remove, cancel, restart, refresh, and view the progress of each task in progress or previously completed.

These colored markers are displayed to indicate the status of a task:

- Green circle: Task completed successfully
- Amber circle: Task processing
- Blue circle: Task pending
- Red circle: Task failed
- Red cross through white circle: Task canceled

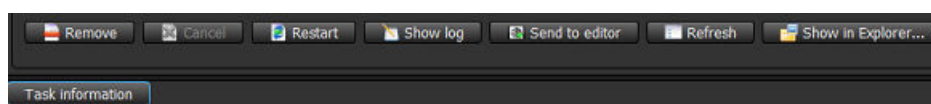
Figure 129: Tasks tab color markers

Type	Name	Uuid	Issuer	Status	Priority	Progress	Remaining time	Date	Report
Download from 10.209.1.129	CPL UUID 68d150a6-e1d2-4fc6-a3...	68d150a6-e1d2-4fc6-a3...	SYOUS-LX1	Done	Normal	100 %		2019/06/06 14:39:29	Done
Download from 10.209.1.129	CPL UUID 109d7c31-01d1-46e6-9...	109d7c31-01d1-46e6-9...	SYOUS-LX1	Done	Normal	100 %		2019/06/06 14:39:31	Done
Download from 10.209.1.129	CPL UUID 70711d37-d25c-4243-9...	70711d37-d25c-4243-9...	SYOUS-LX1	Failed	Normal	0 %		2019/06/13 15:10:45	Failed to open Error: Failed to find any picture file
Download from 10.209.1.129	CPL UUID 0c298fab-b97e-414e-9...	0c298fab-b97e-414e-9...	SYOUS-LX1	Running	Normal	12 %	00:05:00	2019/06/13 15:10:39	Downloading /assets/0c298fab-b97e-414e-9164-da3bd11f33...
Download from 10.209.1.129	CPL UUID 50915390-3635-e645-8...	50915390-3635-e645-8...	SYOUS-LX1	Pending	Normal	0 %		2019/06/13 15:11:22	
Download from 10.209.1.129	CPL UUID 1b93db1a-0037-4b00-...	1b93db1a-0037-4b00-...	SYOUS-LX1	Cancelled	Normal	0 %		2019/06/13 15:11:40	Warning: Operation has been cancelled

These task operation buttons are available:

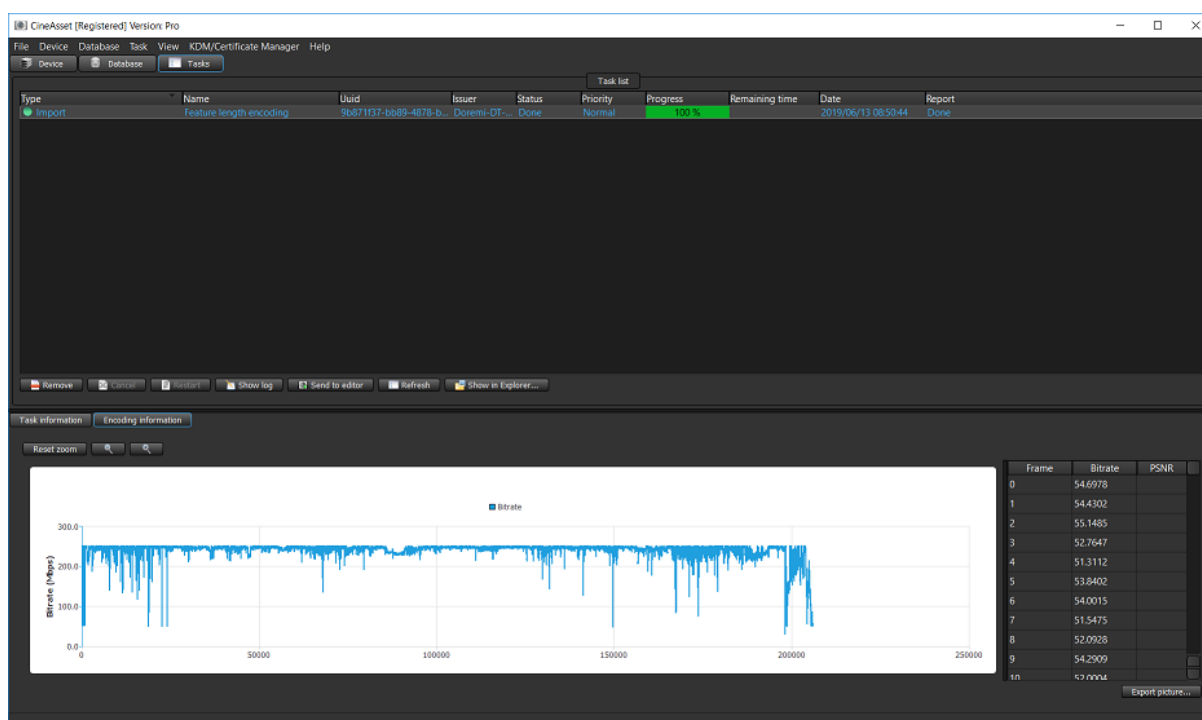
- **Remove:** Removes a task from the **Tasks** tab
- **Cancel:** Cancels a task as it is in process
- **Restart:** Restarts a task
- **Show log:** Displays the selected task information
- **Send to editor:** Sends the selected task to the **CineAsset Editor** main window
- **Refresh:** Refreshes the list of tasks in the **Tasks** tab
- **Show in Explorer:** Displays the location of the file referenced in the selected task

Figure 130: Tasks tab operation buttons



When you select an import task, the **Encoding information** tab appears next to the **Task information** tab. The **Encoding information** tab displays the bit rate for each frame, as well as the peak signal-to-noise ratio (PSNR) value (if the **Target PSNR** option is selected for the encode process).

Figure 131: Encoding information tab



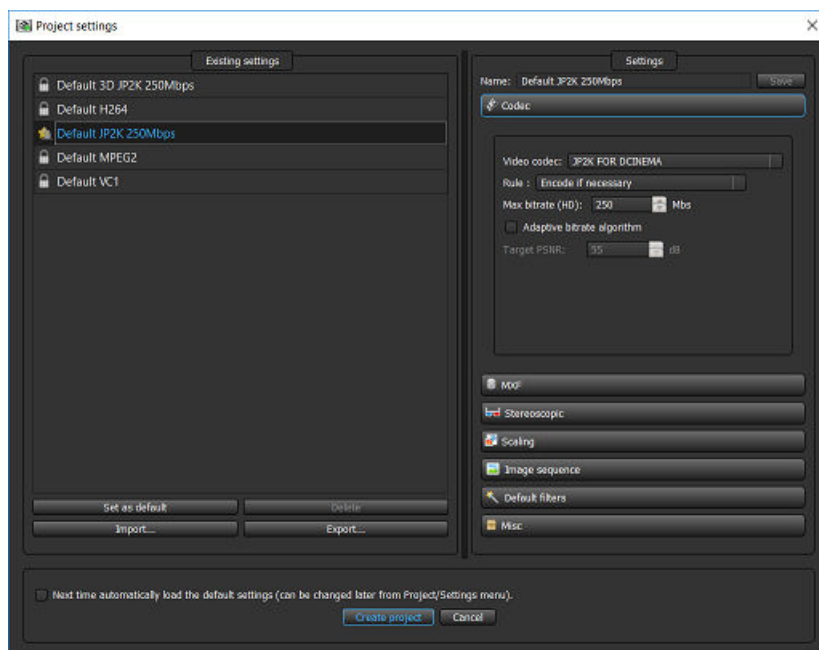
The **Encoding information** tab is not available for tasks generated with previous CineAsset versions or if the package was not re-encoded.

14.2 Project settings window

The **Project settings** window defines the settings for a DCP, such as the bit rate, package standard, and frame rate. Any settings that are set initially using the **Project settings** window can be changed later from the **CineAsset Editor** main window.

The **Project settings** window includes two sections, **Existing settings** and **Settings**.

Figure 132: Project settings window



14.2.1 Existing settings section

The **Existing settings** section contains saved “profiles,” or settings configurations. You can set any profile to default, so every time the **CineAsset Editor** main window opens, the default settings configuration is automatically loaded.

These default profile settings are available:

- **Default 3D JP2K 250 Mbps:** The default profile setting to create an unencrypted, Interop, 3D DCP using JPEG 2000 compression at 250 Mbps. This preset can be selected as a starting point, and all parameters can be adjusted as needed. This profile setting is commonly used for DCI-compliant theatrical content.
- **Default H.264:** The default profile setting to create an unencrypted, Interop DCP using H.264 compression at approximately 80 Mbps. This preset can be selected as a starting point, and all parameters can be adjusted as needed. This profile setting is commonly used for preshow advertising or alternative content.
- **Default JP2K 250 Mbps:** The default profile setting to create an unencrypted, Interop DCP using JPEG 2000 compression at 250 Mbps. This preset can be selected as a starting point, and all parameters can be adjusted as needed. This profile setting is commonly used for DCI-compliant theatrical content.
- **Default MPEG2:** The default profile setting to create an unencrypted, Interop DCP using MPEG-2 compression at approximately 80 Mbps. This preset can be selected as a starting point, and all parameters can be adjusted as needed. This profile setting is commonly used for preshow advertising or alternative content.

- **Default VC1:** The default profile setting to create an unencrypted, Interop DCP using VC-1 compression at approximately 80 Mbps. This preset can be selected as a starting point, and all parameters can be adjusted as needed. This profile setting is commonly used for preshow advertising or alternative content.

14.2.2 Settings section

The **Settings** section defines specific settings for a DCP. The **Settings** section includes seven tabs: **Codec**, **MXF**, **Stereoscopic**, **Scaling**, **Image sequence**, **Default filters**, and **Misc**. Each tab allows you to modify a specific setting for a DCP.

Codec tab

These compression types are available in the **Codec** tab:

- **JPEG 2000**
- **MPEG-2**
- **H.264**
- **VC-1**

MXF tab

These DCP packaging formats are available in the **MXF** tab:

- **Interop**
- **SMPTE**

These MXF rewrap options are available in the **MXF** tab:

- **Read and wrap them**
- **Copy them (no rewrapping)**
- **Do not copy them...ASSETMAP/CPL/PKL**

These DCP audio formats are available in the **MXF** tab:

- **Inter-Society Digital Cinema Forum (ISDCF)** : Provides you with the ISDCF audio configuration.
- **SMPTE** : Provides you with the SMPTE audio configurations.

These audio bit depth options are available in the **MXF** tab:

- **16 bits**
- **24 bits**

These DCP category options are available in the **MXF** tab:

- **Feature**
- **Trailer**
- **Test**
- **Teaser**
- **Rating**
- **Advertisement**
- **Short**
- **Transitional**
- **Public service announcement (PSA)**
- **Policy**

Stereoscopic tab

This option is available in the **Stereoscopic** tab:

- **Generate stereoscopic content**

Scaling tab

These scaling parameters are available in the **Scaling** tab:

- **Scaling preferences:** Sets the scale and maintains the aspect ratio, and adds a border around an image.
- **Force resolution mode:** Forces the video into a specific video format.

Image sequence tab

These frame rates are supported in the **Image sequence** tab:

- High frame rate (HFR)s
- Standard frame rates
- Archive frame rates

Default filters tab

These default filters are available in the **Default filters** tab:

- **Color Conversion:** The most commonly used filter; occasionally is set as default when using JPEG 2000 image compression
- **Overlay:** Overlays a *.png* image file on video
- **Burn:** Burns and edits a frame number, timecode, or editable user text on each frame of a DCP
- **Lead/Tail:** Adds blank frames or custom user frames to the beginning, end, or both ends of a composition

These color-conversion options are available in the **Default filters** tab:

- **Use default LUT:** Uses the CineAsset default RGB to XYZ look-up table (LUT).
- **Use Custom input LUT:** Edits the color conversion manually using slides to adjust the gamma curves or by using a *.csv* LUT file.
- **Offset:** Adjusts the image brightness.
- **Gamma:** Sets the input decoding gamma *.exp*. If the input is Rec709, which uses an encoding gamma of 0.45, the correct setting is 2.22 (1/0.45).
- **Gain:** Adjusts the image contrast.
- **Use 3D LUT:** Uses a *.3dl* LUT file.

CineAsset uses an encoding gamma defined by the ITU-R BT.709-5 specification. If you want to use a mathematical 2.22, use the **Custom input LUT** option. Custom LUT files must be 12 or 16 bits with frame size equal to 512, 1024, 2048, 4096, 8192, 16394, 32768, or 65536 samples.

Misc tab

These DCP extra attributes are available in the **Misc** tab:

- **Import 25 fps AV files as 24 fps AV files:** Converts 25 fps video files to 24 fps
- **Import 23.98/29.97 fps AV files as 24/30 fps AV files:** Converts 23.976 fps video files to 24 fps, and converts 29.97 fps video files to 30 fps
- **Burn subtitles into the video:** Renders all subtitle files into the image of a finished DCP
- **Enable custom MXF file name:** Defines a custom file name for an MXF file
- **Enable custom CPL file name:** Defines a custom file name for a CPL file
- **Number of audio track(s):** Forces a certain number of audio tracks to a project
- **Annotation text:** Automatically sets the annotation text to the same as the CPL title
- **Label text:** Automatically sets the label text to the same as the CPL title

14.3 CineAsset Editor main window

You can use external files (image sequences, audio files, multimedia files, and so on) in the **CineAsset Editor** main window to build a new DCP. The **CineAsset Editor** main window takes the familiar form of a nonlinear editor, and it functions in a similar way.

You can have multiple projects open in the **CineAsset Editor** main window at any time. You can view those multiple projects using two methods, Windowed mode and Tabbed mode.

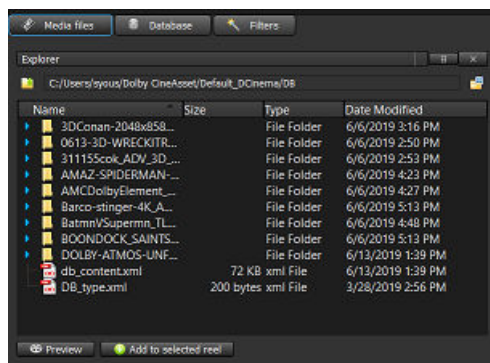
These four main sections are found in the **CineAsset Editor** main window.

- **Browser:** Navigates your computer, CineAsset database, and FTP locations for content to use for creating a DCP.
- **Timeline:** Constructs the content and provides a view for your audio and video for a particular reel. You can also add video, audio, and subtitle files to the **Timeline** section from the **Browser** section.
- **Source/Preview:** The **Source** section previews the video files or image sequences before you add them to the **Timeline** section. The **Preview** section allows you to view the video with filters applied.
- **General:** Names a DCP and allows you to edit DCP metadata.

14.3.1 Browser section

The **Browser** section in the **CineAsset Editor** main window allows you to navigate your computer or workstation for audio, video, and other content files. The **Browser** section includes three tabs: **Media files**, **Database**, and **Filters**.

Figure 133: CineAsset Editor main window: Browser section



The **Media files** tab provides direct access to all content on your computer. You can load a file directly using the **Preview** button. The file loads in the **Source/Preview** section, where you can play and preview the content.

After you choose the content, you can add it to a specific reel on the **Timeline** section using the **Add to selected reel** button.

The **Database** tab displays all DCPs in the CineAsset database. You can add a selected file as a new reel using the **Add as new reel** button. You can also add a selected file to a current reel using the **Add to current reel** button.

If you need to preview a file in the **Source/Preview** section, use the **Preview** button. To view the properties for a selected file, use the **Properties** button.

The **Filters** tab displays filters to edit the content. These filters are added to the current reel on the **Timeline** section by dragging and dropping, or added to all reels by using the **Add to all reels** button.

In addition to these filters, there is an Audio Delay filter. The Audio Delay filter is added to all the audio tracks and can delay the audio by a designated number of frames.

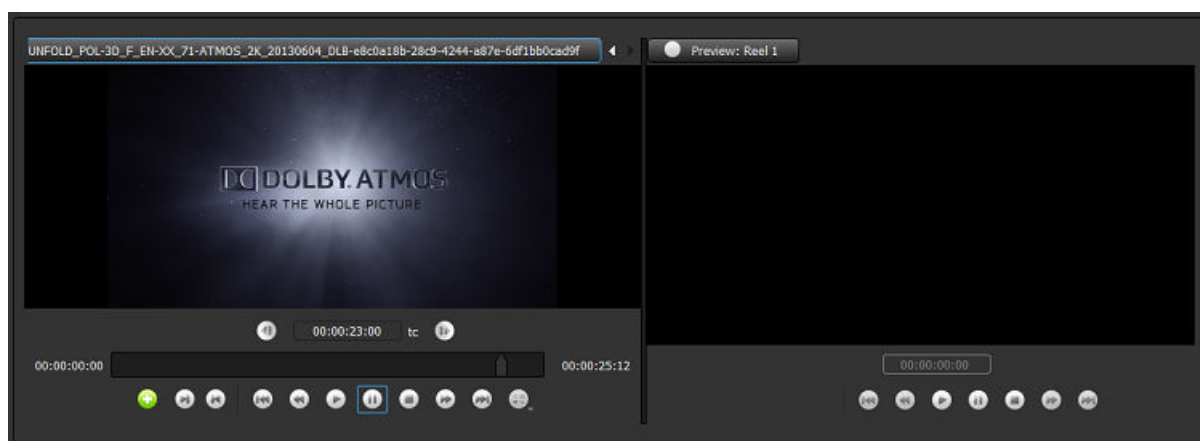
14.3.2 Source/Preview section

The **Source** section in the **CineAsset Editor** main window allows you to preview video files or image sequences before adding them to the **Timeline** section. The **Preview** section allows you to view the video with filters applied.

In the **Source** section, the transport controls allow you to preview content with play, eject, pause, stop, and fast-forward buttons. You can also use the **Source** section to mark in and out points (for example, to trim a file) before adding it to the **Timeline** section.

When a file is opened, more features appear for you to modify and then preview. The name of the source file opened appears at the top center. If a JPEG 2000 file is loaded, a drop-down menu for JP2K image quality appears, as well.

Figure 134: File open in Source/Preview section



14.3.3 Timeline section

The **Timeline** section in the **CineAsset Editor** main window allows you to build and edit the composition (or content). You can add video, audio, subtitles, captions, and other features to the composition.

Figure 135: Timeline section



When subtitles are added to the **Timeline** section, only the subtitle file is added. The resources referenced in the XML file are added automatically when the DCP is generated.

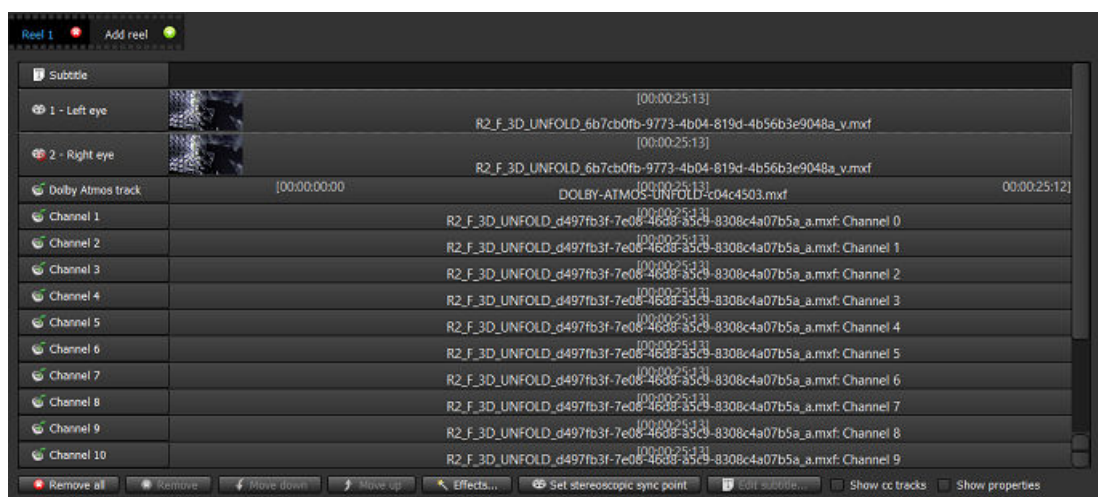
Video files and image sequences are added to video tracks, while audio files are added to their corresponding audio tracks. Use your mouse to drag a file to a different track. You can also use the **Move up** and **Move down** buttons to move files to different tracks.

Note: Subtitle or caption XML files are added to the subtitle or caption tracks. Dolby CineAsset supports both TXT and PNG subtitles.

To edit DCPs not in the CineAsset database, drag and drop the DCP folder or the CPL onto the **Timeline** section.

When creating stereoscopic DCPs, the **Timeline** section displays two video tracks: Left Eye and Right Eye. The left-eye file or image sequence is added to the Left Eye video track, and the right-eye file or image sequence is added to the Right Eye video track.

Figure 136: Stereoscopic DCP



14.3.4 Subtitle editor subsection

The **Subtitle editor** subsection of the **CineAsset Editor** main window is used to modify the subtitle and text attributes for a DCP. The **Subtitle editor** subsection appears after you add subtitles to the **Timeline** section and click **Edit subtitle**.

Tip: Click **Apply** to view the changes in the left section of the **CineAsset Editor** main window. Clicking **Apply** does not save the changes.

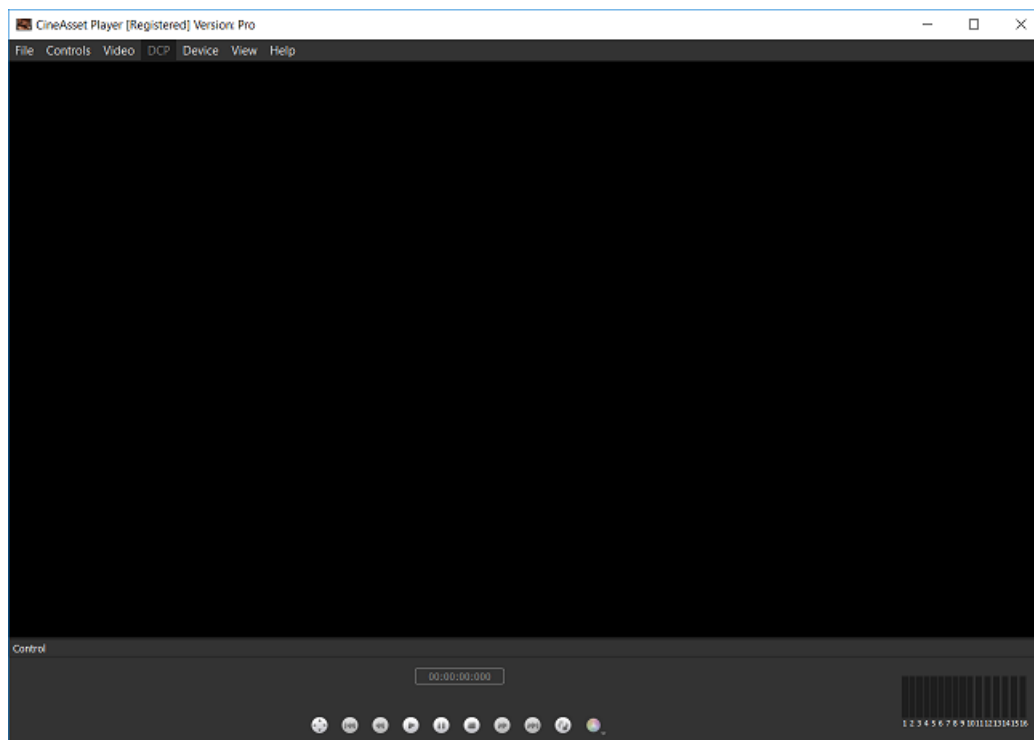
These subtitle text attributes are available in the **Subtitle editor** subsection:

- UUID
- Title
- Format
- Reel number
- Language
- Edit rate

14.4 CineAsset Player main window

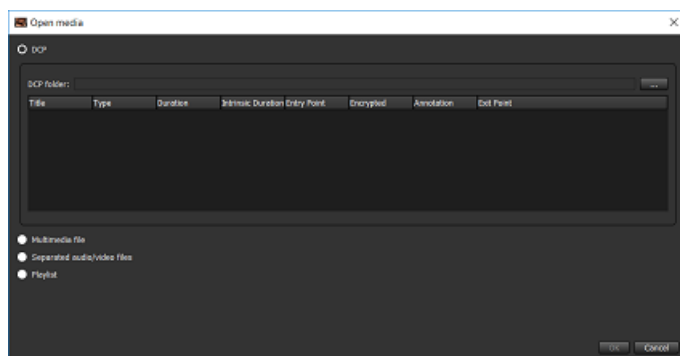
The **CineAsset Player** main window includes a menu bar at the top-left section that provides access to multiple functions for opening DCPs and media files and controlling the DCP playback process.

Figure 137: CineAsset Player main window



If no file is loaded, the **Open media** window appears, where you can filter content to locate the files quickly. You can filter DCPs, audio files, and video files, and then sort the files according to type, making it easier to locate and open specific content.

Figure 138: Open media window



14.4.1 Menu-bar options

The **CineAsset Player** main window provides menu-bar options when playing back a DCP.

These menu-bar options are available in the top-left section of the **CineAsset Player** main window:

- **File:** Opens a new or recent DCP file, launches CineInspect, and exports certificates.
- **Controls:** Controls the playback of DCPs. You can play, pause, load, eject, and so on.
- **Video:** Modifies the image resolution and color-conversion properties.

- **Audio:** Maps the audio tracks in a DCP file. Available only if a DCP file contains audio tracks.
- **DCP:** Views the DCP properties. Also sends a DCP file directly to the **CineInspect** main window for schema validation.
- **Device:** Available only when a DeckLink card is detected.
- **View:** Switches between regular mode and full-screen mode.
- **Help:** Provides you with the CineAsset Player software version and user manual.

14.4.2 Control buttons

The **CineAsset Player** main window provides playback control buttons and other options to modify DCP playback.

These playback control buttons are available when a DCP is loaded in the **CineAsset Player** main window:

- Full screen: Toggles between full-screen mode and regular mode
- Go to beginning: Forces playback to begin from the start of a video or DCP file, even while playback is in progress
- Fast rewind: Rewinds quickly
- Play/Pause: Performs two functions, to begin playback or to pause playback
- Stop: Stops all playback of video and audio
- Fast-forward: Speeds up the playback of video
- Go to end: Pushes the playback process to the end of the time sequence
- Loop: Activates continuous loop play for playback files
- JP2K image resolution layer: Provides a drop-down menu with multiple resolution layers for JPEG 2000-encoded DCPs
- Color conversion: Provides a drop-down menu with multiple color-conversion options
- JP2K image quality: Provides a drop-down menu with multiple options for adjusting the image quality of JPEG 2000 DCPs

Figure 139: CineAsset Player main window



14.4.3 Options window

The **Options** window allows you to modify DCP playback and DCP validation settings.

These options are provided for modifying CineAsset Player DCP playback settings:

- **Drop frame allowed:** Drops frames when playing a file in real time. When this box is unchecked, CineAsset Player plays every frame available. If system performance is low, the playback may be slower when compared to real time.
- **Auto detect DeckLink card:** Automatically detects the DeckLink I/O card. When the DeckLink I/O card is not used, system performance is improved when playing a file directly to your computer monitor.
- **Use GPU for color conversion:** By default, this option is set to use the graphic adapter GPU when performing color conversion. If there is an issue with playback when color conversion is enabled, you can uncheck this box to disable GPU support.
- **Enable dcp validation check:** Performs a validation check on each loaded DCP. If this box is unchecked, CineAsset Player does not run a validation check each time a DCP is loaded for playback. Once selected, the **Options** window expands and the **Validation Options** section appears.

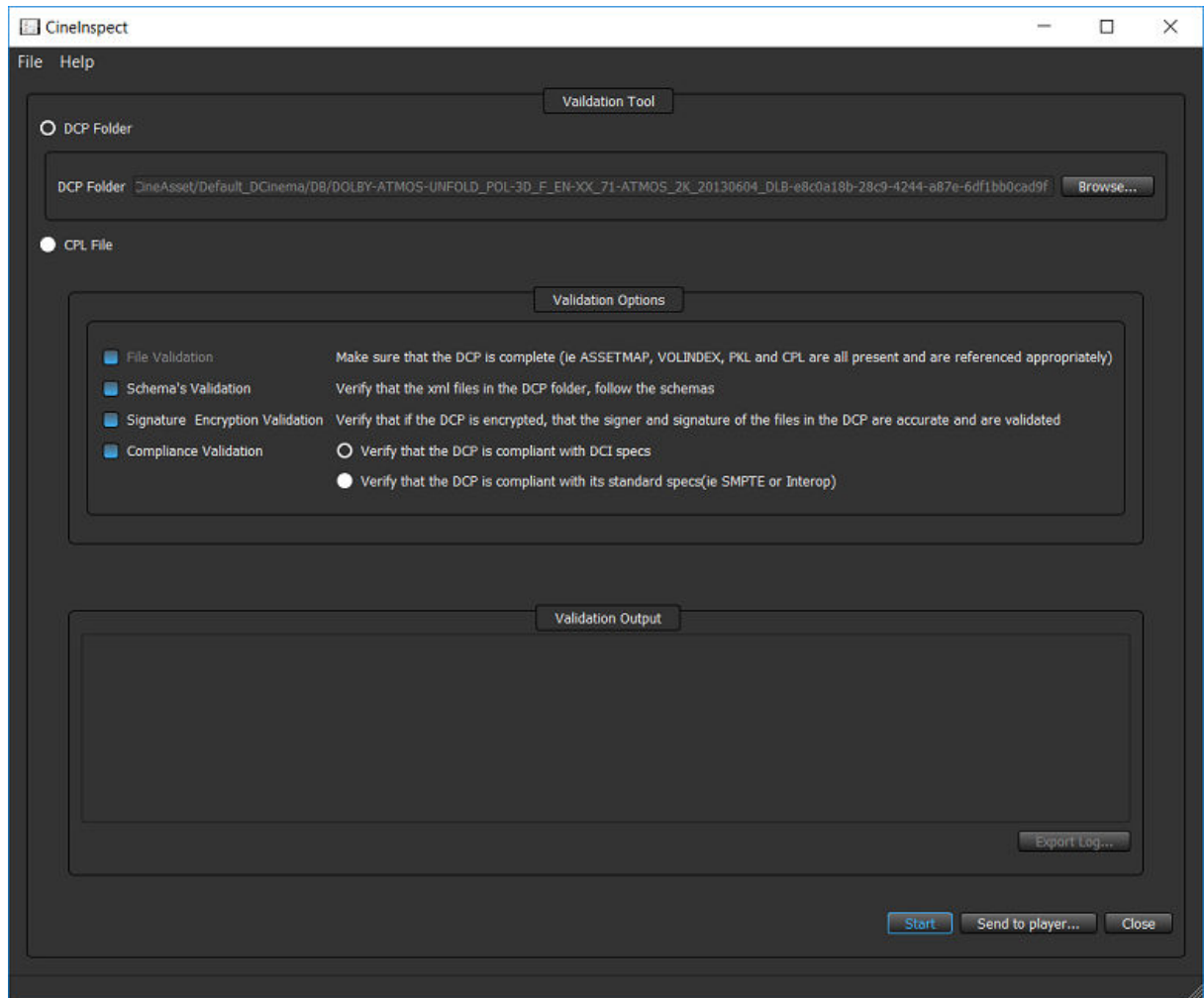
These options are provided for modifying CineAsset Player DCP validation settings:

- **File Validation:** Verifies that DCP components are present and referenced appropriately
- **Schema's Validation:** Verifies that the XML files in a DCP folder follow the appropriate schemas
- **Signature Encryption Validation:** Verifies that an encrypted DCP includes the accurate and valid signature
- **Compliance Validation:** Verifies that a DCP complies with either the DCI or standard specifications (SMPTE or Interop)

14.5 CineInspect main window

The **CineInspect** main window enables you to select the settings and display the results of a DCP inspection. The **CineInspect** main window includes three sections: **Validation Tool**, **Validation Options**, and **Validation Output**.

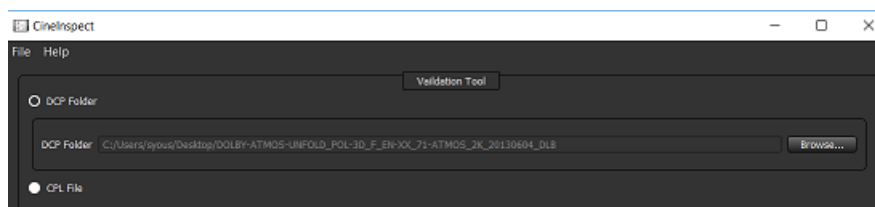
Figure 140: CineInspect main window



14.5.1 Validation Tool

The **Validation Tool** section in the **CineInspect** main window enables you to navigate to a DCP for testing.

Figure 141: Validation Tool section



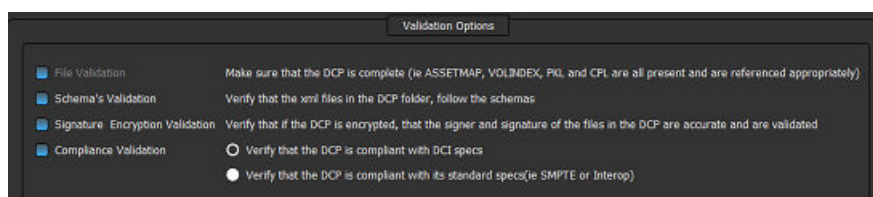
14.5.2 Validation Options

The **Validation Options** section in the **CineInspect** main window allows you to select the level of validation for a DCP. CineInspect splits the validation inspection into various options.

These validation options are available in the **CineInspect** main window:

- **File Validation:** Verifies whether a DCP includes all of the files required for a valid DCP, and verifies that the files were not altered (for example, size verification)
- **Schema's Validation:** Verifies all the XML files in the selected DCP to validate against their corresponding schemas, according to the standard of the DCP (SMPTE or Interop)
- **Signature Encryption Validation:** Verifies the integrity of the signatures present in the XML files
- **Compliance Validation:** Verifies a DCP with two options:
 - DCI specification: Runs a number of tests specified in the DCI specifications to verify that a DCP follows the standardization. Valid only for SMPTE DCPs.
 - Standard specification: Runs a number of tests to verify that a DCP follows the DCP specification standard for SMPTE or Interop.

Figure 142: Validation Options section



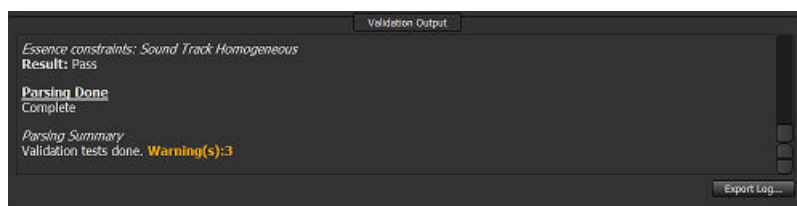
14.5.3 Validation Output

The **Validation Output** section in the **CineInspect** main window displays a detailed set of log messages specifying the tests performed and the results obtained from a DCP inspection process. A summary of the total number of tests that passed, failed, or displayed warnings also appears in this section.

These log messages include descriptions specifying the tests performed and the results obtained:

- **Pass:** Indicates that the tested aspect of a DCP is within the respective specification
- **Fail:** Indicates that the tested aspect of a DCP is not within the respective specification and will likely cause problems with other DCP software or digital cinema players
- **Warning:** Indicates that the tested aspect of a DCP is not within the respective specification, but is not likely to cause problems with other DCP software or digital cinema players

Figure 143: Validation Output section



14.6 Tool-bar icons

Once installed, the Dolby CineAsset runs as a service indicated by a tool-bar icon.

These tool-bar icons indicate status when performing operations:

- **Green circle:** Indicates status is good
- **Amber circle:** Appears when processing tasks

- Red circle: Appears in the event of a failure

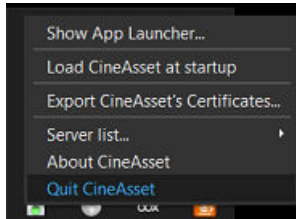
For Microsoft Windows, the tool-bar icon is located in the system tray.

For Mac OS X, the tool-bar icon is located in the menu bar.

For Linux RedHat/CentOS, the tool-bar icon appears in the notification area of the desktop.

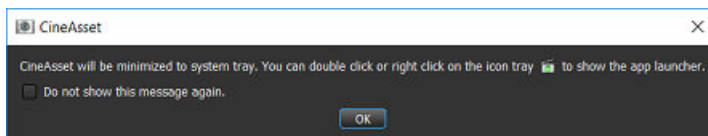
To exit any Dolby CineAsset application, right-click this icon and select **Quit CineAsset**.

Figure 144: Quit CineAsset



After you close a window for the first time, a message window appears, reminding you that CineAsset is available from the tool-bar icon.

Figure 145: Quit CineAsset window



You can choose to click **OK** or select the **Do not show this message again** check box. If you click **OK**, the message appears again the next time you close a CineAsset window. If you select the check box, the message does not appear again.

15

Dolby CineAsset CLI options

Dolby CineAsset provides you with the option to operate CineAsset, play back and validate a DCP, and generate a KDM from a CLI.

- [CineAsset CLI](#)
- [CineAssetSchedule KDM generation CLI](#)
- [CineAsset Player CLI](#)
- [CineInspect CLI](#)

15.1 CineAsset CLI

Use these attributes to operate CineAsset from a CLI.

15.1.1 CineAsset CLI syntax

```
CineAssetSchedule.exe <command> [-i input1 [input options] input2 [input options].  
..] -settings settings_file_name title [destination]
```

15.1.2 CineAsset commands available

Use these commands for CineAsset.

-audio-only

Imports only the audio tracks

-video-only

Imports only the video tracks

15.1.3 CineAsset input options

Use these commands for displaying and creating a DCP with CineAsset.

-help

Shows the command-line usage

dcp

Creates a DCP

15.1.4 CineAsset CLI settings

The settings files are generated using CineAsset. The saved settings files are found in this directory: */Dolby CineAsset/Profiles/*. If no settings file is specified, then CineAsset default settings are used. The default settings profile used is the one previously selected in the CineAsset Editor **Project settings** window.

Title

The title used for a DCP

Destination

The path where a DCP is created, such as the desktop or C Drive. If no destination is specified, the DCP is created in the active CineAsset database.

15.1.5 CineAsset CLI examples

Refer to these examples for using the CineAsset CLI.

This example creates a one-reel DCP using *audio.wav* and *video.m2v*. The settings specified in the *jp2k_settings.pro* file are used when creating the DCP. The DCP is named *dcp_example1* and saved to the root directory of the G Drive.

```
CineAssetSchedule.exe dcp -i G:\audio.wav G:\video.m2v -settings G:\jp2k_settings.pro  
dcp_example1 G:\
```

This example creates a one-reel DCP from *video1.ts* using the settings specified in the *jp2k_settings.pro* file. The DCP is named *dcp_example2* and saved to the root directory of the G Drive.

```
CineAssetSchedule.exe dcp -i G:\video1.ts -settings G:\jp2k_settings.pro dcp_example2 G:\
```

This example creates a one-reel DCP using the video track from *video1.ts* and the audio track from *video2.ts*. The settings specified in the *jp2k_settings.pro* file are used when creating the DCP, which is named *dcp_example3* and saved to the root directory of the G Drive.

```
CineAssetSchedule.exe dcp -i G:\video1.ts -video-only G:\video2.ts -audio-only -settings G:\jp2k_settings.pro dcp_example3 G:\
```

This example creates a two-reel DCP: one reel made from the *reel1.wav* and *reel1.m2v* files, and the second reel made from the *reel2.wav* and *reel2.m2v* files. The settings specified in the *jp2k_settings.pro* file are used when creating the DCP, which is named *dcp_example4* and saved to the root directory of the G Drive.

```
CineAssetSchedule.exe dcp -i G:\reel1.wav G:\reel1.m2v -i G:\reel2.wav g:\reel2.m2v -settings jp2k_settings.pro dcp_example4 G:\
```

This example creates a one-reel DCP from an image sequence using *audio.wav* and *image0001.tiff* (where *image0001.tiff* is the first file in the image sequence). The settings specified in the *jp2k_settings.pro* file are used when creating the DCP. The DCP is named *dcp_example5* and saved to the root directory of the G Drive.

 **Warning:** You cannot create a DCP from a single image file using the CLI.

```
CineAssetSchedule.exe dcp -i G:\audio.wav G:\image0001.tiff -settings G:\jp2k_settings.pro dcp_example5 G:\
```

15.2 CineAssetSchedule KDM generation CLI

Use these attributes to generate a KDM from a CLI.

15.2.1 CineAssetSchedule KDM syntax

Use this CineAssetSchedule KDM syntax:

```
CineAssetSchedule.exe <command> [-i source_dir] [-s server1_location -s server2_location ...] [-p projector1_location -p projector2_location ...] [-std standard] [-cert smpte_optional_cert] [-f filename_label] [-a annotation_text] [-sv start_validity] [-ev end_validity] [-vid video_watermark] [-aud audio_watermark] [-d destination_dir]
```

15.2.2 CineAssetSchedule KDM commands available

Use these commands for a CineAssetSchedule KDM.

-kdm

Creates a KDM

-help

Displays the command-line usage

15.2.3 CineAssetSchedule KDM input options

These input options are used to generate a KDM from a CLI. When entering a location, be sure to include it in quotation marks so spaces are accounted for.

-d

KDM location. If not available, then the KDM is created in the database by default.

-i

Input source directory for the DCP for which to generate a KDM.

-s

Server certificate location. Multiple entry of servers allowed.

-p

Projector certificate location (optional). Multiple entry of projectors allowed.

-std

Standard of the KDM to be created, either "Interop" or "Smppte" (optional). If no standard is present, then the KDM will default to Interop standard.

-cert

Valid only if KDM standard is set to SMPTE (optional). Could be "cs" or "cssm".

-f

File name label (optional).

-a

Annotation text (optional).

-sv

Start of KDM validity (optional). Format should be MMddyyyy-hhmmss. If **-sv** is not available, then the current date and time are used.

-ev

End of KDM validity (optional). Format should be MMddyyyy-hhmmss. If **-ev** is not available, then the end of validity is set to the start of validity plus one month.

-vid

Forensic watermarking for picture (optional). Could be "True" or "False". If not present, then by default is set to true.

-aud

Forensic watermarking for audio (optional). Could be "True" or "False". If not present, then by default is set to true only if the KDM standard is set to SMPTE. Otherwise, set to false.

-t

Sets the time zone for the input start and end periods relative to **-t "+5:00"**. Defaults to **" +0:00"**.

-uuid

Sets the UUID of the created KDM. Default option generates a unique UUID.

-b

Batch KDM creation using a user-defined *.xml* file. When this option is used, the other options must not be used. For example: `CineAssetSchedule kdm -b kdm1.xml -b kdm2.xml -b kdm3.xml`.

-dkdm

Required when generating a KDM for a CPL that is not used in the CineAsset database.

15.2.4 CineAssetSchedule KDM examples

These examples provide KDM generation for an Interop DCP and a SMPTE DCP.

Interop DCP

```
CineAssetSchedule.exe kdm -i "C:\Users\george\Doremi CineAsset\Default_DCinema\DB
\Jp2k_Interop_Encrypted-0c9cc3e6-c54e-45a4-ab77-dd6983fba9a8" -s "C:\Users\george\Doremi
CineAsset\Certs\DB\CineAsset-1209372349\cert_interop_ME_CS_SM.pem"
```

SMPTE DCP

```
CineAssetSchedule.exe kdm -i "C:\Users\george\Doremi CineAsset\Default_DCinema\DB
\Jp2k_Interop_Encrypted-0c9cc3e6-c54e-45a4-ab77-dd6983fba9a8" -s "C:\Users\george\Doremi
CineAsset\Certs\DB\CineAsset--1209372349\cert_interop_ME_CS_SM.pem" -s "C:\Users\george
\Doremi CineAsset\Certs\DB\CineAsset-3085594947\cert_smpte_CS.pem" -std Smppte -sv
07202013-030310
```

Batch KDM creation in XML format

```
?xml version="1.0" encoding="UTF-8"?>
<ASSET_MANAGER_TASK>
<UUID>ecf12c01-cf1d-44ea-a8af-042567b8dd81</UUID>
<ISSUE_DATE>2014/09/10 14:19:04</ISSUE_DATE>
<TASK_ISSUER>Doremi120410</TASK_ISSUER>
<TASK_CREATOR>CineAsset Version 6.9.4</TASK_CREATOR>
<EXTRA_STATUS>Idle</EXTRA_STATUS>
<PRIORITY>Normal</PRIORITY>
<TYPE>Generate KDM</TYPE>
<KDM_STANDARD>1</KDM_STANDARD>
<KDM_TIMEZONE>+00:00</KDM_TIMEZONE>
<KDM_LABEL>kdm1_commandLine_attempt_1</KDM_LABEL>
<KDM_START_VALIDITY>9/09/2014 14:18:51</KDM_START_VALIDITY>
<KDM_END_VALIDITY>10/10/2014 14:18:51</KDM_END_VALIDITY>
<KDM_PICTURE_WATERMARK>1</KDM_PICTURE_WATERMARK>
<KDM_AUDIO_WATERMARK>16</KDM_AUDIO_WATERMARK>
<KDM_SRV_NAME>CineAsset-165344668</KDM_SRV_NAME>
<KDM_SMPTE_CERT_SELECTION>0</KDM_SMPTE_CERT_SELECTION>
<KDM_DIR_LOCATION>C:/Users/aslade/Doremi CineAsset/Kdms/DB</KDM_DIR_LOCATION>
<DKDM_DIR_LOCATION></DKDM_DIR_LOCATION>
<CPL_DIR_LOCATION>V:\CA_DB\DB\CMD_TEST-985f29cb-a894-4f30-a6b7-c89f2f265c4b</
CPL_DIR_LOCATION>
<DKDM_NAME></DKDM_NAME>
<KDM_ANNOTATION_LABEL>kdm1_commandLine_attempt_1</KDM_ANNOTATION_LABEL>
<KDM_CERT_NAME>cert_smpte_CS_SM.pem</KDM_CERT_NAME>
<KDM_CERT_LOCATION>C:\Users\aslade\Doremi CineAsset\Certs\DB\CineAsset-148214703</
KDM_CERT_LOCATION>
<DESTINATION_FOLDER_FILENAME>C:/Users/aslade/Desktop</DESTINATION_FOLDER_FILENAME>
<DESTINATION_IS_DB_FOLDER>0</DESTINATION_IS_DB_FOLDER>
</ASSET_MANAGER_TASK>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<ASSET_MANAGER_TASK>
<UUID>a9158cff-cb7f-48c5-bcea-ec85f80f8b8d</UUID>
<ISSUE_DATE>2014/09/10 14:19:12</ISSUE_DATE>
```

```
<TASK_ISSUER>Doremi120410</TASK_ISSUER>
<TASK_CREATOR>CineAsset Version 6.9.4</TASK_CREATOR>
<EXTRA_STATUS>Idle</EXTRA_STATUS>
<PRIORITY>Normal</PRIORITY>
<TYPE>Generate KDM</TYPE>
<KDM_STANDARD>1</KDM_STANDARD>
<KDM_TIMEZONE>+00:00</KDM_TIMEZONE>
<KDM_LABEL>kdm2_commandLine</KDM_LABEL>
<KDM_START_VALIDITY>10/09/2014 14:19:06</KDM_START_VALIDITY>
<KDM_END_VALIDITY>10/10/2014 14:19:06</KDM_END_VALIDITY>
<KDM_PICTURE_WATERMARK>1</KDM_PICTURE_WATERMARK>
<KDM_AUDIO_WATERMARK>16</KDM_AUDIO_WATERMARK>
<KDM_SRV_NAME>CineAsset-165344668</KDM_SRV_NAME>
<KDM_SMPTE_CERT_SELECTION>0</KDM_SMPTE_CERT_SELECTION>
<KDM_DIR_LOCATION>C:/Users/george/Doremi CineAsset/Kdms/DB</KDM_DIR_LOCATION>
<DKDM_DIR_LOCATION></DKDM_DIR_LOCATION>
<CPL_DIR_LOCATION>C:/Users/george/Doremi CineAsset/Default_D Cinema/DB/
InteropEnc30-64debe4a-39a4-4cc2-8d8e-188213ab5a98</CPL_DIR_LOCATION>
<CPL_NAME>CPL_4fff3d85-5eae-464b-850e-022bba94368a.xml</CPL_NAME>
<DKDM_NAME></DKDM_NAME>
<KDM_ANNOTATION_LABEL>kdm2_commandLine</KDM_ANNOTATION_LABEL>
<KDM_CERT_NAME>cert_smpte_CS.pem</KDM_CERT_NAME>
<KDM_CERT_LOCATION>C:/Users/george/Doremi CineAsset/Certs/DB/CineAsset-165344668</
KDM_CERT_LOCATION>
<DESTINATION_FOLDER_FILENAME>C:/Users/george/Doremi CineAsset/Kdms/DB/
InteropEnc30-64debe4a-39a4-4cc2-8d8e-188213ab5a98</DESTINATION_FOLDER_FILENAME>
<DESTINATION_IS_DB_FOLDER>0</DESTINATION_IS_DB_FOLDER>
</ASSET_MANAGER_TASK>
```

15.3 CineAsset Player CLI

You can operate CineAsset Player from a CLI.

15.3.1 CineAsset Player CLI syntax

You can use this syntax to operate CineAsset Player from a CLI.

```
CineAssetPlayer.exe \[input file 1]\[input file 2] {-fullscreen}
```

15.3.2 CineAsset Player input files

The maximum number of input files is two. If you specify two input files, only the audio track is taken from input file 1, and only the video track is taken from input file 2. An input file is a video or audio file of any format supported by CineAsset.

An input file can also be a folder containing DCP files or a folder containing an image sequence.

15.3.3 CineAsset Player CLI examples

These examples provide audio, video, and DCP files for full-screen playback with CineAsset Player from a CLI.

This example opens *audio.wav* and *video.ts* for full-screen playback in CineAsset Player.

```
CineAssetPlayer.exe G:\audio.wav G:\video.ts -fullscreen
```

This example opens *Example_DCP* for full-screen playback in CineAsset Player.

```
CineAsset Player.exe G:\Example_DCP\ -fullscreen
```

15.4 CineInspect CLI

You can operate CineInspect from a CLI.

15.4.1 CineInspect CLI syntax

You can use this syntax to operate CineInspect from a CLI.

```
CineInspect.exe <command> [dcpFolderDir] [validation_level] start [outputfile]
```

15.4.2 CineInspect commands available

You can use these commands to operate CineInspect from a CLI.

-show

Displays the validation tool

-hide

Hides the validation tool

15.4.3 CineInspect input options

You can use these input options for the destination folder of the DCP to inspect *dcpFolderDir*. When entering a location, be sure to include it in quotation marks, so that spaces are accounted for.

These input options are for the validation level of the DCP:

- 1 = File validation
- 2 = Schemas validation
- 3 = Signature encryption validation
- 4 = Compliance with DCI specification validation
- 5 = Compliance with standard (SMPTE or Interop) specification validation

These input options are for opening the **CineInspect** main window:

- Optional, and is valid only when `command = show`
- If not present, then displays the graphical user interface (GUI) and does not start the validation
- If present, then displays the GUI and starts validation automatically

These input options are for the log-generation output.

- Optional, and is valid only when `command = hide`. It is the destination path file name.
- If not present, then hides the GUI and outputs the log to the standard output window.
- If present, then hides the GUI and outputs the log to the specified output file.

15.4.4 CineInspect CLI examples

You can use these examples to validate a DCP from a CLI.

This example displays the Inspection Validation GUI, and sets the DCP path to *G:/Mpeg2_Interop_UnEncrypted* and the validation level to Signature Encryption Validation.

```
CineInspect.exe -show G:/Mpeg2_Interop_UnEncrypted 3
```

This example displays the Inspection Validation GUI and sets the DCP path to *G:/Mpeg2_Interop_UnEncrypted*. Validation level is set to Signature Encryption Validation, and the validation process starts automatically.

```
CineInspect.exe -show G:/Mpeg2_Interop_UnEncrypted 3 start
```

This example hides the Inspection Validation GUI and automatically sets the DCP path to *G:/Mpeg2_Interop_UnEncrypted* and the validation level to Compliance, with standard specification validation. It starts the validation process automatically and outputs the log to the standard output.

```
CineInspect.exe -hide G:/Mpeg2_Interop_UnEncrypted 45
```

This example hides the Inspection Validation GUI, and automatically sets the DCP path to *G:/Mpeg2_Interop_UnEncrypted* and the validation level to Compliance, with standard specification validation. It starts the validation process automatically and outputs the log to the *test_log.txt* file. If there is no extension, the output file format is automatically considered a *.txt* file format.

```
CineInspect.exe -hide G:/Mpeg2_Interop_UnEncrypted 5 G:/temp/test_log
```

This example hides the Inspection Validation GUI and automatically sets the DCP path to *G:/Mpeg2_Interop_UnEncrypted* and the validation level to Compliance, with standard specification validation. It starts the validation process automatically and outputs the log to the *test_log.txt* file (which outputs to *.txt* file format).

```
CineInspect.exe -hide G:/Mpeg2_Interop_UnEncrypted 5 G:/temp/test_log.txt
```

This example hides the Inspection Validation GUI and automatically sets the DCP path to *G:/Mpeg2_Interop_UnEncrypted* and the validation level to Compliance, with standard specification validation. It starts the validation process automatically and outputs the log to the *test_log.xml* file (which outputs to *.xml* file format).

```
CineInspect.exe -hide G:/Mpeg2_Interop_UnEncrypted 5 G:/temp/test_log.xml
```

16

File formats and codecs

The Dolby CineAsset file formats and codecs provide useful information to help you verify options and avoid performance issues.

- [DCP output formats](#)
- [Video codec import formats](#)
- [Video codec export formats](#)
- [Container import formats](#)
- [Container export formats](#)
- [Image sequence import formats](#)
- [Image sequence export formats](#)
- [Audio import formats](#)
- [Audio export formats](#)

16.1 DCP output formats

Dolby CineAsset supports specific DCP output formats.

Table 1: DCP output formats

Output formats	Linux CentOS	Microsoft Windows	Mac OS X
JPEG 2000 <ul style="list-style-type: none"> • 2D and 3D at up to 4K resolution • Bit rate: 50–500 Mbps 	Yes	Yes	Yes
MPEG-2 <ul style="list-style-type: none"> • I-only or Long GOP • 1080p at 80 Mbps 	Yes	Yes	Yes
H.264 <ul style="list-style-type: none"> • 1080p at 50 Mbps 	Yes	Yes	Yes
VC-1 <ul style="list-style-type: none"> • Wrapping only, no transcoding 	Yes	Yes	Yes

16.2 Video codec import formats

Dolby CineAsset supports specific video import codecs.

Table 2: Video codec import formats

Video codec import formats	Linux CentOS	Microsoft Windows	Mac OS X
JPEG 2000	Yes	Yes	Yes
DNxHD	No	Yes <ul style="list-style-type: none"> • In MOV container, with Apple QuickTime installed and with Avid QuickTime codecs installed 	Yes <ul style="list-style-type: none"> • In MOV container, with QuickTime installed and with Avid QuickTime codecs installed
DNxHR	No	Yes <ul style="list-style-type: none"> • In MOV container, with QuickTime installed and with Avid QuickTime codecs installed 	Yes <ul style="list-style-type: none"> • In MOV container, with QuickTime installed and with Avid QuickTime codecs installed
ProRes	Yes	Yes	Yes
YUV uncompressed	Yes	Yes	Yes
Xvid	Yes	Yes	Yes
MPEG-4	Yes	Yes	Yes
Advanced Video Coding (AVC)/H.264	Yes	Yes	Yes

Table 2: Video codec import formats (continued)

Video codec import formats	Linux CentOS	Microsoft Windows	Mac OS X
High-Efficiency Video Coding (HEVC)/H.265	Yes	Yes	Yes
VC-1	Yes	Yes	Yes
MPEG-2	Yes	Yes	Yes
DVCPro25/50	Yes	Yes	Yes
DVCProHD	Yes	Yes	Yes
Photo JPEG	Yes	Yes	Yes
MJPEG-A&B	Yes	Yes	Yes
DV	Yes	Yes	Yes

16.3 Video codec export formats

Dolby CineAsset supports specific video export codecs.

Table 3: Video codec export formats

Video codec export formats	Linux CentOS	Microsoft Windows	Mac OS X
YUV uncompressed	No	Yes • In MOV container, with QuickTime installed	Yes • In MOV container, with QuickTime installed
DNxHD	No	Yes • In MOV container, with QuickTime installed and with Avid QuickTime codecs installed	Yes • In MOV container, with QuickTime installed and with Avid QuickTime codecs installed
ProRes	Yes	Yes	Yes
MPEG-2	Yes • In MPG container when source DCP is MPEG-2	Yes • In MPG container when source DCP is MPEG-2	Yes • In MPG container when source DCP is MPEG-2
JPEG 2000	Yes • When source DCP is JPEG 2000	Yes • When source DCP is JPEG 2000	Yes • When source DCP is JPEG 2000

16.4 Container import formats

Dolby CineAsset supports specific container import formats.

Table 4: Container import formats

Container import formats	Linux CentOS	Microsoft Windows	Mac OS X
Audio Video Interleave (AVI)	Yes	Yes	Yes
MOV	Yes	Yes	Yes
MXF	Yes	Yes	Yes
MPG	Yes	Yes	Yes
TS	Yes	Yes	Yes
M2TS	Yes	Yes	Yes
MTS	Yes	Yes	Yes
MP4	Yes	Yes	Yes
MKV	Yes	Yes	Yes

16.5 Container export formats

Dolby CineAsset supports specific container export formats.

Table 5: Container export formats

Container export formats	Linux CentOS	Microsoft Windows	Mac OS X
MOV	Yes	Yes	Yes
MXF	Yes • In a DCP	Yes • In a DCP	Yes • In a DCP
MPG	Yes • When source DCP is MPEG-2	Yes • When source DCP is MPEG-2	Yes • When source DCP is MPEG-2

16.6 Image sequence import formats

Dolby CineAsset supports specific image sequence import formats.

Table 6: Image sequence import formats

Image sequence import formats	Linux CentOS	Microsoft Windows	Mac OS X
BMP	Yes	Yes	Yes
Tagged Image File Format (TIFF)	Yes	Yes	Yes
TGA	Yes	Yes	Yes
DPX	Yes	Yes	Yes

Table 6: Image sequence import formats (continued)

Image sequence import formats	Linux CentOS	Microsoft Windows	Mac OS X
JPG	Yes	Yes	Yes
J2C	Yes	Yes	Yes

16.7 Image sequence export formats

Dolby CineAsset supports specific image sequence export formats.

Table 7: Image sequence export formats

Image sequence export formats	Linux CentOS	Microsoft Windows	Mac OS X
TIFF	Yes	Yes	Yes
J2C	Yes	Yes	Yes

16.8 Audio import formats

Dolby CineAsset supports specific audio import formats.

Table 8: Audio import formats

Audio import formats	Linux CentOS	Microsoft Windows	Mac OS X
Waveform Audio Format (WAV)	Yes	Yes	Yes
MP3	No	Yes • With QuickTime installed	Yes • With QuickTime installed
MP2	Yes	Yes	Yes
Advanced Audio Coding (AAC)	Yes	Yes	Yes
AIF/AIFF	Yes	Yes	Yes
Dolby AC-3	Yes	Yes	Yes

16.9 Audio export formats

Dolby CineAsset supports specific audio export formats.

Table 9: Audio export formats

Audio export formats	Linux CentOS	Microsoft Windows	Mac OS X
Waveform Audio Format (WAV)	Yes • Uncompressed PCM	Yes • Uncompressed PCM	Yes • Uncompressed PCM
MP2	Yes • When source DCP is MPEG-2	Yes • When source DCP is MPEG-2	Yes • When source DCP is MPEG-2

Documentation revision history

The documentation revision history lists the date, issue number, and description of all publications of the *Dolby CineAsset User's Manual*.

Date	Issue	Description
17 November 2016	1	Release for software v8.0
30 November 2016	2	Modifications to several sections
09 June 2017	3	Release for software v8.2
11 September 2017	4	Modifications to several sections
14 June 2018	5	Release for software v8.2.16
22 July 2019	6	Release for latest software

Glossary

1080p

See [full high definition](#).

AAC

Advanced Audio Coding. A perceptual audio coding system that is described by ISO/IEC 14496-3.

AVC

Advanced Video Coding. See [H.264](#) on page 139.

AVI

Audio Video Interleave. A Microsoft multimedia container format that supports streaming audio and video.

CLI

Command-line interface.

CentOS

Community Enterprise Operating System.

CPL

Composition playlist. A composition playlist represents a complete digital cinema work, which may include features, trailers, teasers, and advertisements.

CPU

Central processing unit.

container

A formatted file (such as an MP4 file) comprising one or more multiplexed elementary streams and including format-specific metadata.

DCI

Digital Cinema Initiatives, LLC. A joint venture of several motion picture studios that defines an open architecture based on voluntary standards for digital cinema systems.

DCP

Digital Cinema Package. A packing list (PKL) file and all of the files that it references.

fps

Frames per second. The number of unique consecutive audio or video frames an audio or imaging device produces in one second.

FTP

File Transfer Protocol. A network-based protocol designed for transferring data using a client-server architecture.

frame rate

The number of frames decoded per second in real-time operation.

GUI

Graphical user interface.

group of pictures

A sequence of pictures that specifies the order in which frames are arranged within a coded video stream.

HD-SDI

High-definition serial digital interface.

H.264

Also known as Advanced Video Coding (AVC), ISO/IEC MPEG-4 AVC, and ISO/IEC 14496–10:2012. An MPEG standard for video compression most commonly used for high-definition video, such as Blu-ray Disc. The standard was developed jointly by the International Telecommunication Union (ITU) and ISO/IEC MPEG.

H.265

Also known as High Efficiency Video Coding (HEVC), ISO/IEC 23008-2, and ITU-T H.265. An MPEG standard for video compression that improves on the H.264 (AVC) video compression standard and extends support to 10-bit ultra-high-definition video. The standard was developed jointly by the Moving Picture Experts Group (MPEG) and Video Coding Experts Group (VCEG).

HEVC

High-Efficiency Video Coding. See [H.265](#) on page 139.

HFR

High frame rate. Refers to a composition with a frame rate at 48 fps or higher that provides more visual information and reduced motion blur.

HT Technology

Hyper-Threading Technology. A technology developed by Intel that enables a processor to run two threads, or sets of instructions, simultaneously (in parallel). The operating system sees the HT Technology processor as two separate processors.

IP

Internet Protocol.

IP address

Internet Protocol address. A numerical identifier assigned to a device that is a member of a network that uses the IP for communication.

ISDCF

Inter-Society Digital Cinema Forum. A group of professionals that meets to discuss issues related to enhancing technical and operational cooperation in the digital cinema industry.

JPEG

Joint Photographic Experts Group. An International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) working group that develops still image coding standards. May also refer to a digital image format for lossy compression.

KDM

Key Delivery Message. An XML file that is used to provide decryption keys for a specific composition playlist (CPL) containing encrypted content. A KDM also specifies the time window during which the keys remain valid, as well as trusted equipment information to ensure that the CPL playback is possible only on authorized equipment and for an approved period of time.

LUT

Look-up table. In the context of Dolby Vision, a look-up table is a series of precalculated display management data stored in a static text file. The LUT saves processing time and cycles for display management.

MXF

Material Exchange Format. A file format used to transfer and store different types of content (for example, audio, video, data, or metadata). MXF currently supports various compression and encoding formats, and its specification can be extended to new essence formats, if needed.

MP4

A digital multimedia container format defined in MPEG-4 (ISO/IEC-14496, parts 12 and 14) most commonly used to store video and audio streams.

NAS

Network-attached storage. Data storage that is accessed by means of a local network connection for fast data sharing and file access.

TIFF

Tagged Image File Format.

SMPTE

Society of Motion Picture and Television Engineers.

SPL

Show playlist. A playlist that defines one digital cinema show and is made up of a sequence of composition playlists (CPLs) that are associated with automation events, inserts (black pattern and others), or both.

PCM

Pulse code modulation. A method that is used to convert analog signals into digital, binary, coded pulses by sampling the analog signal, quantizing each sample independently, and converting the resulting quantized values into a digital signal.

PEM

Privacy-enhanced Electronic Mail. A file format for security certificates in email communication.

PKL

Packing list. An XML file that describes a set of files in one digital cinema package (DCP).

PSNR

Peak signal-to-noise ratio. The mathematical ratio between the maximum possible value (or power) of a signal and the power of distorting noise.

RAM

Random-access memory.

RAID

Redundant array of independent disks.

RGB

Red green blue. Red green blue color model.

SDI

Serial digital interface.

SMPTE

Society of Motion Picture and Television Engineers.

USB

Universal Serial Bus. A standard that defines the cables, connectors, and communications protocols used in connections between computers and electronic devices.

UUID

Universally unique identifier. A 128-bit string used to identify a software component.

.wav

Waveform Audio Format. An audio bitstream file format.

VBR

Variable bit rate. Describes an encoding method that outputs data at a variable rate.

XML

EXtensible Markup Language.

XYZ

XYZ color space.

YUV

A file format that is encoded using the YCbCr color space.