Autodesk®
Flint® 2010
Extension 1

A Discreet® Systems product

New Features Guide

Autodesk®

Autodesk® Visual Effects and Finishing 2010 Extension 1

Trademarks

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Contents

Introduction 1

Topics in this chapter:

About the Documentation

Autodesk® Flint® 2010 Extension 1 includes documentation that helps you install, configure, and use your product.

For a list of all the documentation available to you, visit *http://www.autodesk.com/flint-documentation-2010extension*.

Refer to the Release Notes for all late-breaking information.

Using the New Features Guide

This New Features Guide describes the new and updated features for this release of Flint. For a quick look at the New Features, see What's New on page 5. Some of the major features also have more information in this guide — just follow the links from the What's New chapter.

Viewing Tooltips

Your application includes tooltips that describe objects on the user interface (such as buttons and fields). The tooltips also display the hotkey for the object, if one is configured.

To view tooltips:

➤ Move the cursor over the object.

After a few seconds, the tooltip displays.

In the Preferences menu, you can turn on and off the display of tooltips. You can also change the amount of time your cursor must rest on an object before the tooltip displays.

Viewing the Help

Included with your application is a Help system that you can view in a Web browser. The Help is installed automatically and is accessible from anywhere within your application.

The Help is best viewed using Firefox® 2 or Internet Explorer 7.

To view the Help:

1. Start your application.
2. Click Preferences to open the Preferences menu and click Help.

   You can also access the Help by clicking the Help button, which appears on the bottom-right of the Desktop.

   TIP Press **Ctrl**+= to open the Help from anywhere in your application.

   A browser launches displaying the Help.

TIP To view the Help without interrupting a client session, copy the *documentation/help* folder from the product DVD to another system, such as your laptop. To view the Help, open the *help/index.html* file.

Autodesk Media and Entertainment Training

There are several training options available to help you be more creative and productive with your application, including free self-paced training and instructor-led training.

For all your training options, see: *http://www.autodesk.com/me_training*

Notation Conventions

A number of style conventions are used throughout your documentation. These conventions and examples of their use are shown as follows.

Convention	Example
Text that you enter in a command line or shell appears in Courier bold. Press the Enter key after each command.	**`install rpm -qa`**
Variable names appear in Courier, enclosed in angle brackets.	`<filename>`
Feedback from the command line or shell appears in Courier.	`limit coredumpsize`
Directory names, filenames, URLs, and command line utilities appear in italics.	*/usr/discreet*

Contacting Customer Support

For Autodesk Media and Entertainment Customer Support, visit *http://www.autodesk.com/support*.

Customer support is also available through your Autodesk reseller. To find a reseller near you, consult the reseller look-up database at *http://www.autodesk.com/resellers*.

What's New

2

Topics in this chapter:

About This Release

This release of Flint introduces many new and updated creative tools, as well as workflow improvements. See the themes below for a quick overview, and then follow the links for more detailed information.

Creative Tools

This release introduces new and improved tools to help you save time and expand your creative results.

Using Audio Tracker Analysis to Generate Keyframes

In the Channel Editor throughout Flint, you can now analyse an audio clip, and use the results to automatically generate keyframes on any animation channel. See Generating Keyframes Based on Audio Analysis on page 15.

New 3D Particle Presets

The library of Action particle presets expands to include many new presets in existing and new categories. You can use the particle presets as is, or as a starting point to explore particles and create custom effects.

NOTE Since there are more categories of Action presets (such as 3D Text presets), the Particle Preset node is now called Presets, and the file browser is changed slightly to allow for a better workflow in choosing which type of preset to load. You can also enable a Scale to Action Resolution button, as well as other rendering settings, when loading a particle preset.

A reference guide PDF of all existing and new particle presets is available online at: *http://www.autodesk.com/flint-documentation-2010extension*.

3D Text Presets

A new library of 3D text presets is available in Action, allowing you to create text effects more easily. See Using 3D Text Presets on page 22.

You can also view a PDF reference guide of all available 3D text presets online at: *http://www.autodesk.com/flint-documentation-2010extension*.

3D Text Cascade Alignment

To help you create better 3D Text effects in Action, you now have an alignment option when cascading text, in relation to the master character. You can choose to align from left to right, right to left, or symmetric.

Ability to Animate Motion Blur Settings

You can now animate the Motion Blur button, as well as the Phase, Shutter, and Samples fields in the Motion Blur menu. This affects Action, Garbage Masks, and Wipe soft effects. See Applying Motion Blur on page 23.

Technical Tools

Like creative tools, technical tools are also necessary to help you get better results. This release introduces the following new and improved technical tools.

Saving Selected Action Objects

To help you quickly save and load Action setups, you are now able to save only selected objects.

See Saving, Loading, and Importing on page 25.

Gradient Clip Creation

Tools for easily creating a 2- or 4-colour gradient clip are added to the Coloured Frame command in the Processing menu, and the Coloured Frame node in Batch.

See Creating Coloured Frames on page 29.

Auto Stabilize Node

Use the new Auto Stabilize Batch node to analyse the movement in a clip and remove camera instability. See Auto Stabilize Node on page 32.

Enhanced Pen Tablet Support

You can now use the pen tablet to jog or shuttle a clip.

- With an Intuos®4 pen tablet, use the touch ring control to jog or shuttle through a clip. Use the button in the centre of the ring to toggle between jog and shuttle.

- With an Intuos®3 pen tablet, use the the touch strip to jog or shuttle through a clip. Use the button with an indentation to toggle between jog and shuttle.

You can also use the tablet buttons as hotkeys. Use the Hotkey Editor to assign a function to each button. Access the Hotkey Editor from the Preferences menu, or by pressing **Alt+Ctrl+F8**.

New Documentation Options

The Help button on the Desktop and in the Preference menu has been redesigned to a dropdown list to give you better access to the documentation you need. For example, you can now open the Help directly to the *What's New* and *Hotkeys* sections. You also have links to online documentation and training resources.

NOTE You can always use the hotkey **Ctrl+=** to display the help from anywhere in the application.

Other Technical Improvements

Use these small improvements to help in your day-to-day use of Flint:

- When using Filter Select to search for timeline elements, you can populate segment information directly into the appropriate fields by pressing **Alt+T** and clicking a segment, and then refine your search accordingly.
- Zoom and pan values are retained when switching clips in the Player.
- When using the full-screen mode in Paint, you now have access to the timebar and zoom controls.
- The broadcast monitor now displays the primary track when using a split or blend view between tracks.

Batch Workflow Improvements

The Batch environment continues to improve with new functionality and workflow enhancements.

Schematic Connection Improvements

A number of shortcuts are introduced to help you insert and connect nodes gesturally to your Batch or Modular Keyer process tree. See Connecting Clips and Nodes on page 39.

Visually Identifying Action Media and Paint Sources

To help identify Action Media nodes and Paint source nodes in the Batch schematic, you can now select the media in the Action Media list, or the source in the Paint Sources list to automatically highlight in yellow the corresponding node and link. Conversely, selecting a Media or source node also highlights the corresponding media in the Action Media list or source in the Paint Sources list.

Floating Point Workflow

This extension release adds floating point support to more Processing and Format menu tools.

- The Separate command in the Format menu is now fully 16-bit floating point compliant.
- The Flip command in the Processing menu is now fully 16-bit floating point compliant.

Interoperability Workflow Improvements

As many new formats and codecs are introduced in the industry, it is important to create workflows that support them.

WiretapCentral

WiretapCentral has an improved RED workflow, a new Backburner Monitor, and other, minor, improvements.

Full Audio Support

WiretapCentral now exports and plays back the audio tracks of clips with audio. R3D files are an exception, playing back as normal, but without audio.

Additional WiretapCentral Export Presets

New iPod and iPhone export presets are available for export. See Supported Export Codecs on page 51.

RED Workflow Enhancements

The following RED-specific enhancements are available in WiretapCentral.

General improvements

- Under the Settings tab, a Preview panel is now located below the List View. This panel allows you to preview the RED clip to import as you edit the Format and Color settings. You can also switch between regular (1/8th resolution preview) and full resolution. See Preview Panel on page 52.
- The Resize type/filter controls are now activated when Resize or Crop are enabled. This ensures that proper resize filtering is applied when cropping. There is also a new Debayer setting: 1/16th resolution. See Format Tab on page 53.

Crop

- There is a new Crop function available. It is located in the Settings, in the Format tab. The Preview panel displays a crop box according to the crop settings. See Format Tab on page 53.

RSX support

- You can now load a file's RSX look, as created in RedAlert, if it resides in the same folder as the R3D file. The Camera look is still loaded by default. See Color Tab on page 56.

Colour Space

- PDLog 685 and PDLog 985 colour spaces for film-like workflows are now available.

Improved Media Selection

- You can use the Mark In and Mark Out buttons to define In and Out points. See Preview Panel on page 52.
- It is now possible to manually relink an event in an XML or EDL to an R3D file if Source Search fails. See Importing FCP XML on page 57 and Importing the EDL on page 60.

Backburner Web Monitor in WiretapCentral

The Backburner Web Monitor available from WiretapCentral is now comparable in features as the stand-alone Backburner Web Monitor. The following features are now available in the Backburner Monitor from WiretapCentral.

The top of the Web Monitor has been updated to include basic Backburner server information. A Refresh button is also available to refresh the list of Backburner managers.

Job Information

The Jobs list includes the ability to filter by job name. And the Job Details panel has undergone the following changes.

- **Modify server or server group assignments** In the Job Details panel, there is now a new Server Assignment tab that allows you to remove or add individual servers from a job, or to select a server group to assign to a job.
- **View and edit advanced job information and parameters** Some applications submit Backburner jobs with extended instructions for the processing engine. The Job Details panel now includes this information on the Advanced Info tab. You can view and modify these extended instructions.
- The job name and type are now more visible, having been relocated to the top of the Job Details panel.

Server Information

You can now delete servers directly from the Servers list. The list now includes:

- A performance index for each server
- A description of the server

There is a new Server Details panel that you can use to manage and edit the settings of each server. The new Server Details panel allows you to view extended information about each server. You can also use it to edit the server description and weekly scheduling.

Server Groups

In previous versions, the Server Groups panel would only show a list of existing server groups. The new Server Groups tab allows you to create, modify, and delete server groups.

Manager Information

Use the new Manager tab to view and edit manager-specific functions, including logging and notification, job assignment, failures, and job handling.

Other Improvements

Use these small improvements to help in your day-to-day use of WiretapCentral:

- In WiretapCentral, selecting an option in the Import menu opens a new browser window. This allows you to launch several imports at the same time.
- In the Import Image menu of Flint, selecting RED or Multi-Channel Open EXR, and then clicking WiretapCentral, opens the corresponding WiretapCentral Import window in the web browser. WiretapCentral also set as a destination the project and the workstation from which the import is launched.
- The Tree view in WiretapCentral has been streamlined. It is easier to read, and a stopwatch appears every time WiretapCentral is processing something, such as when reading a directory to display its contents.

- A new Play button is available to the Input list of the Export panel. Clicking Play displays a player with the clip details.

Input/Output Improvements

Getting your clips in and out of the application continues to improve with support for new formats.

DNxHD Support in MXF

The application now supports the DNxHD codec in an MXF wrapper. See Supported DNxHD MXF File Codecs on page 63.

New XDCAM Codecs

The application now supports the Sony™ XDCAM EX and XDCAM HD422 codecs. See Supported XDCAM File Codecs on page 64.

Support for HDCAM SR Double-Speed and Stereoscopic Tapes

It is now possible to input material from double-speed and stereoscopic tapes read by an HDCAM SR. See HDCAM SR Double-Speed and Stereo Tape Capture on page 65

Creative Tools

3

Topics in this chapter:

Generating Keyframes Based on Audio Analysis

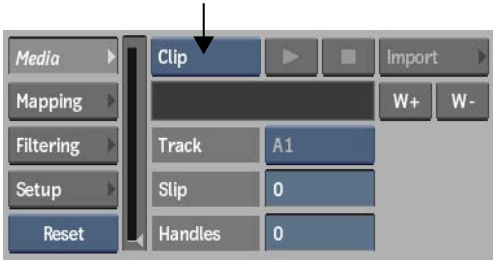
New for this release: In the Channel Editor, you can use an audio clip to automatically generate keyframes on any video or audio channel based on the analysis of the audio.

To map keyframes based on audio analysis:

1 In the Channel Editor, select the Audio tab.

NOTE The Audio menu has a number of submenus with various settings. You may not need to use every setting to analyse your audio clip. See the sections after this procedure for an explanation of each setting.

2 From the Media Source box, select whether you want to analyse the current audio clip (Clip) or import an audio clip (File).



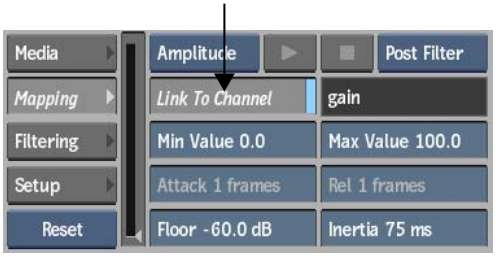
If there is more than one audio clip associated with your choice (for example, Front, Back, or Matte), you can choose which one to use in the Name box. If only one audio clip is available, the name of the clip appears in a locked field.

If you select File, click Import to open the Import Audio browser, and select an audio file to import.

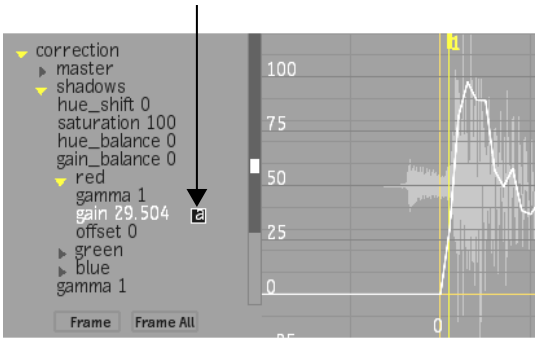
3 In the Channel hierarchy, select the channel or channels you want to link the audio to.

4 Use the settings in the Media submenu to prepare the audio track you want to use. See Media Settings on page 17.

5 From the Mapping submenu, enable Link To Channel.



The letter 'a' appears next to the channel in the Channel hierarchy, indicating that this channel is linked to the audio.



6 Use the settings in the Mapping submenu to determine how the audio track is mapped to the selected channel. Keyframes are adjusted automatically as changes are made to the settings. See Mapping Settings on page 18.

7 Use the settings in the Filtering submenu to filter the exact frequencies you want to analyse. Keyframes are adjusted automatically as changes are made to the settings. See Filtering Settings on page 20.

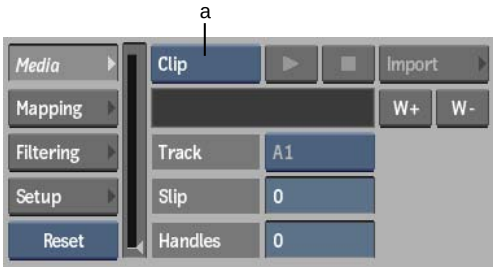
8 Disable Link To Channel or exit the module when you are satisfied with the analysis. The generated keyframes are automatically baked to the animation curve.

You can use different audio tracking settings on different channels. Disable Link To Channel and select a different channel in the hierarchy and restart the mapping process.

NOTE If you want to be able to tweak the settings, you can save the analysis settings in an audio tracker setup.

Media Settings

The following settings are available in the Media submenu.



(a) Media Source box

Media Source box Select whether to analyse the current audio clip (audio attached to the front, back, or matte clips, for example), or the imported audio file.

Play button Plays the audio media. This button is present in the Media, Mapping, and Filtering submenus.

Stop button Stops the audio playback. This button is present in the Media, Mapping, and Filtering submenus.

Import button Opens the import audio browser to load a file.

Clip Name box If multiple audio clips are available, select which clip to use as source media. If only one audio clip is available, the name of the clip appears in a locked field.

W+ button Displays the selected media's waveforms in the Channel Editor.

W- button Hides the waveform.

Track box Select which audio track to use as source media.

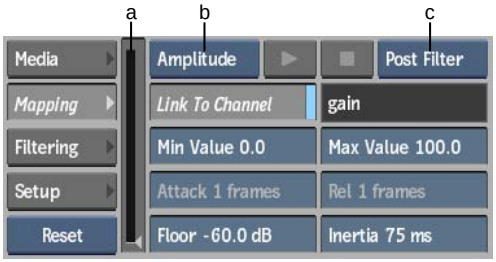
Slip field Displays the number of frames by which to slip the media.

Handles field Displays the number of handles (frames) to analyse before and after the current shot duration. For example, with a shot of 100 frames, if you enter 30 in this field, the total number of frames becomes 160 (30 frames before and 30 frames after the original 100 frames).

Reset box Select Reset to reset the Media submenu settings only. Select Reset All to reset all of the Audio tab settings.

Mapping Settings

The following settings are available in the Mapping submenu.



(a) Audio Level Indicator (b) Tracking Mode box (c) Listening Mode box

Tracking Mode box Select the tracking mode. In Amplitude tracking mode, a keyframe is generated at each frame, following the envelope of the audio signal. In Transient tracking mode, a keyframe is generated for each audio transient (sudden rise in amplitude), provided that the signal rises above the specified threshold.

Listening Mode box Select Pre Filter (the audio as it was imported) or Post Filter (the audio with any changes made) monitoring when playing back the audio media. This setting does not affect the analysis.

Link To Channel button Enable to map the tracked audio to the selected animation channel. An 'a' appears in the Channel hierarchy next to the name of the linked channel. Multiple channels can be selected simultaneously.

Channel Name field This locked field displays the name of the selected channel being linked to the tracked audio. Multiple Channels is displayed if more than one channel is selected.

Min Value field Displays the minimum value at which keyframes can be set in the linked channel.

Max Value field Displays the maximum value at which keyframes can be set in the linked channel.

NOTE The minimum value can be higher than the maximum value to get an inverse mapping of the tracking mode in the animation channel.

Attack field Displays the number of frames needed for the channel to reach the Max Value before a transient. Available only in Transient tracking mode.

Release field Displays the number of frames needed for the channel to reach the Min Value after a transient. Available only in Transient tracking mode.

Threshold field (not shown) Displays the value at which a keyframe is generated each time the signal rises above it. Available only in Transient tracking mode.

TIP Start with a high threshold, and lower it until all required peaks are detected.

Floor field Displays the minimum level of the audio media to be considered for the analysis. This setting is typically used to remove analysis noise between audio transients. Available only in Amplitude tracking mode.

Inertia field Displays the rate at which the signal decreases after a transient. In Transient tracking mode, the Release field can be increased to avoid the generation of several consecutive keyframes when the transient is not clearly defined in the input signal. Conversely, if the Release field is set to 0 ms, each transient rising above the threshold generates a keyframe, even if each occurs within a few milliseconds of another.

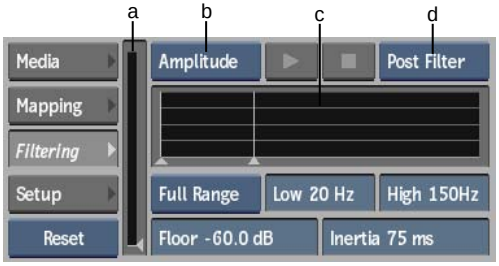
Audio Level Indicator A visual representation of the audio level and the current Threshold or Floor value.

Reset box Select Reset to reset the Mapping submenu settings only. Select Reset All to reset all of the Audio tab settings.

NOTE Some of the settings in the Mapping submenu are repeated in the Filtering submenu so that you do not to have to switch tabs to change the settings. The same settings are reflected in both submenus.

Filtering Settings

The following settings are available in the Filtering submenu.



(a) Audio Level Indicator (b) Tracking Mode box (c) Frequency Graph (d) Listening Mode box

Tracking Mode box Select the tracking mode. In Amplitude tracking mode, a keyframe is generated at each frame, following the envelope of the audio signal. In Transient tracking mode, a keyframe is generated for each audio transient (sudden rise in amplitude), provided that the signal rises above the specified threshold.

Listening Mode box Select Pre Filter (the audio as it was imported) or Post Filter (the audio with any changes made) monitoring when playing back the audio media. This setting does not affect the analysis.

Frequency Graph A visual frequency representation of the audio signal being tracked. The audio display is always Pre Filter.

Frequency Range Preset box Select a frequency range preset to determine the cutoff frequencies for Low and High filters.

Low field Displays the lowest frequency of the input signal used in the analysis (also represented by a slider under the frequency graph). Use the slider or field to adjust the low value.

High field Displays the highest frequency of the input signal used in the analysis (also represented by a slider under the frequency graph). Use the slider or field to adjust the high value.

Threshold field (not shown) Displays the value at which a keyframe is generated each time the signal rises above it. Available only in Transient tracking mode.

TIP Start with a high threshold, and lower it until all required peaks are detected.

Floor field Displays the minimum level of the audio media to be considered for the analysis. This setting is typically used to remove analysis noise between audio transients. Available only in Amplitude tracking mode.

Inertia field Displays the rate at which the signal decreases after a transient. In Transient tracking mode, the Release field can be increased to avoid the generation of several consecutive keyframes when the transient is not clearly defined in the input signal. Conversely, if the Release field is set to 0 ms, each transient rising above the threshold generates a keyframe, even if each occurs within a few milliseconds of another.

Audio Level Indicator A visual representation of the audio level and the current Threshold or Floor value. In Transients tracking mode, the arrow turns red to indicate a peak.

Reset box Select Reset to reset the Filtering submenu settings only. Select Reset All to reset all of the Audio tab settings.

NOTE Some of the settings in the Filtering submenu are repeated in the Mapping submenu so that you do not to have to switch tabs to change the settings. The same settings are reflected in both submenus.

Setup Settings

The following settings are available in the Setup submenu.

Load button Click to load a saved audio mapping setup. The name of the loaded setup is displayed in the Name field.

Save button Click to save an audio mapping setup.

Using 3D Text Presets

New for this release: To help take some of the complexity out of creating 3d text effects, a new library of 3d text presets is available from within Action. You can use the presets as is, or as a starting point to explore 3d text and create custom effects.

A number of 3d text presets are included in Action, such as rotating or fading text to add to your scene. These presets can help you add complex text effects with just a few clicks.

Some of the presets include 3D Path objects, which are unsupported in Flint. These 3D Path objects are displayed as greyed out nodes in the schematic, and greyed out menus in the Object menu. They are read-only objects that can be viewed (in the image window and the Object menu), but not modified or linked to or from. In Channels view, you can view the parent channel for the 3D Path object, and in Tracks view, you can slide or stretch the parent channel.

To add a 3d text preset:

1 Do one of the following:

- Drag the Presets node from the node bin and place it in the schematic.
- Drag the Presets node from the node bin and place it where you want it in Result view.
- Double-click the Presets node. You do not need to be in Schematic view to add a node in this manner.

The file browser opens.

2 From the Preset Type box, select 3D Text.

The 3D Text Preset file browser appears, pointing to the default location of the presets: *usr/discreet/<product home>/3d_text_presets*.

3 Optional: Enable Scale to Action Resolution to load the preset in the current Action resolution.

4 Optional: Select which rendering settings to enable or disable in the preset (Z-Buffer, Shading, Polygon Resolution, and Colour Clamping).

NOTE These settings are enabled by default, and by disabling any of them, you may not see the intended results in the preset.

5 Navigate through the subfolders and select the 3d text preset you want to load. Hold **Ctrl** and click to select multiple presets.

TIP Switch to Proxies view to see a visual representation of the presets.

6 Click Load.

The 3d text preset is then appended to your Action scene. In the 3D Text menu, you can change the default text string of the preset.

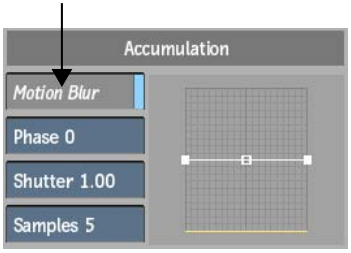
For a listing and description of all available 3d text presets, see the *3D Text Presets Reference Guide*, available at *http://www.autodesk.com/flint-documentation-2010extension*.

Applying Motion Blur

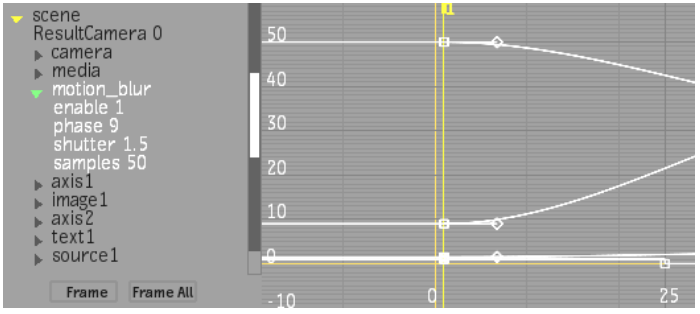
New for this release: You are now able to add keyframes and animate the Motion Blur button, as well as the Phase, Shutter, and Samples fields. The following example displays Action motion blur settings, but the Garbage Mask and Wipe motion blur settings are similar.

Use the Motion Blur tool to simulate the blur created by fast-moving objects. Motion Blur is used with both the normal and physical cameras.You can apply motion blur globally (to the entire scene) and then exclude objects in the scene from its effect.

To use motion blur, enable the Motion Blur button in the Action Setup menu and specify motion blur settings.



You can animate the Motion blur button, as well as the Phase, Shutter, and Samples fields. They can be found in the Channel Editor under the *motion_blur* folder.



Technical Tools

4

Topics in this chapter:

Saving, Loading, and Importing

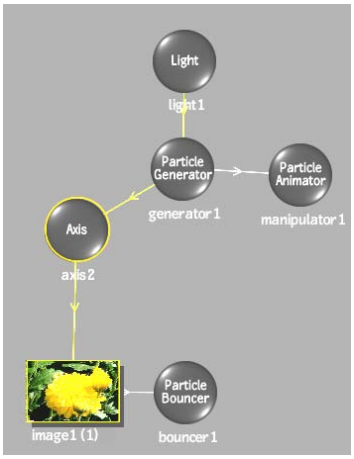
New for this release: You can now save selected nodes in the Action schematic, and to help keep your Media list clean when using the Add Nodes+Media load option, media from the setup file fills empty slots in the Media list. See the following procedures for saving and loading Action setups.

You can save, load, and delete Action setups, and import Photoshop files into Action.

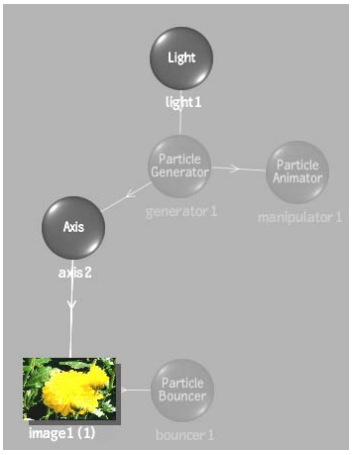
When loading a DVE setup from a previous version of Fire or Smoke, Action translates the elements to create a comparable scene. For example, in a saved DVE setup, if the front axis of a layer is not modified, it is not created by default in Action.

When importing a setup that contains non-supported objects (such as particles and deformations in Smoke), these objects are displayed as greyed out nodes in the schematic, and greyed out menus in the Object menu. These greyed out objects are read-only objects that can be viewed (in the image window and the

Object menu), but not modified or linked to or from. In Channels view, you can view the parent channel for the non-supported object, and in Tracks view, you can slide or stretch the parent channel. If you modify the setup and resave it, you can then open it in the application that supports the objects, and modify all objects.



Schematic of Inferno, Flame, or Flint setup



Schematic of same setup opened in Smoke

To save an Action setup:

1 Click Save.

The file browser and Save menu appear.

2 From the Save Action box, select the format for saving the setup.

Select:	To save:
All	References to all clips in the Media list.
Selected Objects	The selected objects, their media and media settings. Any expressions on channels of selected nodes are baked to the channels before saving, and any Duplicate or Reentry links to or from non-selected nodes are removed before saving. If a node is selected that is duplicated

Select:	To save:
	from a non-selected node, though, the animation channels are copied from the node before saving.
Raw	Selected animation channels as a user-readable ASCII file. In the file, each line corresponds to one frame, and each column consists of one frame number and the value of the animation curve at that frame. All saved information starts at frame one. A file with the extension *.raw* is saved in the *.../action* directory by default. At least one channel must be selected in the Channel Editor.
Text	The current text settings, including font, character size, kerning, italics, depth, beveling curve, and text string properties, all of which can be loaded in another Action session. A file with the extension *.atext* is saved in the *.../action* directory by default. A 3D text node must be selected in the schematic.
Preferences	The current Action settings as user preferences. A file with the extension *.pref* is saved in the */usr/discreet/user/<product_name>/<user_name>/action/pref* directory.
Defaults	The current Action preferences as Action's new default settings. To restore Action's factory default settings, select Factory Defaults in the Load menu.
Multitrack	A multilayer setup for all Action media and save a multitrack clip in the current library.

3 Type a name for the setup file and click Enter.

The name appears in the Name field.

By default, the setup is saved in the */usr/discreet/project/<project_name>/action* directory. Using the file browser, you can save setups to the directory of your choice.

4 Once you have saved an Action setup, you can quickly resave it by clicking Save again.

TIP Click Revert to revert to the last saved setup. All changes made since the previous Save operation are undone.

To load a setup in Action:

1 Click Load.

The file browser and Load menu appear.

NOTE When you access the file browser through Load, you also have the option of deleting existing setups.

2 In the Load box, select the format for loading the setup.

Select:	To:
All	Load the clips in the selected setup into their corresponding media. The media in the Media list is replaced with the loaded clips. If a clip cannot be found on the Desktop, Action searches for it in the clip library and loads it automatically to Action and to the Desktop. If the clip still cannot be found, Action displays the missing clip name in red in the Media list. A surface that uses a missing clip appears as an outline in the image area and is shown in red in Schematic view.
No Clips	Load a setup without its clips. The current media in the Media list remains the same.
Add Nodes+Media	Add nodes and media from the setup file. This option appends the schematic from the setup file to the current schematic, and wherever possible, media from the setup file fills empty slots in the Media list. Remaining media from the setup file is appended to the end of the Media list. Enable Load Cameras if you want to include the cameras saved with the setup.
Add Nodes	Add only the nodes from the setup file. This option appends the schematic from the setup file to the current schematic. Not supported when loading a DVE setup from previous releases of Smoke or Fire. Enable Load Cameras if you want to include the cameras saved with the setup.
Multitrack	Load a multitrack setup. Loads front, matte, back, and background video tracks from an entire clip. Replaces all media.

Select:	To:
Raw	Load raw animation data to a selected channel in the Channel Editor.
Text	Load the text setup files. The text settings are loaded into Action's Text menu.
Preferences	Load a file containing Action preferences.
Factory Defaults	Load original Action default settings. Selecting this option prompts you to confirm that you want to restore factory defaults and returns you to the Action menu.

3 Click Context to filter the file types listed in the browser.

Only the files types that correspond to the selected load option are listed in the browser.

4 Select the setup you want to load.

NOTE Sample Action setups are provided in the *~/examples/action* directory.

5 Click Load.

The selected setup is loaded into Action.

To delete an Action setup:

1 Click Load.

The file browser and Load menu appear.

2 Enable Delete.

3 In the file browser, select the setup you want to remove.

4 Click Confirm.

Creating Coloured Frames

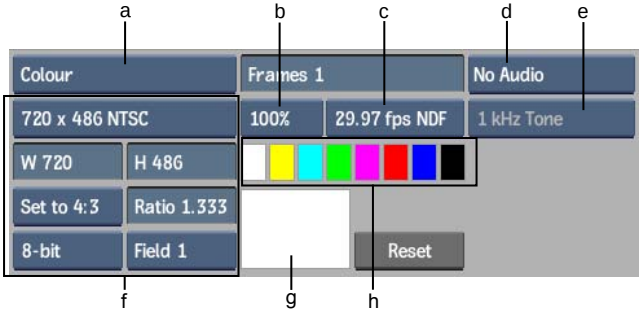
New for this release: Create two or four colour gradient patterns with the Coloured Frame command or the Coloured Frame node in Batch.

Use the Coloured Frame command to generate a clip that contains one or more identical frames of a solid colour, a gradient of two or four colours, or SMPTE or PAL colour bars at 75% or 100% luminance.

To create coloured frames:

1 Click Coloured Frame in the Processing menu.

The Coloured Frame menu appears.



(a) Frame Mode box (b) Luminance box (c) Frame Code Mode box (d) Track box (e) Frequency box (f) Resolution settings (g) Current colour pot (h) Colour palettes

2 Select the type of frame to generate from the Frame Mode box.

Select:	To generate frames of:
Colour	A solid colour.
Noise	Video static noise.
Colour Noise	Colour video static noise.
SMPTE Bars	SMPTE standard colour bars.
PAL Bars	PAL standard colour bars.
Gradient	A two- or four- colour gradient.

3 Specify the number of frames that you want to generate in the Frame number field.

4 From the Luminance box, select 75% or 100% luminance (not available for Gradient frames).

5 From the Frame Code Mode box, select the framerate and drop frame mode for your colour source clip.

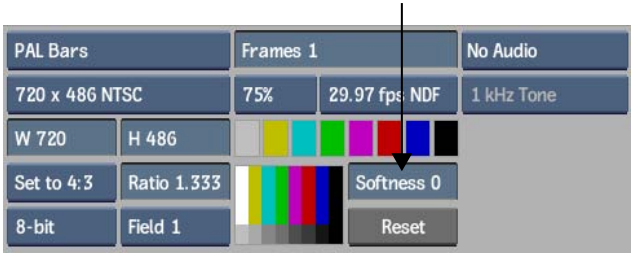
6 To generate audio with the clip, select the number of audio tracks from the Track box and then select a frequency from the Frequency box.

NOTE Selecting Silence in the Frequency box creates audio tracks with a flat waveform.

7 If the Frame Mode is set to Colour, set the colour to be used for the frames in the Current Colour pot. Perform one of the following:

- Click one of the colour pots to transfer that colour into the Current Colour pot.
- Click the Current Colour pot to create the current colour.

8 If the Source Type is set to SMPTE or PAL Bars, enter a value in the Softness field to display the softness between the colour bars.



9 If the Source Type is set to Gradient, use the Gradient tools to create a two- or four- colour gradient. See the following procedure.

10 Optional: Change the resolution. By default, the result clip has the same resolution as the project default resolution. To specify an alternative resolution, use the Resolution settings.

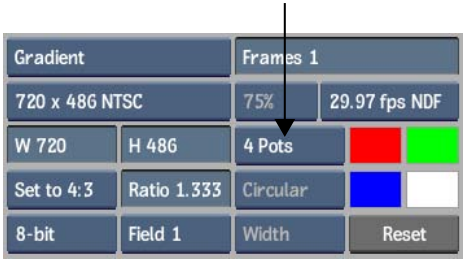
11 Select the destination reel.

The generated clip appears on the destination reel.

To create a gradient clip:

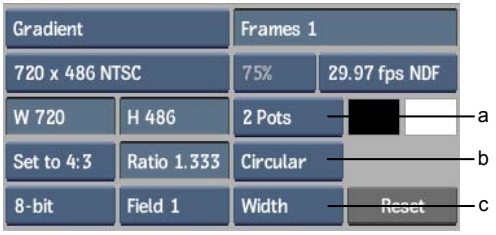
1 From the Source Type box, select Gradient.

2 From the Gradient Mode box, select whether you want to create a two-colour or four-colour gradient.



3 If you selected 4 Pots in the Gradient Mode box, use the four colour pots to select the colours representing the four corners of the image.

4 If you selected 2 Pots in the Gradient Mode box, use the two colour pots to select the gradient colours and then set a pattern of Horizontal, Vertical, or Circular in the Gradient Pattern box.



(a) Gradient Mode box (b) Gradient Pattern box (c) Circular Mode box

5 If you selected Circular in the Gradient Pattern box, you can set how the gradient is drawn in the Circular Mode box. The gradient is drawn from the centre of the image using the maximum width, height, or diagonal length, depending on your choice.

6 Select the destination reel for the generated gradient clip.

Auto Stabilize Node

New for this release: You can now quickly identify and correct stabilization issues with the new Auto Stabilize Batch node.

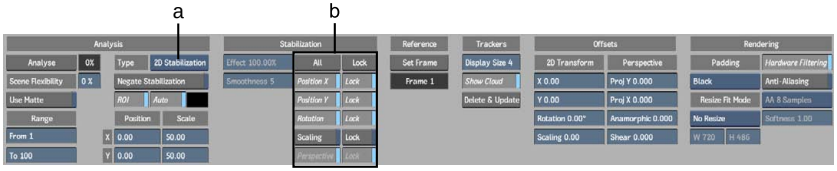
Use the Auto Stabilize node to analyse the movement in a clip and remove camera instability. For example, you can remove camera jitter or lock an object's position over a sequence of frames to make it appear motionless. Attach a front clip to this node to analyse its movement. Matte input can be attached to this node to create an output matte, or to use black pixels on the

matte to exclude areas from the stabilization algorithm. Use the parameters in the Auto Stabilize menu to refine the stabilization.

You can use the Negate Stabilization feature to apply the inverse transformation to the input. For example, you can apply a stabilization analysis to a clip and connect the output to a Paint node to touch up a portion of it. You can copy the Auto Stabilize node and revert to the motion of the original input.

You can perform a two-dimensional analysis, which takes X and Y position, rotation, and scaling into account. You can select a three-dimensional analysis, which also analyses and compensates for perspective distortion. Select this option to stabilize a flat object moving in three-dimensional space, or if you are stabilizing a pan or tilt camera movement.

The X-axis, Y-axis, rotational, and scaling stabilization curves are calculated during analysis. If a perspective analysis is performed, perspective curves are also calculated. The data from all or a selection of these curves can be applied to the final stabilization of the result clip and output matte.



(a) Stabilization Method box (b) Stabilization Parameter buttons

Analyse button Click to run the stabilization analysis.

Scene Flexibility field Determines the level of focus on rigid objects that move in the clip. If the analysis has no scene flexibility, the stabilization will focus on a single rigid object as it moves in the clip. If the value is set to 100%, all visible motion paths are analysed.

Use Matte button Use the black areas of the matte input to exclude those areas from analysis on the front.

From and To fields Displays the range of frames included in the analysis.

Stabilization Method box Provides options to perform a two-dimensional or perspective analysis.

Negate Stabilization button Enable to apply the inverted parameter values.

Region of Interest (ROI) button Displays a rectangle that can be resized to indicate the region to be analysed on the front clip.

Auto button Enable to automatically track motion within the region of interest. At each frame, the position of the region of interest will be updated

based on the motion within the area. If this button is disabled, and the region of interest was not previously tracked, the region of interest remains static.

X and Y Position fields Displays the centre of the region of interest.

X and Y Scale fields Displays the horizontal and vertical dimensions of the region of interest as a percentage of the total image. When both fields are set to 100, the dimensions of the region of interest and the image are equivalent.

Effect field Displays the percentage of smoothness used in the final stabilization output.

Smoothness field Displays the level of smoothness of the stabilization curves generated by the analysis.

Stabilization Parameter buttons Enable to include a parameter in the stabilization. Enable the Lock button to link the parameter value at the reference frame to all frames in the analysis.

Set Frame button Makes the current frame the reference frame for the stabilization.

Display Size field Displays the pixel width and height of track points.

Show Cloud button Enable to display the track point cloud.

Delete and Update button Deletes selected track points and updates stabilization curves.

2D Transform Offset fields Displays the X and Y position, rotational and scaling offsets applied to the clip. The offset is applied independently of the analysis if the corresponding Stabilization Parameter button is disabled.

Perspective Offset fields Displays the perspective offsets applied to the clip. These fields are enabled after a three-dimensional analysis.

Padding box Provides fill options to pad the empty portions of the frame with the last line of pixels, a repeated (rolled) image, a mirror image, or black pixels.

Resize Fit Mode box Resize the clip with user-defined width and height values.

Width field Displays the width of the image.

Height field Displays the height of the image.

Hardware Filtering Enable the graphics processing unit to filter subpixel information.

Anti-aliasing button Enable to display anti-aliasing.

(AA) Anti-aliasing Sampling box Select the anti-aliasing sampling level.

Anti-aliasing Softness field Displays the level of softness used in anti-aliasing.

To analyse a clip:

1. Enable Use Matte if you want to use the matte to constrain the region of analysis.
2. Select an option from the Stabilization Method box.
3. Enter a percentage in the Scene Flexibility field. The following range of values are recommended.

Select:	To:
0%-20%	Stabilize a pan, tilt, zoom, or the motion of a single rigid object that is visible during the entire analysis.
30%-70%	Stabilize objects that change their shape or depth, and exclude objects that are smaller or moving rapidly.
80%-100%	Stabilize all visible movements.

4. You can enable Region of Interest (ROI) to display a rectangle that constrains the analysis to the region of interest. Enable Auto track motion within the region of interest; at each frame, the position of the region of interest will be updated based on the motion within the area. The rectangle can be resized and animated, and you can use the colour pot to change its colour.
5. In the In and Out fields, enter the range of frames to analyse.
6. Click Analyse.

   During analysis, the viewport defaults to the Front view, and the frame advances as the stabilization is calculated. Progress can be monitored by the keyframes that have been created during analysis and the percentage of completion displayed next to the Analyse button. Track points are displayed on the clip to indicate how the stabilization was tracked.

When the analysis is finished, the stabilization can be customized further using the additional settings in the Auto Stabilize menu. Track points can be deleted to modify the stabilization curve.

To delete track points:

1. Toggle track point selection:
   - Click a track point to select it for stabilization (green) or mark it for deletion (red).
   - **Ctrl**-drag to toggle points within a rectangular area.
   - Press **Ctrl** and either drag or click to toggle additional points and retain other existing selections.
2. Click Delete & Update.

   The red track points are deleted and the stabilization curve is recalculated using the remaining track points.

You can change the centre of rotation and scaling for the image. By default, the centre of rotation and scaling is the centre of the image, represented by a yellow crosshair.

To change the centre of rotation and scaling:

1. Display the Front view (**F1**).

The yellow crosshair appears.

2 Hold down **spacebar+C** and click the new centre point.

Batch Workflow Improvements

5

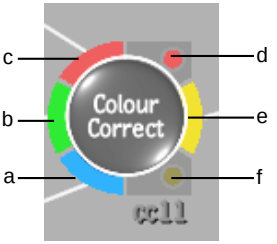
Topics in this chapter:

Connecting Clips and Nodes

New for this release: A number of new shortcuts and hotkeys, including advanced autolinking, help you add and connect clips quickly in the schematic.

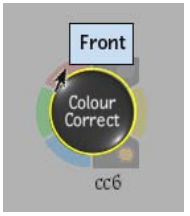
As you add nodes, you connect them to the process tree by linking the result from one node and using it as a source (front, matte, or back) for the next node in the process tree. You can also connect by linking backward from the source of one node to the output of another (to reuse a node's output). Exceptions are the BFX Output, Output, and Export nodes: you cannot link from their result.

To connect nodes, you use the coloured tabs on the node's left side; these tabs are called *source tabs*. The colours of the source tabs correspond with the cursor colours when selecting clips from the Desktop reels. The yellow tab on the node's right side is called the *Result tab*. You use the Result tab of a node to connect its result to the front, back, or matte tab of another node.



(a) Matte tab (b) Back tab (c) Front tab (d) Warning tab (e) Result tab (f) Cache tab

If auto display of tooltips is enabled in the Preferences menu, hover over a tab to see the name of the tab. If you have disabled the auto display of tooltips, press and hold **Alt+Ctrl+spacebar** and hover over the tab.



Node source tabs are described in the following table.

Tab	Colour	Description
Front	Red	Connects a front clip to a node.
Back	Green	Connects a back clip to a node.
Matte	Blue	Connects a matte clip to a node.
Audio	Aqua	Connects a clip with audio to an Output node.
Result	Yellow	Connects the result of a node to other nodes.
Output Matte	Blue	Connects the output matte of a node to other nodes.
Cache	Grey and yellow circle	Enables, disables, or sets cache as read only for the selected node.
Warning	Red circle	Warns that clip input to this node is unconnected or is missing media, or clips parented to this node do not share the same resolution or a compatible bit-depth. A message

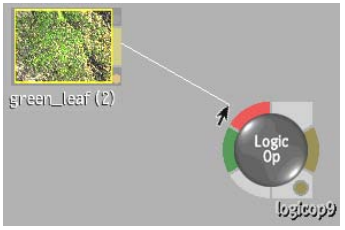
Tab	Colour	Description
		also appears in the message bar (press **Alt**+**E** and mouse over the node to redisplay the message).

The available source tabs depend on the node. If the node accepts a front, back, and matte clip, all coloured source tabs are available. If the node only accepts a front clip, the red source tab is available and the other source tabs are grey. The Result tab is always available, except on the BFX Output, Output, and Export nodes. When a source tab or Result tab is not connected to a clip or to another node, the coloured tabs are dimmed.

There are several ways of connecting clips or nodes together. You can connect them manually or automatically. You can also quickly connect several nodes and clips together using the tap-tap feature.

To connect a clip to a node:

➤ Click the clip and drag the cursor to a source tab on a node. Alternatively, select Parent from the Edit Mode box and drag the cursor to a source tab.



Dragging from a clip to the front tab of a Logic Op

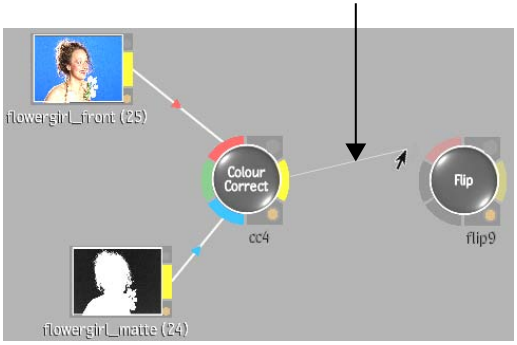
(a) Edit Mode box

An arrowed line is drawn from the clip to the source tab. The colour of the line corresponds to the colour of the source tab to which the clip is connected.

To connect nodes manually:

➤ Click the Result tab of a node whose result you want to use and drag the cursor to one of the source tabs of the next node in the process tree.

An arrowed line is drawn from the node to the source tab. For example, click the Result tab of the Colour Correct node and drag the cursor to the front tab of the Flip node to flip the result of the colour-corrected clip.



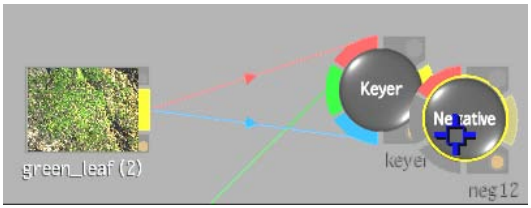
To connect nodes automatically:

1 Use the Autolink feature by pressing **Shift** and dragging a node to another node so their tabs touch.

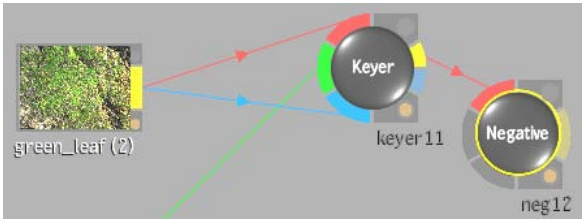
The nodes are connected.

NOTE Using Autolink to connect nodes will not connect an audio input to an Export or Output node.

Action: Press and hold Shift while dragging the Negative node to the Keyer node



Result: The Keyer output is the front for the Negative node

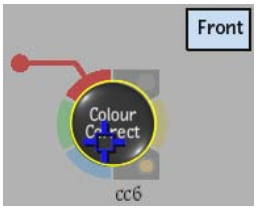


2 To help distinguish between the various source tabs, use the Advanced Autolink feature by pressing **Alt** repeatedly while still holding **Shift** to extend a similarly coloured arm from each source tab (starting with the topmost source tab, and cycling counter-clockwise with each press of **Alt**). The name of the tab is also displayed above the node. You can then touch the extended arm to the tab you want to connect to.

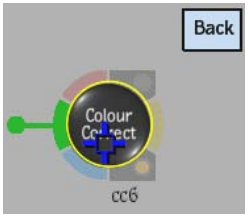
For example, while pressing and holding **Shift** and dragging a Colour Correct node, pressing **Alt** once displays an extended red arm from the Front tab. Pressing **Alt** again displays an extended green arm from the

Back tab; and pressing **Alt** a third time displays an extended blue arm from the Matte tab.

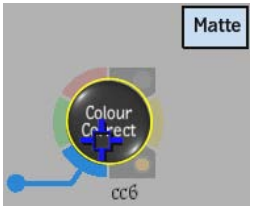
Hold **Shift** and press **Alt** to extend the Front tab.



While still holding **Shift**, press **Alt** again to extend the Back tab.

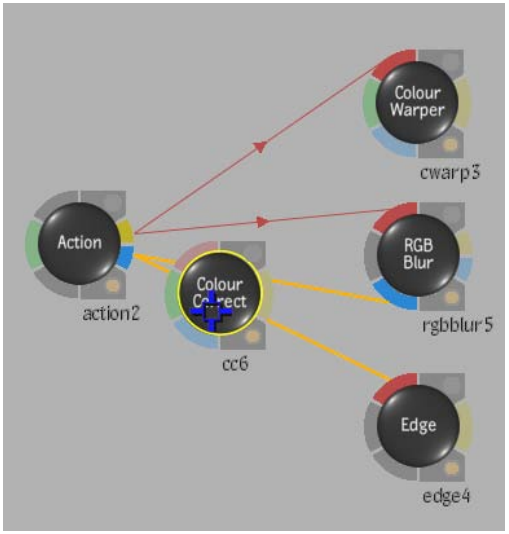


While still holding **Shift**, press **Alt** a third time to extend the Matte tab.



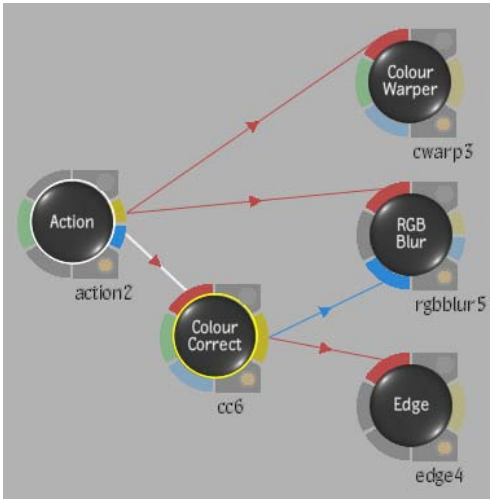
To use Advanced Autolink and retain output links:

1. Drag a node while pressing and holding **Shift**.
2. Optional: Press **Alt** until the desired coloured arm is extended, then release **Alt**.
3. While still holding **Shift**, navigate to the output tabs of the desired node that you want to connect to. Press **Ctrl** and hover over the output links from the node's tabs to highlight them in orange.



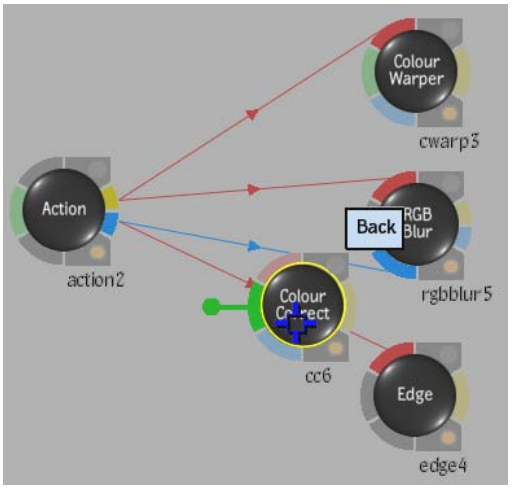
4 When the desired output links are highlighted (signifying that they will be altered by the operation), release **Ctrl** and **Shift**.

The links are disconnected from the original node, reconnected to the main output of the inserted node, and a new link appears between the original output and the chosen input of the inserted node.

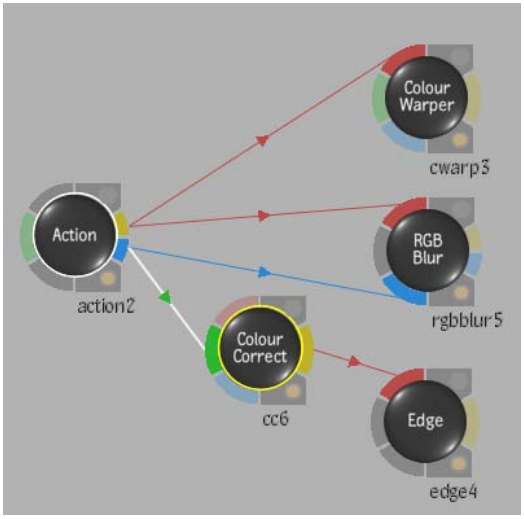


To use Advanced Autolink to insert a node between existing connected nodes:

1. Drag a node while pressing and holding **Shift**.
2. Press **Alt** until the desired coloured arm is extended, then release **Alt**.
3. While still holding **Shift**, navigate to the link between two connected nodes.

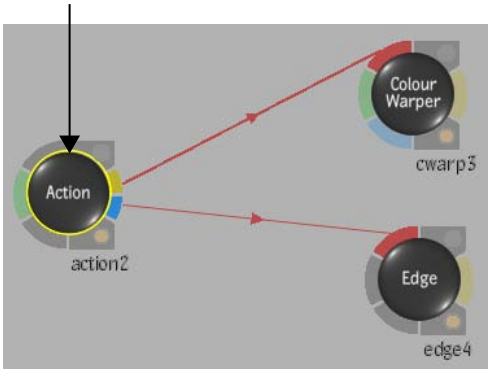


4. Touch the extended arm to the link, and release **Shift**.
   The node is inserted, while retaining the input and output connections.



To add a node from the bin between existing connected nodes:

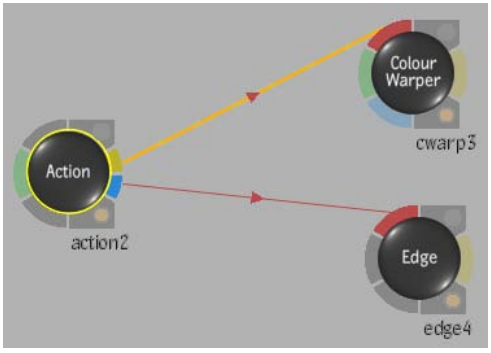
1 Select the node in the schematic that has one or more output links.



2 Hover over the node in the node bin that you want to add.

3 Press and hold **Shift**, then press **Alt** repeatedly to cycle through the output links.

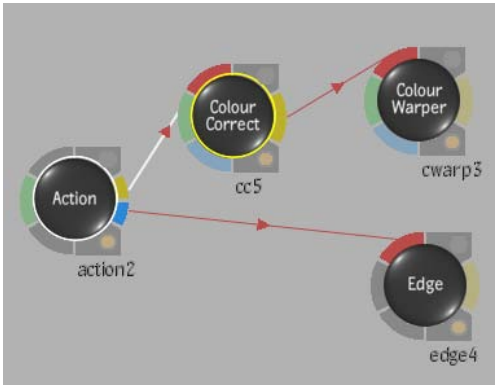
Each press of **Alt** highlights an output link in orange.



4 Release **Alt** when the connection that you want to retain is highlighted.

5 While still holding **Shift**, double-click the node in the bin.

The node is added to the schematic, and is linked automatically between the desired nodes.



If the selected node is connected to multiple inputs, the insertion is done on all inputs. Once connected, the link colour returns to its default colour.

To create a node connection using tap-tap linking:

1. Click the socket of the first node or clip you want to connect.
2. Click the socket of the node you want to connect the first node to.

   The nodes are connected.

NOTE If the first node you click is an Output node, you can add as many subsequent input socket connections as you like. To finish selecting, click anywhere in the schematic work area.

To simultaneously break a connection and add a new input:

➤ Connect the new clip or node's Result tab to the source tab of a node that is already connected to a different source.

The source tab's original link is disconnected and replaced with a connection to the new Result tab.

To disconnect nodes or clips:

1. Drag the cursor across the connecting line between a clip and a node or between two nodes.

   The arrowed line is cut and the source tab is dimmed.
2. You can cut multiple connections in a single stroke by clicking and dragging over several connecting lines in the schematic.

TIP To quickly disconnect a node, press **Ctrl**+**Alt** and click the node to disconnect.

Interoperability Workflow Improvements

6

Topics in this chapter:

Supported Export Codecs

WiretapCentral can export clips in the following formats. New for this release: settings for iPhone™ and iPod® exports.

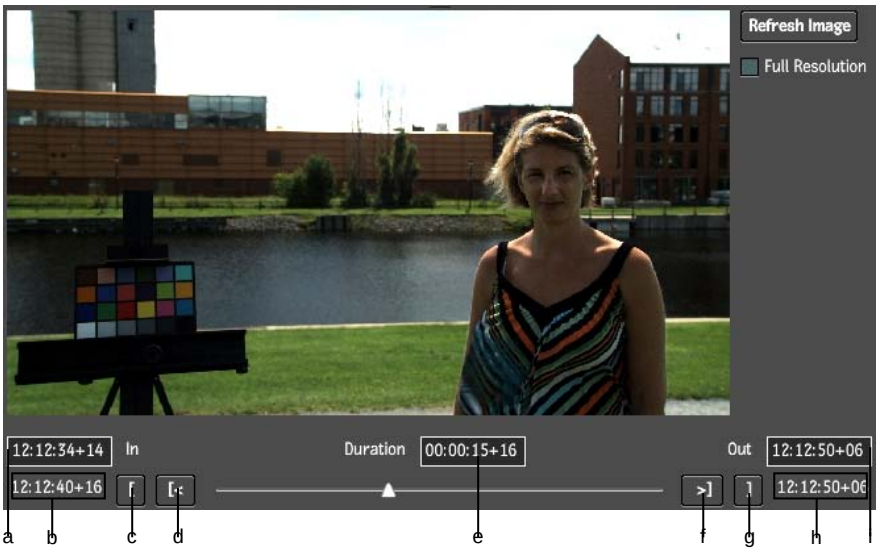
Codec	Comments
H.264	Main, High. Use Main when you want to minimize the use of computing resources. This is the setting used by QuickTime Pro. Use High for broadcast or disc storage at high-definition, such as for HD DVD or Blu-Ray.
iPod Touch/iPhone	H.264 format for iPhone and iPod Touch®

Codec	Comments
iPod 5G	H.264 format for video-capable iPod
MPEG-4	
MPEG-2	
MPEG-1	
FLV	Flash Video
QT Animation	QuickTIme file using the Animation codec
DV (PAL or NTSC)	Raw PAL or NTSC DV stream
MS MPEG-4	Microsoft MPEG-4 version 2

Preview Panel

The new Preview panel allows you to preview the effect of the settings being edited on the selected clip. You can also use the Preview panel to set In and Out markers. These markers define the actual clip to import. They are disabled when importing clips using an FCP XML or an EDL.

The image displayed in the Preview panel is a 1/8th resolution preview. Enable Full Resolution to view the clip at full resolution.



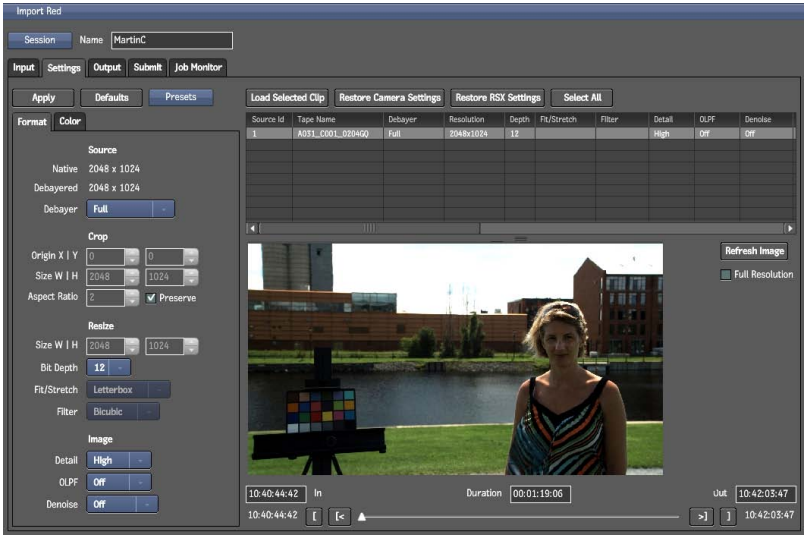
(a) In timecode (b) Start timecode (c) Mark In button (d) Go To In button (e) In-Out duration field (f) Mark Out button (g) Go To Out button (h) End timecode (i) Out timecode

Format Tab

New for this release: A new Debayer setting is available (1/16th of resolution). Also, new Crop settings allow you to crop the image.

Use the Format Settings options to set:

- Resize
- Crop settings
- Debayer quality
- Detail level
- Optical Low Pass Filter options
- Denoise level



Debayer Select the level of quality required from the debayering algorithm. Higher resolutions take more time to process.

Crop Enter the desired Crop settings. Setting crop values displays a matching crop box on the clip displayed in the Preview panel.

Size W | H (Resize) Enter the desired resize settings. A resize setting that is not directly proportional to the size of the original media takes longer to process. Resize settings are automatically applied when Debayer is set to something else than Full.

Bit Depth RED media is 16 bits, but must be converted down to 12, 10 or 8 bits.

Fit/Stretch To use a different aspect ratio during resize, select a fit method option to be applied to the exported clip.

Select:	To:
Centre/Crop	Fit the source image, centred, over the destination frame. If the source is larger than the destination, it is cropped. If the source is smaller than the destination, it is surrounded by a black border.

Select:	To:
Crop Edges	Fit one edge of the source into the destination frame without stretching or squashing the frame. Excess parts of the source frame after resizing are cropped. If the source, after the one edge is resized, is wider than the destination, its overhanging left and right edges are cropped. If the source is taller than the destination, the upper and lower edges are cropped.
Fill	Fit the source, width, and height, into the destination frame. If the source and destination frames do not have the same aspect ratio, the image can become distorted.
Letterbox	Fit the source to the destination frame without squashing or stretching it, and without cropping the source. If the source is wider than the destination, black bars fill the top and bottom of the destination frame. If the source is narrower than the destination, black bars fill the right and left sides of the frame. In all cases, the entire source frame is contained within the destination frame.

Filter Select the filter option to determine the quality of the interpolated resize result.

Select:	To get:
Impulse	Quick, low-quality results.
Triangle	Moderate results with little processing overhead.
Mitchell	Best results when resizing a clip to a higher resolution.
Bicubic	Very good results for resizing soft-looking images. Use to sharpen the image.
Quadratic	Good results for resizing simple images with straight edges. Similar to Gaussian but with more blurring. Use to soften the image.
Gaussian	Excellent results when resizing a clip with no patterns and a lot of straight edges to a lower resolution. Useful for softening some detail.
Shannon	Excellent results when resizing a clip to a lower resolution. Very similar to Lanczos, but results are a little softer.

Select:	To get:
Lanczos	Best results when resizing a clip containing a variety of patterns and elements to a lower resolution. It is the most complex with the longest processing time.

Detail Select the level of detail extraction required.

OLPF Select the level of Optical Low Pass Filter compensation to use. OLPF is a type of sharpening used to compensate for the optical anti-aliasing filter, which can induce softening of the image during recording.

Denoise Select the level of noise reduction applied to the debayered clip.

Color Tab

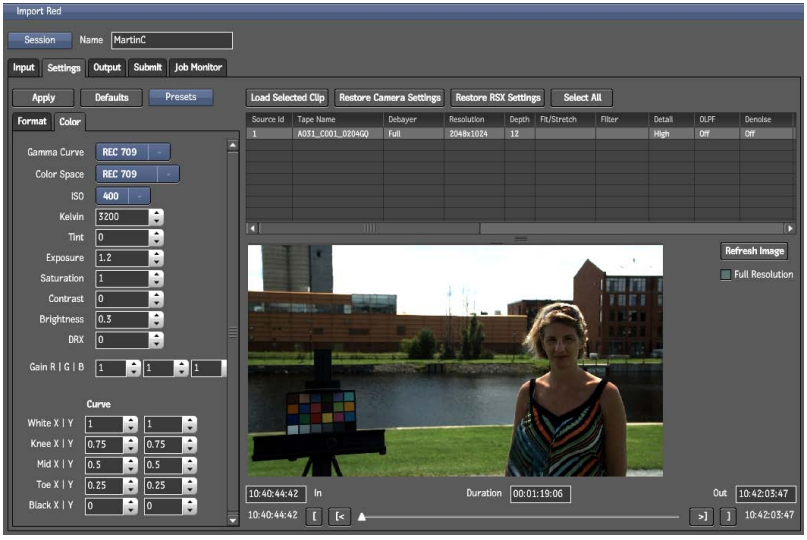
New for this release: RedAlert!™ RSX settings are available, as well as colour spaces PDLog 685 and PDLog 985.

WiretapCentral supports most color options available in RED applications, such as RED Alert!.

The Color Tab displays the settings for the clip metadata, as set in the camera. Alter these settings carefully, since overiding some values may produce unexpected results.

Load the RSX look created in RED Alert! by clicking Restore RSX Settings. The RSX file of a clip must reside in the same folder as the R3D file of that clip; this is the default behavior in RED Alert!.

NOTE The Color tab also contains settings for RGB Gain, as well as Color curve settings. We recommend that you do not change the default settings unless you have prior experience with color management.



Gamma Curve Displays the value of the output gamma curve that is applied to the clips.

Color Space Displays the value of the native color space of the images, as set in the camera.

ISO Displays the value of the linear gain operation. Red images are always shot at 320 ISO.

Kelvin Displays the perceived color temperature of the image.

Exposure Displays the exposure increments, which are equivalent to f-stops.

DRX Displays the setting for Dynamix Range Extension, which sets how much pixel data is copied from non-saturated channels into saturated channels.

Importing FCP XML

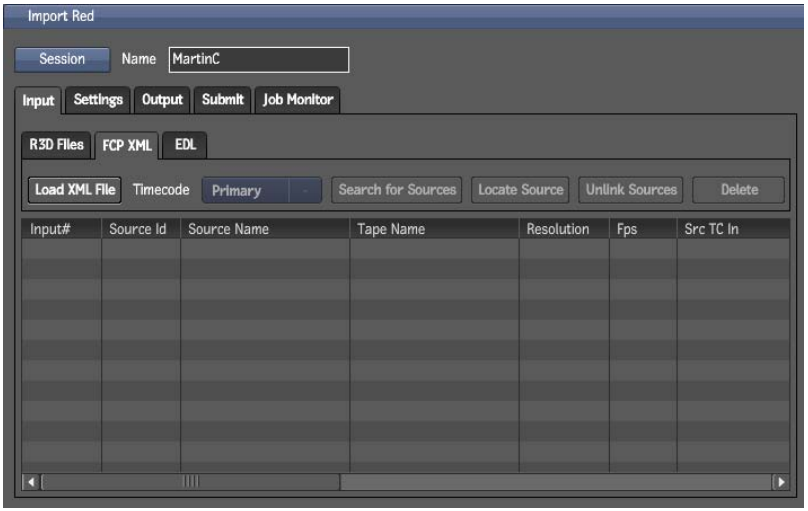
New for this release: If Search for Sources cannot locate a RED file, you can use Locate Source to manually assign a RED file to an event.

RED media can be imported as FCP XML pointing to R3D files.

1 In WiretapCentral, from the Import menu, select Red.
This starts a new import job. The Import Red window appears.

2 Enter a session name. Special characters are prohibited.

The session name identifies your import job when saving or loading a session, and when outputting the job. It is also the job name in Backburner Manager.



3 Optional: Save the session. At any time, you can save a session. From the Session button, select Save or Save As. Use the Session button to load a previously saved Import Red session or delete one.

WARNING Sessions are saved as cookies. Deleting your browser cookies deletes your saved sessions. On Firefox, using the Clear Recent History option deletes the browser cookies.

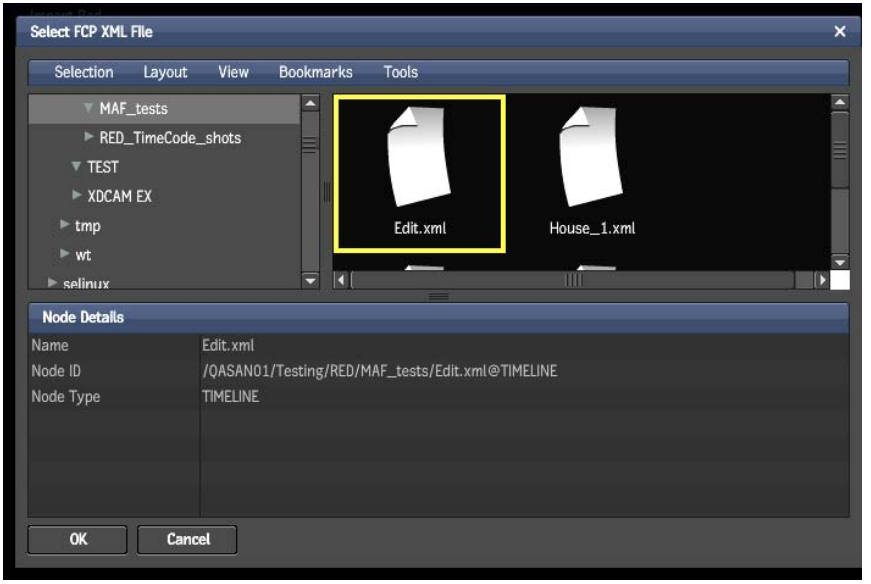
4 Ensure that the Input tab is selected.

5 From the Input tab, select the FCP XML tab.

6 From the FCP XML tab, click Load XML File.

A browser appears.

7 Navigate to the folder containing the FCP XML file to be imported, and select the file.



8 Click OK.

The events from the selected XML file appear in the Input list.

9 Select the Timecode to use.

10 Click Search for Sources to have WiretapCentral search the contents of a folder for the sources. A browser appears.

11 Navigate to the folder containing the R3D files. The files themselves are not displayed.

12 Select the location of the RED media files and click OK. WiretapCentral searches the folder and all subfolders for each clip referenced in the XML.

In the list, the Status of each event with a located source changes from Missing to Found.

13 Optional: For each event with the Missing status:

1 Select the event for which to locate an R3D file.

2 Click Locate Source. A browser appears.

3 Navigate to the R3D file, and select it.

4 Click OK to link the R3D file to the event.

In the list, the Status of the event changes from Missing to Found.

NOTE To verify the timecode used: if the Src TC columns matches either Edgecode or TOD TC (time of day) columns, the clip will be imported using the matching timecode. If it matches neither, the clip will be imported using the primary timecode.

14 When you are ready to proceed, click the Settings tab.

Importing the EDL

New for this release: If Search for Sources cannot locate an RED file, you can use Locate Source to manually assign an RED file to an event.

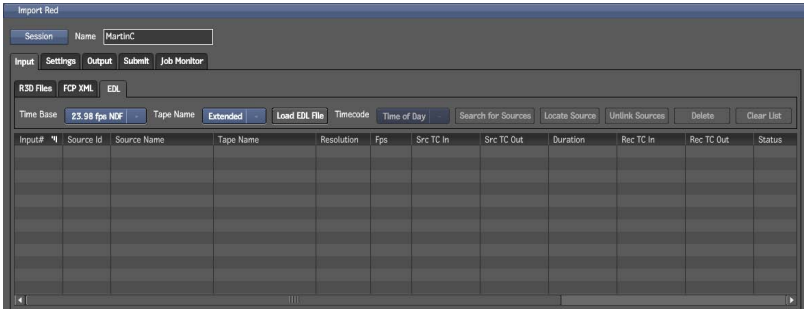
RED media can be imported as generic EDLs containing R3D files. The workflow goes as follows.

1 In WiretapCentral, from the Import menu, select Red.

This will start a new import job. The Import Red window appears.

2 Enter a session name. Special characters are prohibited.

The session name identifies your import job when saving or loading a session, and when outputting the job. It is also the job name in Backburner Manager.



3 Optional: Save the session. At any time, you can save a session. From the Session button, select Save or Save As. Use the Session button to load a previously saved Import Red session or delete one.

WARNING Sessions are saved as cookies. Deleting your browser cookies deletes your saved sessions. On Firefox, using the Clear Recent History option deletes the browser cookies.

4 Ensure that the Input tab is selected.

5 From the Input tab, select the EDL tab.

6 Select the Time Base for your EDL.

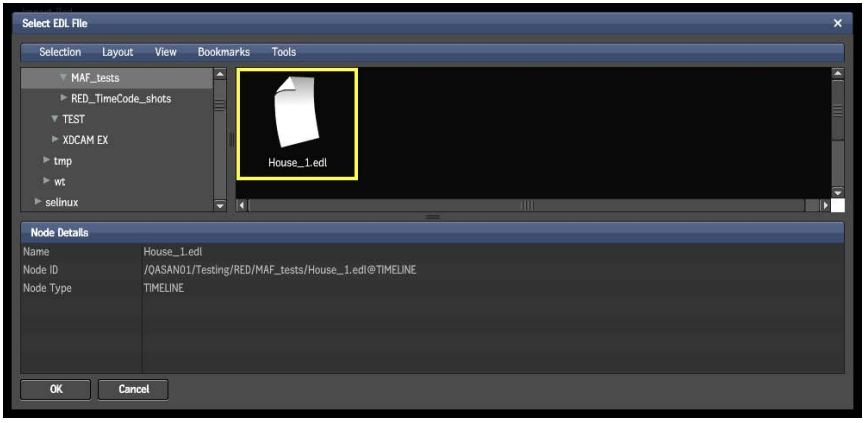
You must manually define the timeline's time base before importing the EDL as the EDL does not this information.

7 Select how Tape Name is written in the EDL.

If there is a tape name conversion, and the original tape name is written below each event, WiretapCentral shows the correct tape name. In the end you must have both the Source Name and Tape Name fields containing the same data.

8 Click Load EDL File. A browser appears.

9 Navigate to the folder containing the EDL file to be imported, and select the file.



10 Click OK.

The events from the selected EDL file appear in the Input list.

11 Select the Timecode to use.

12 Click Search for Sources to have WiretapCentral search the contents of a folder for the sources. A browser appears.

13 Navigate to the folder containing the R3D files. The files themselves are not displayed.

14 Select the location of the RED media files and click OK. WiretapCentral searches the folder and all subfolders for each clip referenced in the EDL.

In the list, the Status of each event with a located source changes from Missing to Found.

15 Optional: For each event with the Missing status:

1 Select the event for which to locate an R3D file.

2 Click Locate Source. A browser appears.

3 Navigate to the R3D file, and select it.

4 Click OK to link the R3D file to the event.

In the list, the Status of the event changes from Missing to Found.

NOTE To verify the timecode used: if the Src TC columns matches either Edgecode or TOD TC (time of day) columns, the clip will be imported using the matching timecode. If it matches neither, the clip will be imported using the primary timecode.

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16 When you are ready to proceed, click the Settings tab.

Input/Output Improvements

7

Topics in this chapter:

Supported DNxHD MXF File Codecs

New for this release: Flint supports the import of Avid® DNxHD MXF files encoded with any of the following codecs.

DNxHD CODEC	CODEC Flag	Comment
DNxHD 220X 1080p	DNxHD 220X	10-bit
DNxHD 145 1080p	DNxHD 145	8-bit
DNxHD 220 1080p	DNxHD 220	8-bit
DNxHD 36 1080p	DNxHD 36	8-bit

DNxHD CODEC	CODEC Flag	Comment
DNxHD 220X 1080i	DNxHD 220X	10-bit
DNxHD 145 1080i	DNxHD 145	8-bit
DNxHD 220 1080i	DNxHD 220	8-bit
DNxHD 220X 720p	DNxHD 220X	10-bit
DNxHD 220 720p	DNxHD 220	8-bit
DNxHD 145 720p	DNxHD 145	8-bit
DNxHD 145 1080i	DNxHD 145	Thin Raster. Resolution of 1440x1080 (NTSC) or 1280x1080 (PAL) at 8 bits.

Supported XDCAM File Codecs

Flint supports import of Sony™ XDCAM files encoded with any of the following codecs. New codecs for this release: XDCAM EX and XDCAM HD422.

XDCAM CODEC	CODEC Flag	File Type	Comment
MPEG-2 IMX 30	IMX 30	MXF	XDCAM
MPEG-2 IMX 40	IMX 40	MXF	XDCAM
MPEG-2 IMX 50	IMX 50	MXF	XDCAM
MPEG-2 long-GOP	XDCAM HD	MXF	XDCAM HD (4:2:0)
MPEG-2 long-GOP	XDCAM HD422	MXF	XDCAM HD (4:2:2)
MPEG-2 long-GOP	XDCAM EX	MP4	XDCAM EX

HDCAM SR Double-Speed and Stereo Tape Capture

Using an HDCAM SR, you can capture material from specially formatted double-speed and stereoscopic tapes.

Double-speed tapes allows you to capture material twice as fast. Stereoscopic tapes essentially stores in an interlaced timing two progressive clips; a 60i (50i) “clip” contains two 30p(25p) clips.

This feature does have the follwoing limitations:

- To use this feature, you must use specially formatted tapes. If you insert a regular tape in the HDCAM SR and try to capture it as double-speed or stereoscopic material, the capture fails.
- Audio monitoring is not available during capture.
- When capturing stereo tapes, only audio channels 1 through 8 are avaialble.

To capture material recorded at double-speed:

1. Ensure that the HDCAM SR is connected to the AJA card using a dual-link.
2. Set the HDCAM SR VTR to DBL 422.
3. From the Device Name box, select the HDCAM SR VTR.
4. From the Tape Type box, select 2x-DOUBLE.

   In the Input Clip menu, the clip is displayed with a strong yellow bias. This is normal; the captured clip will not have this yellow bias.

5. Capture the clip.

To capture material recorded on stereoscopic tapes:

1. Ensure that the HDCAM SR is connected to the AJA card using a dual-link.
2. Set the HDCAM SR VTR to 2X 422.
3. From the Device Name box, select the HDCAM SR VTR.

4 From the Tape Type box, select 2x-STEREO.

In the Input Clip menu, the clip is displayed with a strong yellow bias. This is normal; the captured clip will not have this yellow bias.

5 Capture the clip.

The stereoscopic material is captured as two clips and named according to the Clip Name field. But to differentiate the clips, one has the A suffix, and the other has the B suffix.