

# CORTEX Dailies

PLAY. COLOR. SYNC. TRANSCODE.

## What's New

## in v 1.5

This User Guide covers version 1.5 of the following applications

**CORTEX Dailies**  
**CORTEX Dailies Enterprise Edition**

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# What's New in CORTEX Dailies v1.5

For details on using the the new features of CORTEX Dailies, see the CORTEX User's Guide.

## CORTEX Manifest

The CORTEX Manifest is a lightweight sidecar file that contains all the media and metadata information about a CORTEX job. It can be passed between on-set and post installations to ensure complete coherence of media and other metadata.

The Manifest file includes information about:

- Audio and Image files that have been copied or imported
- Checksum for verification
- LUT files applied
- CDL values of primary color correction applied
- Framing settings
- Synchronization points
- Scene/Take/Camera
- Comments & Discrepancies

Manifest files can be loaded into a CORTEX job first and then relinked to the underlying media or the media can be imported first and the traced back with a Manifest.

## Data Discrepancy Reports

When working with a Manifest file, CORTEX can export formatted PDF reports containing:

- Media files reported on the Manifest but not available on the second system
- Media files loaded into a job that are not reported on the Manifest
- All media files that have been relinked/traced to a Manifest

**My Project****Episode 101: The Chinese Restaurant**

03/19/2014

Data Discrepancy Report

Total Files: 7

Total Size: 2.2 GB (2,369,435,713 bytes)

Missing files: 1

File Name	Size	Checksum	Path	Location
A707C007_111117_R2M.mov	167,250,031	48ead34f9f4507a359163d25427a02d3	E:\140313_1	Manifest

Files not in manifest: 4

File Name	Size	Checksum	Path	Location
A707C002_111117_R2M.mov	407,464,223	f6f4476f129ffe87bc65c1ace749c377	C:\media\cortex\input\Mismatchtest	Local
A707C003_111117_R2M.mov	465,287,127	9d1d480c3f25713e8de01787186ea499	C:\media\cortex\input\Mismatchtest	Local
A707C004_111117_R2M.mov	939,632,971	3fde183b9f6592c5b9989e6a99bfb21	C:\media\cortex\input\Mismatchtest	Local
A707C006_111117_R2M.mov	10,814,147	42fc965465c69ddb27c9b6d120b4484e	C:\media\cortex\input\Mismatchtest	Local

Matched files: 2

File Name	Size	Checksum	Path	Location
A707C005_111117_R2M.mov	204,487,715	35cc617ee33b3e80755639e2ed94d9c4	C:\media\cortex\input\Mismatchtest	Local
A707C008_111117_R2M.mov	174,499,499	a6219813be92d9eaf83f87fcc7a2fc5f	C:\media\cortex\input\Mismatchtest	Local

## Copy & Verify Tool

CORTEX Dailies now includes an integrated Copy & Verify Tool. You can set up one or more Copy jobs to run simultaneously and can be used for offloading media from camera cards, shuttle drives or and other media transfer you wish to track and verify.

The Copy tool has a simple interface that allows each job to specify a single source (such as a camera card) and up to three target destinations. One of these destinations, marked as Primary, should be the primary storage of the CORTEX Dailies system or internal storage of the CORTEX CarryOn. The remaining two destinations can be shared storage, attached storage, shuttle drives or LTO drives (using LTFS).

Each copy job can generate optional MD5 Checksums for verification. These checksums will be available in any Manifest file created from the job.

CORTEX allows the option to "Copy to Primary First" which reads off the source media once, then reads of the Primary backup to create the remaining backups. When working onset, this allows the operator to free up the card slot or input device to begin the next copy job more quickly.

## Relink and Traceback

### CORTEX Manifest Relink & Traceback

When working with a CORTEX Manifest file, you can either Relink media (if you start with a Manifest) or traceback (if you start with the media).

### Manifest Relinking

The CORTEX Dailies Copy Tool will automatically relink media from a Copy or Verify job with an already existing Manifest.

Using the Copy Tool, CORTEX will also generate all data discrepancy and verification data.

You can also Relink using the simple Import Media tool, but this will not verify the data & checksums.

### Manifest Traceback

When you import a Manifest to a job with existing media, CORTEX Dailies will give you the option to run a traceback.

The traceback process allows you to selectively apply metadata such as CDL values, LUTs, sync points and Edit Markers.

### EDL Traceback & Relink

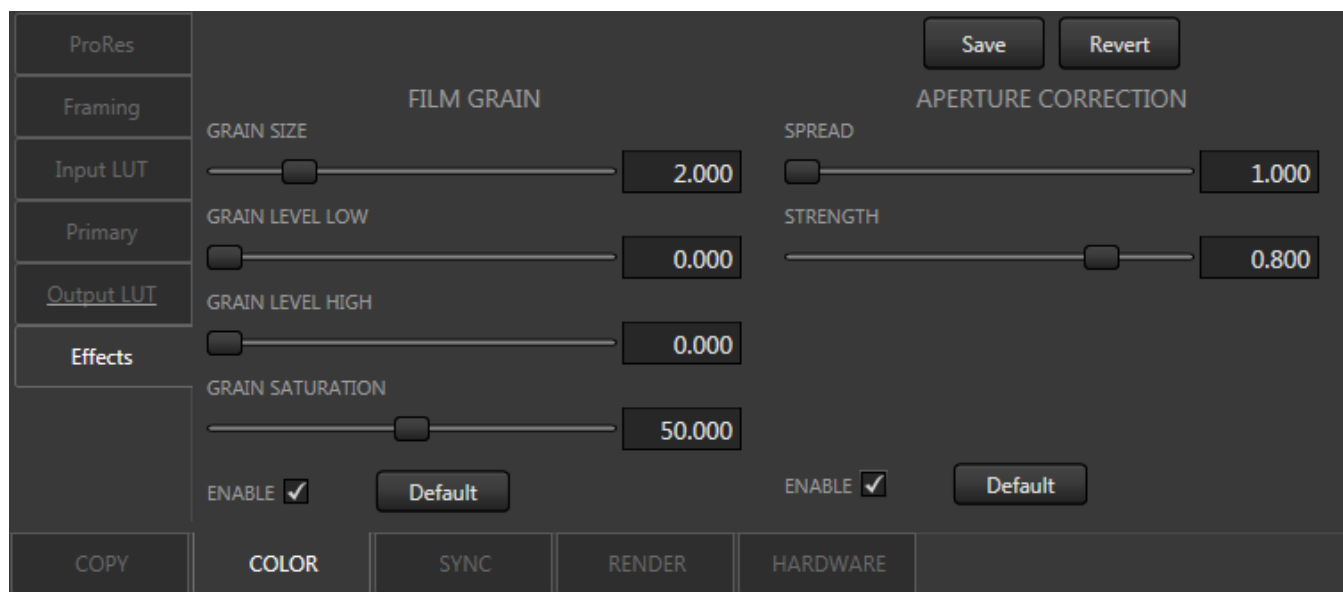
CORTEX Dailies allows you to use an EDL to traceback for assemblies, with the option to relink any media that is missing or has been moved.

## MTI High Quality Resize Algorithm

Originally designed to address the needs of studios and productions moving both existing catalogues and new projects to 4K/UHD delivery, MTI Film has developed a new Resize algorithm. This new algorithm provides high-quality resizing to and from any resolution and can be selectively applied to individual deliverables formats as needed or used to drive for 4K real-time playback on an external monitor.

Available only in CORTEX Dailies Enterprise Edition

## Effects - Grain & Aperture Correction



The **Film Grain** tool allows you to add artistic grain, based on the control parameters within the tool.  
**Aperture Correction** will sharpen the image (useful when doing UpRes)

## Clip Bin Layout and Sidebar

CORTEX Dailies v 1.5 now offers three Clip Bin views and a new sidebar for navigation.

### Sidebar

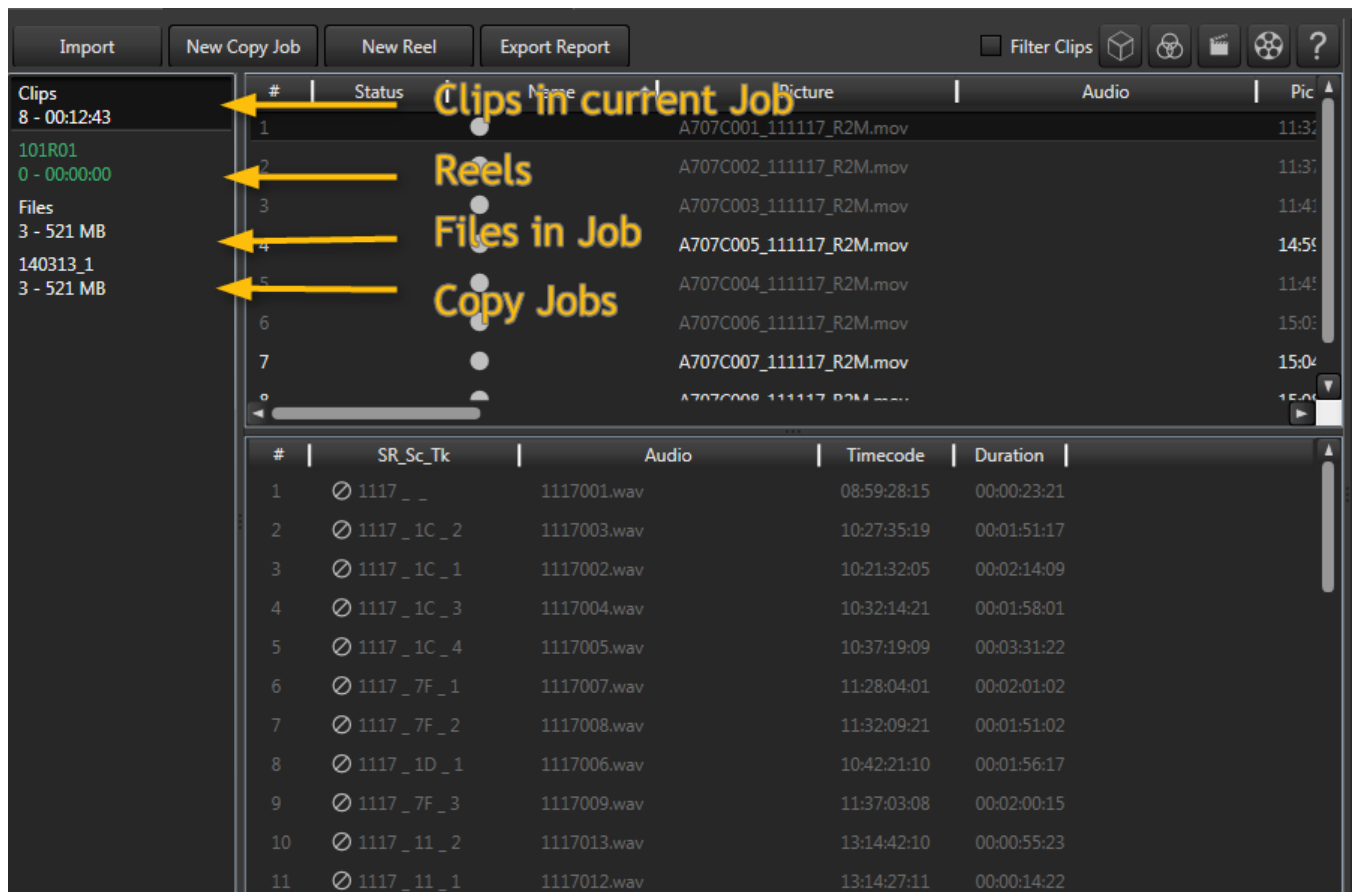
The new Sidebar allows you to navigate through different bins within your Job

**Clips** navigates to the Clip Bin and displays the number of clips and total runtime in the Job

**Reels** (displayed as individual Reels, by name) navigates to the selected reel and displays the number of clips and total runtime of the Reel

**Files** navigates to a list of all files included in any Copy Job or Verify Job to display Data Discrepancy status for each

**Copy Jobs** (displayed as individual Copy Jobs, by name) navigates to the selected Copy Job



### New Clip Bin Views

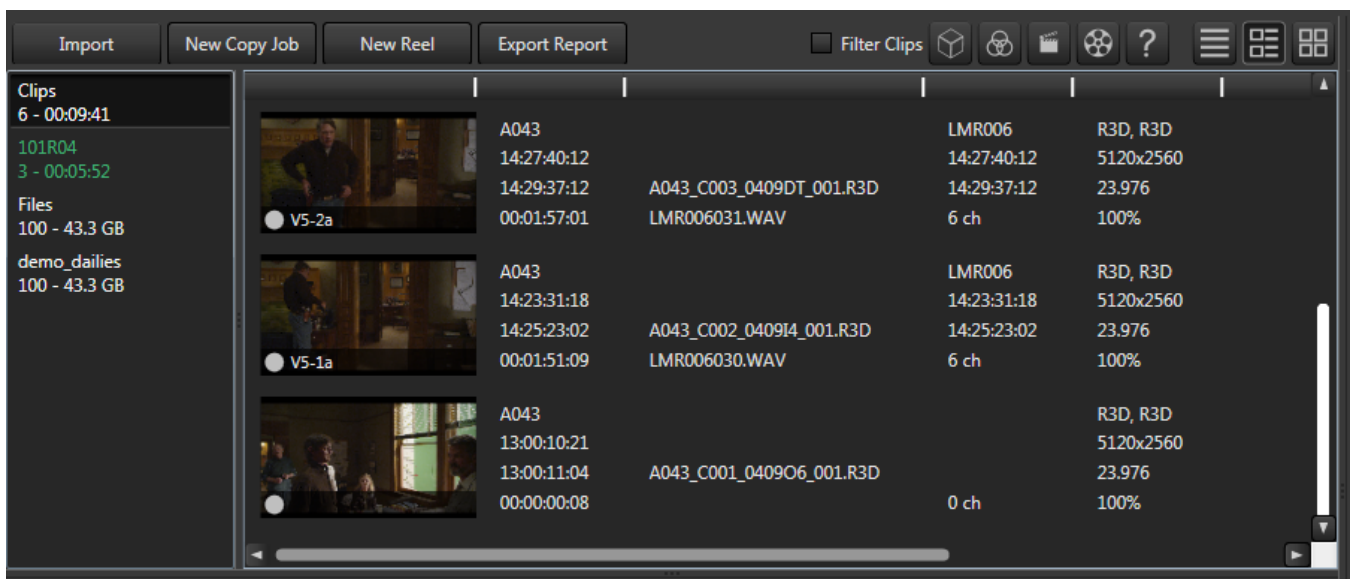
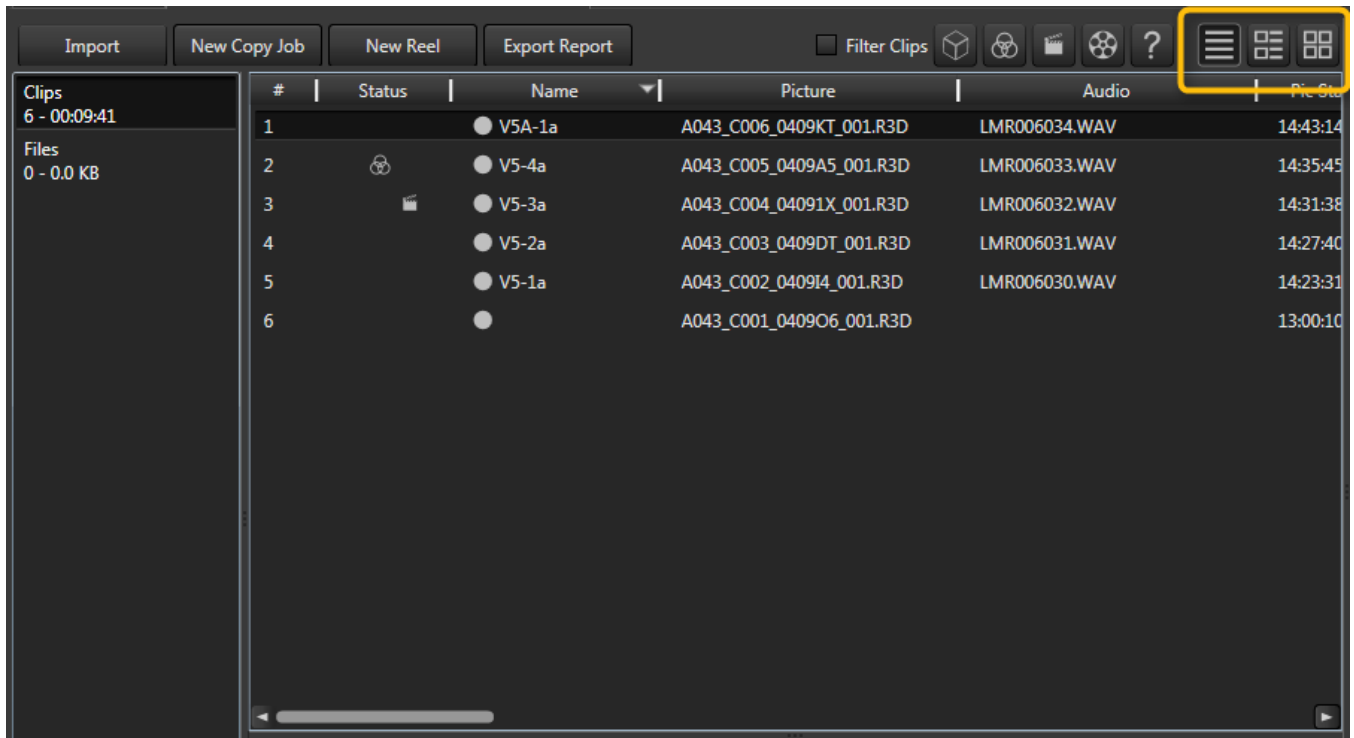
The Clip Bin now offers three views:

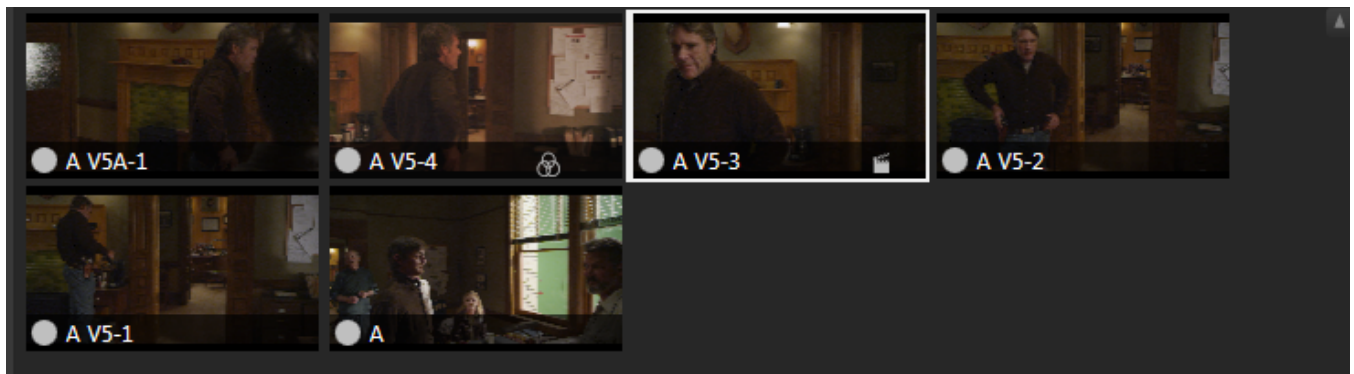
**Details** - Full list of clip & file details (current view in CORTEX Dailies 1.4)

**List & Thumbnails** - Thumbnail view with clip details

**Thumbnails** - Timeline thumbnail only view

You can toggle between these views using the buttons at the top of the Bin. Timeline thumbnails are still available in the Color tool, if you prefer working in Details view but still want a visual representation of your clips.





### Clip Column Layout & Sorting

Select visible columns and column order and save layout for recall via context menu.

Click any column header to sort on that value.

### Selective Batch Color



**RED**

☐ HDR Method : Simple    ☐ Blending : 1    ☐ Brightness : 0

☐ Contrast : 0    ☐ DRX : 0    ☐ Denoise : ImageDenoiseOff

☐ Detail : ImageDetailHigh    ☐ Exposure : 0    ☐ FLUT : 0

☐ Gain, Blue : 1    ☐ Gain, Green : 1    ☐ Gain, Red : 1

☐ ISO : Iso800    ☐ Gamma Curve : ImageGammaRedGamma3    ☐ Color Space : ImageColorRedColor3

☐ Kelvin : 3200    ☐ OLPF : ImageOlpfCompOff    ☐ PD Log, Black : 95

☐ PD Log, Gamma : 0.6    ☐ PD Log, White : 685    ☐ Post Gain, Blue : 1

☐ Post Gain, Green : 1    ☐ Post Gain, Red : 1    ☐ Post Gamma, Blue : 1

☐ Post Gamma, Green : 1    ☐ Post Gamma, Red : 1    ☐ Post Lift, Blue : 0

☐ Post Lift, Green : 0    ☐ Post Lift, Red : 0    ☐ Saturation : 1

☐ Shadow : 0    ☐ Tint : 0

**Framing**

☐ Size & Position    ☐ Flip X : False    ☐ Flip Y : False

**Input Lut**

☐ LUT : None

**Color Correction**

☒ Red Slope : 0.9751836    ☒ Green Slope : 1.004499    ☒ Blue Slope : 1.00989

☒ Red Offset : 0.03485301    ☒ Green Offset : -0.007634835    ☒ Blue Offset : -0.01845323

☒ Red Power : 1.181999    ☒ Green Power : 0.9568326    ☒ Blue Power : 0.8920003

☐ Saturation : 1    ☐ ACES Log Color Space : False

**Output Lut**

☐ LUT : None

**Image Effects**

☐ Aperture Correction Enabled : False    ☐ Aperture Correction Spread : 1    ☐ Aperture Correction Strength : 0.8

☐ Film Grain Enabled : False    ☐ Film Grain Highlights : 0    ☐ Film Grain Lowlights : 0

☐ Film Grain Size : 2    ☐ Film Grain Saturation : 50

**Save to 5 clips.**    **Cancel**

You can now selectively apply decisions made in the Color tool to a batch of clips. When you select multiple clips and apply changed settings via CTRL+S, a dialog will pop up detailing the settings you are about to apply.

You can choose to select or deselect any of them.

Settings include:

- Camera color settings
- Framing settings
- Input & Output LUT file
- Color Correction values
- Effects (Grain & Aperture Correction)

## PDF Reports

CORTEX Now generates formatted PDF reports for all Jobs

The Reel report file is added to the Reel output folder after the Reel is closed.

Full Job reports with optional QC notes, Reel details, Data Discrepancy reporting and Copy Job Details are now available from the **Export Reports** button in the Clip Bin.

MTI FILM

### My Project

Episode 101: The Chinese Restaurant

03/28/2014

Reels	Indexed Files	Total	Total	Scenes
1	100	00:09:40:11	6	5
Copy Jobs	Missing Files	Reel Total	Reel Total	Cameras
1	0	00:05:51:17	3	A043
Total Size	Mismatched Files	Circled	Circled	Sound Rolls
43.3 GB	0	00:05:51:17	3	LMR006

#### Reels

Reel	Total	Circled	Total	Circled	Sound Rolls	Scenes	Cameras
101R04	00:05:52	00:05:52	3	3	LMR006	V5,V5A	A043
No Reel	00:03:49	00:03:49	3	3	LMR006	V5	A043

#### Copy Jobs

Source	Files	Size	Bytes	Primary	Backup1	Backup2
demo_dailies	100	43.3 GB	46,470,165,422	OS		

# Release Notes

## FEATURES

### IMAGE PROCESSING

- UPRES / RESIZE (INCLUDING UHD & 4K)
  - New high quality resize algorithm option in deliverable configs (ENTERPRISE EDITION only)
  - Resize to and from any resolution during encoding, including up-res to UHD and 4K
- APERTURE CORRECTION TOOL
  - New tool tab in color tool to apply aperture correction to enhance perceived sharpness of images
- DYNAMIC EFFECTS:
  - Can now add transitions and dissolves for Framing, Aperture and Grain effects

### DATA AND METADATA

- COPY TOOL
  - Copy and verify data from multiple sources to up to 3 destinations (primary storage and 2 backups)
  - Backup to LTO with LTFS
  - MD5 checksums calculated during copy. Optionally verify checksums on destination copies
  - Output reports of all data copied
  - Checksums and list of files included in Job Manifest
- JOB MANIFEST
  - Provides a means to exchange metadata between Cortex systems and intelligently merge it with new or existing media
  - Missing media is clearly displayed to provide greater confidence that all media has been properly received
  - Ability to export Job Manifest with all pertinent metadata from a Job at time of export
  - Ability to import Job Manifest from any system
  - Ability to merge metadata with existing clips, automatically prompted after manifest import
  - Ability to relink media to offline clips automatically when media is imported
- RELINK
  - Ability to relink offline clips to media at a new location
  - Relink automatically searches for any remaining clips at similar a relative paths based on the identified clip
  - Automatically uses a combination of timecode, tapename and filename to match clips
- IMPORT EDL
  - Ability to import CMX 3600 EDL files to create a pull list or list of offline clips
- TRACEBACK / MERGE METADATA
  - Ability to trace through and merge metadata from several sources:
    - Current project database

- Another project database
  - ALE, FCP XML and CORTEX XML File(s) or Folders of files
- Selectively apply color, sound, sync and edit metadata during merge
- PDF REPORTS
  - Export PDF reports for each reel or for an entire job
  - Replaces text based FLR and NDR reports with one single report
  - Optionally include details sections for QC Notes, Reels, Copy Jobs and Data Discrepancies

## FILE FORMATS AND CODECS

- SONY RAW CUSTOM DEBAYER AND SGAMUT3/SLOG3 COLORSPACE
  - Fast, high quality, full resolution debayer now available for Sony RAW footage (F5, F55, F65)
  - SGamut3/SLog3 colorspace now available
  - Sony RAW controls now available for Exposure Index, Color Temperature and Tint
- RED SDK WITH GPU SUPPORT
  - R3D files are now decoded using the new GPU accelerated SDK when possible
- ARRIRAW OPENGATE AND MONOCHROME SUPPORT
  - Can debayer ARRIRAW Open Gate format (3414 x 2198)
  - Can decode ARRIRAW monochrome files
- PHANTOM FLEX 4K SUPPORT
  - Added support for new Phantom Flex 4K camera
  - Added additional controls for Phantom color metadata
  - Colors now match Phantom SDK when using GPU debayer with advanced parameters
- DNxHD QUICKTIME / MOV SUPPORT
  - Can read and write DNxHD of all bitrates in a QuickTime / .mov wrapper
- 16 BIT DPX SUPPORT
  - Added support for reading and writing 16 bit DPX files
- COMPRESSED CINEMA DNG SUPPORT
  - Added support for reading compressed CinemaDNG files
- MONOPHONIC WAV FILE SUPPORT
  - Can import audio monophonic wav files and use them directly in the sync tool

## USER INTERFACE

- SELECTIVELY APPLY COLOR AND IMAGE SETTINGS TO MULTIPLE CLIPS
  - When copying and saving color from one clip to many, select which parameters to clone, all the way down to a single RED setting
- CLIP BIN COLUMN LAYOUTS AND SORTING
  - Sort the clip bin by any column by clicking the header
  - Column layout is automatically saved between sessions (column order, width and visibility)
  - Custom layouts can be saved with a name and recalled on demand
- JOB NAVIGATION SIDEBAR
  - Added sidebar for navigating among reels and copy jobs. Replaces tab-based reel navigation

- New views for clip list: Thumbnail Only and Thumbnails + List
- All actions for each reel or copy job bin are now accessible via right-click on bin in side navigation list
- STILL STORE OPTIMIZATIONS
  - Optimizations to still store makes saving color corrections faster, takes less disk space
  - Optimizations to still store makes loading jobs faster and browsing project stills faster
- ABILITY TO SYNC PICTURE AND AUDIO SHOT AT DIFFERENT FRAMERATES
  - Picture and audio can now be sync'd together if they were shot at different framerates (eg. picture at 24, audio at 30)
- AUTO-COMPLETE COMMENTS
  - Auto-complete comments as they are added in the SYNC tool
- SCOPE CONTROL AND REGION OF INTEREST (ROI)
  - Click and drag in image area to define a region of interest to highlight in the waveform and vectorscope
  - Right click scope for options to choose various display options (channels, gain)
- BETTER TANGENT ELEMENT SUPPORT
  - Added mapping files for all Tangent Element panels

## 4K MONITORING

- BLACK MAGIC DESIGN SDI OUTPUT
  - A variety of black magic design hardware can now be used to output SDI video (along with AJA and DVS which continue to be supported)
- UHD SDI OUTPUT
  - Can output SDI at UHD using AJA, BMD or DVS SDI cards

## DIAGNOSTICS AND TROUBLESHOOTING

- ERROR LOG
  - Notifications displayed for any errors logged while running application
  - Can open log window to see errors, cut/copy error messages, and filter by severity. Can also save logs to send to support.

## IMPROVEMENTS

- COPY: Show current file being copied in the copy job widget
- COPY: Optimized copy tool for copying file sequences (like .ari or .dpx files)
- GENERAL: In file list, "Mismatches" and "Not Listed" are now differentiated
- GENERAL: When clips are imported on another system, it is less disruptive (current clip and frame are maintained)
- GENERAL: Comments imported from manifest are now always merged with existing comments
- GENERAL: Stills and LUTs are now always located via the project path at the chosen root directory:
  - <chosenroot>\{project}\stills
  - <chosenroot>\{project}\luts

- Allows users to more easily move stills and LUTs when moving projects between locations or moving project from one storage volume to another
- COPY: Available and remaining space now includes in progress copy jobs
- COPY: Verification waits until copies to that volume are finished
- COPY: Checksum calculation of downstream copy can be used to verify upstream copy
- COPY: Can copy from multiple sources at one time
- COPY: Folders hidden in 'show clips' mode
- COPY: Ability to resume a copy job that has failed
- COPY: Improved layout for each copy job widget
- COPY: Database optimizations to handle millions of file entries for file-per-frame media types
- COPY: Source name is set to volume name if the root drive is chosen as source
- COPY: Ability to set the maximum number of concurrent offloads (copy to primary)
- COLOR: Tools are disabled when clip with offline media is selected
- COLOR: When switching between RED clips, the chosen RED tab stays selected
- COLOR: Framing decisions are included in still thumbnails and exports, per the Preview configuration
- COLOR: Save button is enabled when multiple clips are selected, regardless of whether any changes were made
- COLOR: Save button now on all tabs
- COLOR: Color tools and tabs are disabled when a deliverable is selected which is configured not to apply a given tool
- COLOR: Aspect ratio of still thumbnails matches source frame
- COLOR: Still store project browser expands down so controls are less likely to be out of view
- GENERAL: Ability to add embedded audio back to clip after it has been removed
- GENERAL: Optimizations to ensure real time playback of 4K material on appropriate hardware.
- GENERAL: Faster loading of clips with lower up front memory footprint
- GENERAL: Faster decoding of ProRes in optimized mode
- GENERAL: When deleting a reel with many clips or large dpx files, busy message is displayed
- GENERAL: The edit timecode setting last used is remembered
- GENERAL: Can now import multiple clips of Avid MXF media stored in a single folder
- GENERAL: Can now import multiple sequences of DPX files with the same base name stored in a single folder
- GENERAL: Can now import DPX sequence where the padding / index number changes in the middle of the sequence
- GENERAL: When importing manifest, if sync'd audio is online, show in white even if picture is offline
- GENERAL: Player stops when application is minimized - fixes application freeze that could happen
- GENERAL: Much faster playback of RED material when using RED Rocket or RED Rocket-X

- GENERAL: After deleting clips, Cortex now lets go of file handles so they can be moved or deleted
- GENERAL: Separate locations for deliverables and stills and LUTs can now be chosen for your project
- GENERAL: Column for comments now available in clips bin
- GENERAL: When importing media that has a wav file in the same folder, separate audio clip is created so it can be re-synced if necessary
- GENERAL: Player loops to beginning of reel when in reel playback
- GENERAL: Do not allow user to add clips to a source timecode reel if playspeed is modified and 'enforce consistency' is checked
- RENDER: Automatic decode quality for Sony RAW better optimized for speed / quality trade-offs
- RENDER: File-per-reel deliverables which don't start encoding until reel is closed now more accurately reflect their progress