



Late-Breaking News About Compressor 2

This document provides updated information about Compressor 2 and covers these topics:

- Late-Breaking News About Compressor 2.3.1 (p. 2)
- Previous Release Information About Compressor 2.3 (p. 2)
- Corrections to the Compressor 2 User Manual (p. 6)
- Previous Release Information About Compressor 2.1 (p. 13)
- Previous Release Information About Compressor 2.0.1 (p. 19)
- Previous Release Information About Compressor 2.0 (p. 20)

This document may be updated as versions of Compressor are released or new information becomes available. You can check for updated information by choosing Help > Late-Breaking News when Compressor is open.

For the latest information about product updates, tips and techniques, and qualified third-party devices, choose Compressor Support from the Compressor Help menu or visit the Compressor support website at <http://www.apple.com/support/compressor>.

To receive automatic notification about new support issues, use Safari to bookmark the AppleCare RSS page at <http://docs.info.apple.com/rss/compressor.rss>. See Safari Help for more information about configuring RSS feeds.

There is no late-breaking information about Compressor 2.2, which was not released to the public.

Late-Breaking News About Compressor 2.3.1

Compressor 2.3.1 addresses compatibility issues. This update is recommended for all Compressor 2.3 users.

Mac OS X v10.5 Leopard Support

Compressor 2.3.1 addresses Mac OS X v10.5 compatibility issues for customers using Compressor 2.3.

Using Compressor Distributed Processing with Mac OS X Server v10.5

To use the Compressor distributed processing feature with Mac OS X Server v10.5 Leopard, you must manually enable NFS.

To enable NFS for Mac OS X Server, do one of the following:

- Use the Server Admin application to enable NFS. For additional information, see Mac OS X Server Help.
- In the command line, enter the following:

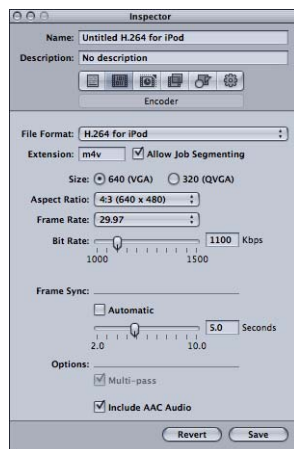
```
qmaster$ sudo nfsd enable
```

Previous Release Information About Compressor 2.3

Compressor 2.3 addresses performance issues and improves stability. This update is recommended for all Compressor 2.1 users.

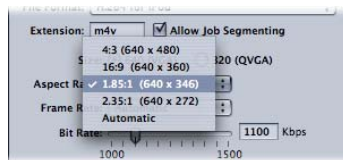
iPod Video Support

Compressor 2.3 adds compatibility with new options for transcoding to iPod-compliant H.264 files. This section contains detailed information about the various controls within the H.264 for iPod Encoder pane of the Inspector window. The information in this section replaces information that was released with Compressor 2.1 about the H.264 for iPod Encoder pane.



You make your H.264 for iPod settings using the controls described below, either by duplicating an existing setting and modifying it or by creating a new setting in the Settings tab of the Presets window. The H.264 for iPod Encoder pane contains the following items:

- *Extension*: This field displays the H.264 for iPod file extension (.m4v) automatically after the H.264 for iPod output format is chosen from the File Format pop-up menu or the (+) pop-up menu in the Settings tab of the Presets window.
- *Allow Job Segmenting*: This checkbox allows you to turn off job segmenting. It is relevant only if you are using Compressor with distributed processing *and* with multi-pass encoding. (The Compressor 2 distributed processing feature is limited to computers that have either Final Cut Studio or DVD Studio Pro 4 installed.) For more information, see “Encoder Pane” on page 43 of the *Compressor 2 User Manual*.
- *Size*: Select one of the following size options:
 - *640 (VGA)*: This option creates video output files with a frame width of 640 pixels.
 - *320 (QVGA)*: This option creates video output files with a frame width of 320 pixels.
- *Aspect Ratio*: Use the Aspect Ratio pop-up menu to choose the exact pixel dimensions of the output media file. The available options depend on which size option (640 or 320) you selected.



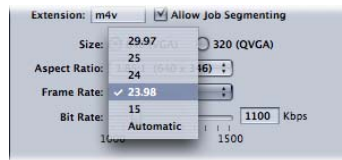
The following choices are available in the Aspect Ratio pop-up menu:

640 (VGA)	320 (QVGA)
4:3 (640 x 480)	4:3 (320 x 240)
16:9 (640 x 360)	16:9 (320 x 180)
1.85:1 (640 x 346)	1.85:1 (320 x 173)
2.35:1 (640 x 272)	2.35:1 (320 x 136)
Automatic	Automatic

If the source media file is either DV NTSC or HDV, but you are unsure of your source media file's aspect ratio, choose Automatic. This option analyzes the source media file's aspect ratio to determine the appropriate pixel dimensions.

Note: By default, the Frame Controls feature is set to Automatic. As in the H.264 for DVD Studio Pro setting, the Frame Controls Retiming Control will be engaged only if the source file is interlaced.

- *Frame Rate:* Use this pop-up menu to choose from the following six choices:
 - 29.97
 - 25
 - 24
 - 23.98
 - 15
 - *Automatic:* Choose this setting if you are unsure of your source media file's video format. This setting analyzes your source media file's frame rate to determine the correct video format.



Using QuickTime Export Components for iPod Video

If the frame rate of your video is less than 12 fps, or the frame size is smaller than 320 x 240, you can use the QuickTime Export Components method of transcoding to iPod-compliant H.264 files. For more information, see “Creating QuickTime Export Component Output Files” on page 177 of the *Compressor 2 User Manual*. Distributed processing and Frame Controls are not available with the QuickTime Export Components method, so if you need to use this method, consider a “preprocessing” pass with Frame Controls to an intermediate file using the Uncompressed 8-Bit 4:2:2 format. Then use the QuickTime Export Components method for the final encoding step.

- **Bit Rate:** Use this slider to choose the bit rate to use for the output video, or enter a number in the text field. The available ranges are from 1000 to 1500 kbps for 640 (VGA) files and 300 to 700 kbps for 320 (QVGA) files. The setting you should choose depends on how the output is to be used. Higher bit rates produce better picture quality, but they also produce larger output files. Except for the 700 kbps single-pass encoding option for 320 (QVGA) files, all encoding for iPod-compliant H.264 files is multi-pass.



- **Frame Sync:** Also known as the *key frame interval*, the Frame Sync value represents how often a keyframe is inserted in the H.264 stream. The lower the number, the more smoothly the video can be manipulated (scrubbed) during playback (more frequent keyframes). The higher the number, the more efficient the compression (less frequent keyframes). The available range is from 2 to 10 seconds; the default is 5 seconds.

To adjust the Frame Sync value, do one of the following:

- Use the slider to choose the frame sync (keyframe) rate for the output video, or enter a number in the text field.
- Select Automatic to allow Compressor to set the frame sync (keyframe) rate.



- **Multi-pass:** Similar to two-pass MPEG-2 encoding, multi-pass offers the best possible quality. For faster (single-pass) encoding for 320 (QVGA) files only, turn this feature off by deselecting the checkbox. (Single-pass is disabled unless QuickTime 7.0.4 or later is installed.)

Note: If you are also using distributed processing, you may want to turn off job segmenting. (See “Allow Job Segmenting” on page 3.) For more information, see “Job Segmenting and Multi-pass” on page 112 of the *Compressor 2 User Manual*.

- **Include AAC Audio:** Use this checkbox to include a stereo AAC audio track in the output movie. The audio track will have a bit rate of 128 kbps. The sample rate will be either 44.1 kHz or 48 kHz, depending on the input audio.



Chapter Markers for iPod and QuickTime Output

In previous versions of Compressor, you could add and name chapter markers that DVD Studio Pro would recognize in MPEG-1, MPEG-2, and H.264 for DVD Studio Pro output files. Compressor 2.3 expands this feature for iPod video authoring and other QuickTime authoring. Chapter markers are now passed through (transferred) to other output files that can be recognized by QuickTime Player, iTunes (.m4v files), Final Cut Pro, and DVD Studio Pro. For information about adding chapter markers, see “Adding Chapter Markers to a Clip” on page 222 of the *Compressor 2 User Manual*.

Deinterlacing with Frame Controls

Compressor 2.3 addresses issues with deinterlacing quality for the fastest Frame Controls settings, specifically for the following conditions:

- An interlaced source media file
- *Frame Controls Resize Filter*: Better (Linear filter)
- *Frame Controls Output Fields*: Progressive
- *Frame Controls Deinterlace*: Fast or Better
- *Frame Controls Adaptive Details*: Off (not selected)
- *Frame Controls Rate Conversion*: Fast (Nearest frame)

Note: This improvement requires Mac OS X 10.4.7.

Corrections to the Compressor 2 User Manual

The following information covers corrections and updates to the documentation included with Compressor 2.

Command Line Syntax

The command line syntax in the synopsis example at the bottom of page 246 of the *Compressor 2 User Manual* is incorrect. Here is the correct example:

```
Compressor [-clustername <name>]
           [-clusterid <username:password@ipaddress:portNumber>] [-batchfilepath
<path>] [-batchname <batchname>] [-priority <value>] [-jobpath <path>]
           [-settingpath <path>] [-destinationpath <path>] [-info <xml>]
           [-timeout <seconds>] [-help] [-show]
```

In this example, `-jobpath`, `-settingpath`, and `-destinationpath` can be repeated as many times as the number of jobs you want to submit.

Note: Not all of the options are necessary. For example, you can specify the cluster either by its `-clustername` or by its `-clusterid`. You do not need to specify both. If both are specified, only `-clusterid` is used.

Additionally, if you specify `-batchfilepath`, then `-jobpath`, `-settingpath`, and `-destinationpath` are not necessary because the previously saved batch file already contains information about the job, settings, and destination.

Example of `-batchfilepath`:

```
Compressor -clustername "This Computer" -batchfilepath "/Volumes/Hermione/  
SavedCompressorBatches/FreeChampagne.compressor"
```

Surround Sound Channel Identifier Codes

The section on page 104 entitled “Assigning Files to Surround Sound Channels (Automatic Methods)” contains inaccurate instructions. In order to create a single surround source media file in the Batch window with this automatic method, you must use the following channel identifier codes:

Channel assignment	Channel Identifier Code
Left front channel	-L
Right front channel	-R
Center front channel	-C
Left surround channel	-RL
Right surround channel	-RR
Center surround channel	-RC
Low frequency channel (Subwoofer, LFE)	-LFE

For example, to assign an AIFF file to the left surround channel, rename the file as `filename-RL.aiff` (where `filename` is the name of your file).

Note: This procedure only works when you drag and drop files into the Batch window. If you drag the files onto the application icon, they will appear as separate sources.

About the Frame Controls Pane

The following is an update of the “Working With Frame Controls” section on pages 196–199 of the *Compressor 2 User Manual*. Use the features in the Frame Controls pane of the Inspector to select and adjust Frame Controls attributes that you want to assign to your settings.

Frame Controls

Use this pop-up menu to choose from the following Frame Controls options:



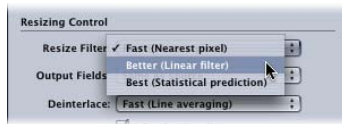
- *Off*: The default setting for most Apple presets. Choose *Off* if your Compressor project does not involve changes to the frame size, frame rate, or field dominance.
- *Automatic*: Compressor analyzes the transcoding job (the source media file and the applied setting), and then automatically determines the appropriate Frame Controls attributes.

In Automatic mode, Frame Controls technology is engaged in the following two types of transcodes only:

- Transcoding from high definition (HD) sources to standard definition (SD) MPEG-2 output files
- Transcoding from interlaced sources to H.264 for DVD Studio Pro (progressive) output files
- *Custom*: Allows you to manually adjust all of the attributes in the Frame Controls pane.

Resizing Control

Use the controls in this section to choose the algorithm with which frames are resized.



- *Resize Filter*: Use this pop-up menu to choose from the following resizing options. This decision is a trade-off between faster processing time and higher output quality in projects that involve a change in resolution.
 - *Fast (Nearest pixel)*
 - *Better (Linear filter)*
 - *Best (Statistical prediction)*



- *Output Fields*: Use this pop-up menu to choose the output scanning method (either the field dominance or a conversion to progressive scanning).
 - *Same as source*: No change to the scanning method.
 - *Progressive*: Scanning method where each frame is complete (not divided into fields). Use this setting in place of the Compressor Deinterlacing filter (a legacy filter in the Filters pane) as it will always provide much higher quality.
 - *Top first*: Interlaced field *dominance (field order)*, also known as *field two, the upper field, or the odd field*.
 - *Bottom first*: Interlaced field *dominance (field order)*, also known as *field one, the lower field, or the even field*.



- *Deinterlace*: Use this pop-up menu to choose from different techniques for deinterlacing. This decision is a trade-off between faster processing and higher-quality deinterlacing of motion areas within the frame. In all cases, each higher-quality deinterlacing option yields the same or better results than the next lower quality option. However, if downward resizing is also applied to the frame, improvements in quality may not be noticeable. Under these circumstances, Fast or Better will likely provide sufficiently high quality, depending on the amount of downward resizing.
 - *Fast (Line averaging)*: This option averages adjacent lines in a frame.
 - *Better (Motion adaptive)*: This option offers good-quality deinterlacing for areas of the image that are in motion.
 - *Best (Motion compensated)*: This option offers higher-quality deinterlacing for areas of the image that are in motion.

Warning: Using all Best settings may result in unexpectedly long processing times. If you are reducing the frame size in addition to deinterlacing the frame, Fast or Better will likely provide sufficiently high quality, depending on the amount of downward resizing.

While the Deinterlace pop-up menu is always active, Compressor only deinterlaces jobs that need it. (For example, if the source is interlaced and the Output Fields pop-up menu is set to Progressive, Compressor will deinterlace. If the source media file is progressive, Compressor will not deinterlace.)

Adaptive Details, Anti-Alias, and Details Level

Use the following controls to make frame resizing adjustments.



- *Adaptive Details*: Select this checkbox to use advanced image analysis to distinguish between noise and edge areas.
- *Anti-alias*: Use this slider to set a softness level from 0 to 100. This parameter improves the quality of conversions when you're scaling media up. For example, when transcoding standard definition video to high definition, Anti-alias smooths out jagged edges that might appear in the image.
- *Details Level*: Use this slider to set a level (from 0 to 100) to preserve sharp edges. This is a sharpening control that lets you add detail back to an image being enlarged. Unlike other sharpening operations, the Details Level setting is able to distinguish between noise and feature details, and generally doesn't increase unwanted grain. Increasing this parameter may introduce jagged edges, however, which can be eliminated by increasing the Anti-alias level.

Note: Adaptive Details, Anti-alias, and Details Level pertain only to frame resizing (scaling), *not* deinterlacing.

Retiming Control

Use the controls in this section to choose the algorithm with which frame rates are adjusted.



- *Rate Conversion*: Use this pop-up menu to choose from the following techniques for retiming frames (changing the frame rate). This decision is a trade-off between faster processing time and higher output quality. In many cases, the Better setting will provide sufficiently high-quality conversion at a substantial savings in processing time over the Best setting.
 - *Fast (Nearest frame)*: No frame blending is applied; Compressor simply uses a copy of the nearest available frame to fill the new in-between frames.
 - *Good (Frame blending)*: Averages neighboring frames together to create new in-between frames.
 - *Better (Motion compensated)*: Uses optical flow to interpolate frames, with good-quality results.
 - *Best (High quality motion compensated)*: Uses optical flow to interpolate frames, with higher-quality results; this option is particularly useful for transcodes that involve increases in frame rates (for example, 23.98 fps to 59.94 fps).

Warning: Using all Best settings may result in unexpectedly long processing times. The Better setting for rate conversion will provide sufficiently high-quality conversion at a substantial savings in processing time over the Best setting.

Adding Frame Controls to a Setting

You use the Frame Controls pane in the Inspector window to add frame resizing and retiming adjustments to your settings.

To add automatic Frame Controls adjustments to a setting:

- 1 Open the Settings tab of the Presets window.
- 2 Select the setting in the Settings table that you want to modify. (Or select a setting already applied to a source media file in the Batch window.)
- 3 Click the Frame Controls tab in the Inspector.
- 4 Choose Automatic from the Frame Controls pop-up menu.

Compressor analyzes the transcoding job (the source media file and the applied setting), and then automatically determines the appropriate Frame Controls attributes.

In Automatic mode, Frame Controls technology is engaged in the following two types of transcodes only:

- Transcoding from high definition (HD) sources to standard definition (SD) MPEG-2 output files
- Transcoding from interlaced sources to H.264 for DVD Studio Pro (progressive) output files

To add custom Frame Controls adjustments to a setting:

- 1 Open the Settings tab of the Presets window.
- 2 Select the setting in the Settings table that you want to modify. (Or select a setting already applied to a source media file in the Batch window.)
- 3 Click the Frame Controls tab in the Inspector.
- 4 Choose Custom from the Frame Controls pop-up menu.
Choosing Custom allows you to manually adjust all of the attributes in the Frame Controls pane.
- 5 Make changes to any of the following controls in the Frame Controls pane. (See “About the Frame Controls Pane” on page 7 for details on each of the controls.)
 - Resize filter
 - Deinterlace
 - Adaptive Details
 - Anti-alias
 - Details Level
 - Rate Conversion
- 6 Click Save to save the changes.

Standards Conversion with Frame Controls

With the Frame Controls feature, you can convert video files between international television standards (such as PAL to NTSC or NTSC to PAL) at levels of quality that were previously only available through expensive hardware solutions.

To convert a file to a different international television standard:

- 1 Add the source media file to the Batch window.
- 2 Open the Settings tab of the Presets window and find the appropriate target setting or create a custom setting.
Note: The Advanced Format Conversions settings group contains many common settings for international television standards (such as DV NTSC or DVCPRO50 PAL).
- 3 Apply the setting to the source media file in the Batch window.
- 4 Click the Frame Controls tab in the Inspector.
- 5 Choose Custom from the Frame Controls pop-up menu.
Choosing Custom allows you to manually adjust all of the attributes in the Frame Controls pane.
- 6 Make changes to any of the controls in the Frame Controls pane. (See “About the Frame Controls Pane” on page 7 for details on each of the controls.)
- 7 Click Save As at the bottom of the Inspector window to save the changes.
- 8 Click Submit in the Batch window to have Compressor convert the file.

Source Media File Data

Page 129 of the *Compressor 2 User Manual* includes instructions on how to get information about a source media file:

To see the source media resolution and frame rate:

- 1 Import the source media file into the Batch window.
- 2 Click the source's name in the Batch window.

The subsequent sentence should have read as follows:

The source media file's resolution, frame rate, and duration appear in the Inspector window as well as at the bottom of the Preview window.

Previous Release Information About Compressor 2.1

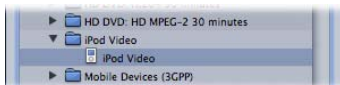
This version of Compressor is designed to run natively on both PowerPC-based and Intel-based Macintosh computers.

iPod Video Support

Compressor 2.1 adds professional “H.264 for iPod” settings for transcoding to iPod-compliant H.264 files. These settings can be used with the distributed processing and Frame Controls features. The “Create a New Setting” (+) pop-up menu in the Settings tab of the Presets window now includes an “H.264 for iPod” menu item.



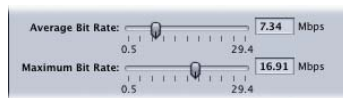
The Apple group of factory settings in the Settings tab of the Presets window now includes an “iPod Video” setting.



Bit Rate Adjustment in H.264 Encoder Pane

Compressor 2.1 adds additional controls in the H.264 for DVD Studio Pro Encoder pane of the Inspector window for adjusting the bit rate of H.264 files intended for authoring high definition (HD) format video DVDs. The new Maximum Bit Rate slider and field provide more precise encoding control. The former Bit Rate slider and field have been re-named to Average Bit Rate.

- *Average Bit Rate slider and field:* Choose an average bit rate to use for the output video with the slider, or enter a value directly. While the available range is between 0.5 and 24.99 Mbps, typical HD-based DVD video bit rates with H.264 might range from 7 to 15 Mbps, depending on your DVD bit-budget and the nature of your source media files. The H.264 file format is twice as efficient as the standard MPEG-2 format. This means you can count on a lower bit rate to get the same quality, or higher quality at the same bit rate.
- *Maximum Bit Rate slider and field:* Choose a maximum bit rate between .59 Mbps and 29.4 Mbps. You can also enter any number within these ranges into the accompanying field. The Maximum Bit Rate cannot be set lower than the Average Bit Rate.



Important: When determining average and maximum bit rates for DVD playback, remember to consider the bit rate of your audio tracks as well as the H.264 bit rate. You must keep the total of both average and maximum audio and video bit rates under 30 Mbps, the maximum guaranteed transfer rate from high definition DVD players.

(Because DVD-compatible audio formats are constant bit rate (CBR), there is no maximum audio bit rate to worry about.) For example, if you are using AIFF audio at 1.5 Mbps, you should keep both the average and maximum video bit rates for high definition DVDs under 28.5 Mbps. Typically, your average bit rate will be lower than this (from 7 to 15 Mbps). However, your maximum bit rate must also stay under this number. The 28.0 Mbps maximum bit rate is recommended to provide an extra margin for error (for example, to accommodate subtitle streams). If you are using one of the DVD-compatible compressed audio formats such as Dolby Digital or MPEG-1/Layer-2, your audio bit rate may be as low as 0.2 to 0.4 Mbps, in which case you can set your maximum bit rate about 1 Mbps higher. As a general rule, set your maximum bit rate at least 1 Mbps higher than your average bit rate, to allow for bit rate variability in achieving the goal of constant quality.

Distributed Processing and QuickTime Versions

If you are using the Apple Qmaster distributed processing system with Compressor, all nodes (computers) in a cluster must have the same version of QuickTime installed.

To download the most recent version of QuickTime, go to:

- <http://www.apple.com/quicktime/download/mac.html>

Exporting from Final Cut Pro and Distributed Processing

You can use Compressor to transcode sequences or clips from within other applications, such as Final Cut Pro. This saves time and hard disk space by eliminating the need to export self-contained media files before processing them.

There are two methods you can use to avoid exporting self-contained media files for Compressor distributed processing:

- Export a sequence directly from Final Cut Pro to Compressor and then submit that job to a cluster in an Apple Qmaster distributed processing network. In this workflow, Final Cut Pro opens on each processing node in that cluster to complete the job.
- Export the Final Cut Pro sequence as a QuickTime reference movie and then submit the resulting movie to the cluster for processing. Although this method does not require that Final Cut Pro be installed on each computer in the distributed processing cluster, the media files specified in the reference movie must be available to each computer in the cluster.

To export a Final Cut Pro sequence directly to Compressor for distributed processing:

- 1 Make sure Final Cut Pro is installed on each computer in the cluster that you intend to use for distributed processing.

Each installation of Final Cut Pro requires a product serial number. For information about volume licenses, go to <http://www.apple.com/finalcutstudio>.

- 2 Make sure all of the source media files and render files for your Final Cut Pro project are on a hard disk that can be shared (mounted) by all the computers in the cluster that will process the job. (The following instructions use an example of a shared hard disk named Media1.)

If you copy all the media files to another hard disk for this purpose, you may need to reconnect the media files in Final Cut Pro before proceeding.

Important: The hard disk you use to store the media files may not be a startup disk for any computer in the cluster.

- 3 In Final Cut Pro, set the scratch disk to the same hard disk used for storing media files in step 2:
 - a Choose Final Cut Pro > System Settings, then click the Scratch Disks tab.
 - b Click Set.
 - c In the dialog that appears, locate and select the disk you want to use (Media1 in this example).
 - d Click Choose. The specified disk (Media1) is listed next to the Set button, along with the amount of available disk space.

For more information about Final Cut Pro scratch disks, see the *Final Cut Pro User Manual*.

- 4 Enable file sharing on the computer where the scratch disk (Media1) is located (in the Sharing pane of System Preferences, click Services and then select Personal File Sharing).
- 5 On each computer in the intended cluster, mount the scratch disk you specified in step 3 (in the Finder sidebar, click Network, navigate to the computer that contains the Media1 disk, click Connect, and select Media1).
- 6 In Compressor preferences, specify cluster options settings:
 - a Choose Compressor > Preferences, or press Command-comma (,). The Preferences window appears.
 - b Choose Copy Source to Cluster as Needed from the Cluster Options pop-up menu.
- 7 In Final Cut Pro, choose File > Export > Using Compressor.

Compressor opens with the selected media file (the Final Cut Pro sequence) in the Batch window.
- 8 In Compressor, double-click the selected file and play it in the Preview window to verify the integrity of the clip.
- 9 In the Batch window, assign settings and destinations to the selected file as necessary.
- 10 Choose the intended cluster from the Cluster pop-up menu in the lower-left corner of the Batch window.
- 11 Click Submit.

To export a Final Cut Pro sequence as a QuickTime reference movie and submit it to Compressor for distributed processing:

- 1 Make sure all of the source media files and render files for your Final Cut Pro project are on a hard disk that can be shared (mounted) by all the computers in the cluster that will process the job. (The following instructions use an example of a shared hard disk named Media1.)

If you copy all the media files to another hard disk for this purpose, you may need to reconnect the media files in Final Cut Pro before proceeding.

Important: The hard disk you use to store the media files may not be a startup disk for any computer in the cluster.

- 2 In Final Cut Pro, choose File > Export > QuickTime Movie.
- 3 In the Save dialog, make sure that the Make Movie Self-Contained checkbox is not selected.
- 4 Save the QuickTime reference movie to the same hard disk (Media1) used to store media files in step 1.
- 5 Enable file sharing on the computer where the scratch disk (Media1) is located (in the Sharing pane of System Preferences, click Services and then select Personal File Sharing).
- 6 On each computer in the intended cluster, mount the hard disk (Media1) where the media files and QuickTime reference movie are located (in the Finder sidebar, click Network, navigate to the computer that contains the Media1 disk, click Connect, and select Media1).
- 7 In Compressor preferences, specify cluster options settings:
 - a Choose Compressor > Preferences, or press Command-comma (,). The Preferences window appears.
 - b Choose Never Copy Source to Cluster from the Cluster Options pop-up menu.
- 8 Import the QuickTime reference movie into Compressor. (Drag it from the desktop to the Compressor Batch window.)
- 9 Double-click the file in the Batch window and play it in the Preview window to verify the integrity of the clip.
- 10 In the Batch window, assign settings and destinations to the selected file as necessary.
- 11 Choose the intended cluster from the Cluster pop-up menu in the lower-left corner of the Batch window.
- 12 Click Submit.

Cluster Settings for Extended Transcoding Sessions

If you are using Compressor 2.0 or later for distributed processing, and you anticipate a transcoding session that will last up to seven days or longer, you must make an adjustment in the Advanced section of the Apple Qmaster Preferences Pane. By default, temporary process files may remain on a cluster's scratch location for seven days before they are automatically deleted. You can increase this value (the number of days) in the Apple Qmaster pane in System Preferences.

To extend the time process files remain on a cluster's scratch location:

- 1 On the cluster controller, open the Apple Qmaster pane in System Preferences.
- 2 If any Apple Qmaster services are enabled on this computer, click Stop Sharing to temporarily turn them off.
- 3 Click Advanced to open the Advanced pane.
- 4 In the Delete Files Older Than ___ Days field, enter the number of days you expect the session to take, plus a day or two extra, just in case.
- 5 Click Setup to return to the Setup pane.
- 6 Click Start Sharing.

"Inherited" Settings Issue Resolved

In previous versions of Compressor 2, old settings from Compressor 1.x produced undesirable results. This issue has been resolved.

Using Frame Controls for Frame Rate Conversion

If you are using Compressor for frame rate conversion (retiming), be sure to engage Frame Controls for the most accurate results. After making this change in Frame Controls, you can save the setting for future frame rate conversion jobs.

To convert the frame rate of a file using Frame Controls:

- 1 Add the source media file to the Batch window.
- 2 Open the Settings tab of the Presets window and find the appropriate target setting or create a custom setting.
- 3 Apply the setting to the source media file in the Batch window.
- 4 Click the Frame Controls tab in the Inspector.
- 5 Choose Custom from the Frame Controls pop-up menu.
Choosing Custom allows you to manually adjust all of the attributes in the Frame Controls pane. (See "About the Frame Controls Pane" on page 7 for details on each of the controls.)
- 6 Click Save As at the bottom of the Inspector window to save the changes.
- 7 Click Submit in the Batch window to have Compressor convert the file.

Note: Standards conversion (converting video files between international television standards such as PAL to NTSC, or NTSC to PAL) almost always involves frame rate conversion. For more information, see “Standards Conversion with Frame Controls” on page 12.

Test Transcode Tip

Before committing to a long transcoding session, do a quick test with a small section of the source media file. If there is a problem (such as an incorrect setting, or a reference file that can't find the files it is referencing) you can make the correction without losing a lot of time. Such tests also allow you to preview Frame Controls results that are not visible in the Preview window. For a quick way to select a small section of the source media file, see “Transcoding a Portion of the Clip with the Preview Window” in the *Compressor 2 User Manual*.

Note: Make sure the test section is specific to the type settings you apply. For example, pick a high motion section if you're doing frame rate or field order conversions with Frame Controls.

Using Apple Qmaster 2 with an NFS Server

By default, Apple Qmaster uses `/etc/exports` to define its Cluster Storage export. This can cause a conflict if you defined an NFS export in your local Netinfo database. When you enable a controller using Apple Qmaster 2 or later, Apple Qmaster will use `/etc/exports`, not entries defined in your Netinfo database. To work around this issue, either move the exports to `/etc/exports`, or move the controller to a computer that doesn't export anything.

Previous Release Information About Compressor 2.0.1

Compressor 2.0.1 is a maintenance release of Compressor that provides improved reliability.

Droplet Reporting Delay

A Droplet is a standalone preset created by Compressor, packaged into a drag-and-drop application and saved as an icon. When you drag source media files to a Droplet icon, they are automatically submitted for transcoding using the specified embedded settings. If you submit a large number of source media files (such as 200 or more) using a Droplet, there may be a delay of about 1 minute between the “Getting ready for processing” alert message and the dialog reporting that the job is being submitted. You can avoid this reporting delay by reducing the number of source files you submit at one time with a Droplet.

Previous Release Information About Compressor 2.0

The following information is late-breaking news that was included with Compressor 2.0.

Estimated Total File Size

Compressor can now display the estimated total size of an output file before the job is processed.

To see the estimated file size of an output file:

- 1 Open the Batch window.
- 2 Import a source file.
- 3 Assign a setting to the source file.
- 4 Select the assigned setting in the Batch table.
- 5 Open the Summary pane of the Inspector window.

Note: The estimated total file size is not available for all output formats.

Audio Passthrough

With the audio passthrough feature in Compressor 2, you can transcode the video in a QuickTime movie, and Compressor will copy the audio into the output movie without modifying it. An example of this might involve HD (high definition) files with multi-track audio that you want to convert to SD (standard definition) files without disturbing the audio tracks.

To modify the video format of a media file without changing its audio:

- In the QuickTime Movie Encoder pane of the Inspector window, choose “Pass-through” in the pop-up menu next to the Audio Settings button.

Note: If you export a sequence from Final Cut Pro to Compressor (File > Export > Using Compressor) and apply a setting with “Pass-through” selected, the audio portion of the setting will change to a PCM setting with the sequence’s setting and channel count, but with only a single track created on output. If you require audio passthrough for a Final Cut Pro sequence, export a QuickTime movie (File > Export > QuickTime Movie) and then import the movie into Compressor.

Source Media File Data

Previously, source media file information (such as frame size and frame rate) was displayed in the lower-left and lower-right corners of the Preview window. While this remains true, the following video information is now also available in the Inspector window: frame width, frame height, frame rate, starting timecode, duration, native field dominance. For audio files, the Inspector window shows the sample rate and the number of channels.

Importing AIFF Files With the File Menu

Certain AIFF files created with Final Cut Pro or GarageBand cannot be imported by choosing Import from the File menu. To import these files, drag them to the Batch window.

Refreshing the Frame Size in the Preview Window

When you adjust the frame size of a setting (in the Geometry pane of the Inspector window) while you are viewing it in the Preview window, the frame size may not resize accordingly. If this occurs, close the Preview window and reopen it, and it will display the correct frame size.

Duration Display in the Preview Window

The way the Preview window displays the duration of a media file (in the lower-right corner of the window) has been enhanced. Compressor 2 always displays the duration between the In point and the Out point, regardless of whether the Preview window is in the Source view or the Setting view. To see the total duration of the clip (without In and Out points), select the source file in the Batch window and open the Inspector window (Window > Show Inspector).

Frame Controls and the Preview Window

Although Geometry (cropping and scaling) and Filters adjustments are displayed instantly in the Preview window, Frame Controls settings are not. To preview Frame Controls settings, do a test transcode of a small section of your source media file. (See “Transcoding a Portion of the Clip With the Preview Window” in the *Compressor 2 User Manual* for more information.)

Creating MPEG-1 Layer 2 Audio Files

MPEG-1 audio provides a way to reduce audio file sizes and reduce the bit rate needed to play the files. For example, you can use MPEG-1 audio in conjunction with MPEG-2 video on a DVD, which is useful when you want to maximize the amount of disc space and bit rate available for your project’s video. While there is no Apple setting for MPEG-1 audio-only files in this release of Compressor, you can easily create a setting yourself. See the *Compressor 2 User Manual* for detailed instructions on configuring the MPEG-1 output file format (for DVD or web use, and so on).

Adjusting Settings for QuickTime Export Component Output Files

Please note the following when using the QuickTime Export Component Output feature:

- Use the third-party export module user interface to explicitly enter the width, height, and frame rate for the output file. Do *not* leave the width, height, and frame rate fields in the third-party user interface at their default (“Current”) values.
- The Compressor Cropping and Frame Controls features are not available when using the QuickTime Export Component Output feature.

Droplets and Compressor Processing Services

When you drag source media files to a Droplet icon, they are automatically submitted for transcoding using the specified embedded settings. The transcoding process begins, whether or not the Compressor application is open. If you drag files to a Droplet icon without first opening the application or opening a Droplet, Compressor may display an alert message (“This computer is unavailable”), indicating that Compressor processing services have not yet started up in the background. Click Submit at the bottom of the Droplet window. Compressor processing services will start up and transcode the files.

TIFF Transcodes and Remote Destinations

You can use Compressor to convert a video clip to a TIFF image sequence for use with applications that are not compatible with QuickTime. However, the Compressor Remote Destination feature does not support uploading TIFF image sequences to a remote destination (FTP server). Instead, use FTP software to upload the TIFF image sequence to remote servers.

Creating H.264 Files for HD-DVD

To ensure that any H.264 files you create with Compressor will compile properly into HD-DVD–compliant files in DVD Studio Pro, make sure that multi-pass encoding is turned on.

To turn on H.264 multi-pass encoding:

- 1 Open the Settings tab of the Presets window.
- 2 Select the setting in the Settings table that you want to modify. (Or select a setting already applied to a source media file in the Batch window.)
- 3 Open the H.264 Encoder pane in the Inspector window.
- 4 Select the Multi-pass checkbox.

Note: If you turn on Multi-pass, and you are using Compressor with distributed processing, you may want to turn off job segmenting by deselecting the Allow Job Segmenting checkbox. For more information, see the *Compressor 2 User Manual*. (The Compressor 2 distributed processing feature is limited to computers that have either Final Cut Studio or DVD Studio Pro 4 installed.)

Scaling (10-bit Color) Source Media Files

If you are using Compressor to transcode source media files which use 10 bits per color channel and you intend to scale (resize) the frame size, enable Frame Controls. If you do not enable Frame Controls in these cases, the transcoded output file will have 8-bit color rather than 10-bit color.

To enable Frame Controls:

- 1 Open the Settings tab of the Presets window.
- 2 Select the setting in the Settings table that you want to modify. (Or select a setting already applied to a source media file in the Batch window.)
- 3 Click the Frame Controls tab in the Inspector window.
- 4 Choose one of the following from the Frame Controls pop-up menu:
 - *Automatic*: Compressor analyzes the transcoding job (the source media file and the applied setting), and then automatically determines the appropriate Frame Controls attributes.
 - *Custom*: This option allows you to manually adjust all of the attributes in the Frame Controls pane.

Late-Breaking News About Compressor 2 and Distributed Processing

The following news items are relevant if you are using Compressor with distributed processing. The Compressor 2 distributed processing feature is limited to computers that have either Final Cut Studio or DVD Studio Pro 4 installed.

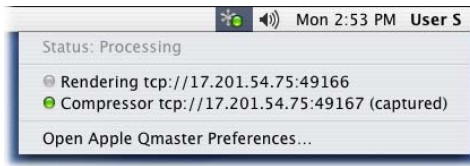
Service Node Status Indicator in the Menu Bar

By default, once a service node is enabled, an Apple Qmaster icon appears in the computer's menu bar. The icon now changes color based on the service node's current status:

- Gray = Idle
- Green = Processing
- Red = Connection failure



Click the icon to reveal additional information, including the service node's IP address, port number, and capture status, as well as a link to the Apple Qmaster pane in System Preferences.



Cluster Storage Capacity

By default, the Apple Qmaster distributed processing system saves temporary process files in the `/var/spool/qmaster` directory on the startup disk of the cluster controller. Computers in the cluster will access this location as needed. If you are processing large source media files that exceed the available storage space on the startup disk, you may run out of storage space on that disk. There are a number of things you can do to address this.

If cluster storage capacity is low, do any of the following:

- Change the cluster storage location to a disk with more free space. For more information, see “Adjusting Cluster Storage Settings,” below.
- Configure cluster storage settings to delete files more frequently. For more information, see “Adjusting Cluster Storage Settings,” below.
- Compressor users can set Cluster Options preferences (Compressor > Preferences) to “Never copy source to cluster.” For more information, see the *Compressor 2 User Manual*.

Adjusting Cluster Storage Settings

Follow the steps below to change scratch storage settings for a cluster.

To change cluster storage settings:

- 1 On the cluster controller, open the Apple Qmaster pane in System Preferences.
- 2 If any Apple Qmaster services are enabled on this computer, click Stop Sharing to temporarily turn them off.

Note: Do not attempt to change the cluster storage settings while the cluster is turned on.

- 3 Click Advanced to open the Advanced pane.



- 4 Do any of the following:

- To change the cluster storage location:
 - Click the Set button next to the Cluster Storage field.
 - Navigate to the folder in the dialog, select it, and then click Choose.
- To change how often cluster storage files are deleted, enter a new number in the "Delete Files Older Than _ Days" field.

- 5 Click the Start Sharing button to restart the cluster.

Cleaning Up Cluster Storage

If you are using cluster storage, and an error occurs, partial files may be left on the designated cluster storage location. Check the designated cluster storage location to make sure no partial media files are left there. If you find partial media files, delete them and submit the job again.

QuickTime Reference Movies and Distributed Processing

Strictly speaking, only actual QuickTime movies (not QuickTime reference movies) are supported for distributed processing. If you submit a reference movie for distributed processing, make sure media files specified in the reference movie are available to each node of the Apple Qmaster cluster. In other words, put the media on the shared (cluster storage) volume.

Compressor Command-Line Usage Requires Login

While it is possible to use the command line to run an Apple Qmaster distributed processing network, each Compressor service node (each computer providing Compressor distributed processing services) must be logged in (with a Mac OS X user name and password) for full functionality.

Apple Qmaster Node Installer

By default, the Apple Qmaster Node Installer installs all the necessary Apple Qmaster software for distributed processing. (Insert the DVD Studio Pro 4 or the Final Cut Studio installation disc and locate the "AppleQmasterNode.mpkg" Installer package.) If you are installing the Apple Qmaster Node Installer on Mac OS X v10.3 Panther, do not deselect the "Apple Qmaster Support Software" option. Both Apple Qmaster Applications and Apple Qmaster Services require this software. For more information, see the *Distributed Processing Setup* guide.

Apple Qmaster Distributed Processing and Xsan

Using Apple Qmaster distributed processing on an Xsan may cause mounting problems when restarting an Apple Qmaster distributed processing cluster controller.

Restart Apple Qmaster and Xsan computers in the following order:

- 1 Turn off the cluster controller by clicking Stop Sharing in the Apple Qmaster pane in System Preferences.
- 2 Restart the Apple Qmaster cluster controller computer.
- 3 Wait for the Xsan volume to mount on the desktop.
- 4 Click Start Sharing in the Apple Qmaster pane in System Preferences to restart the controller.

Distributed Processing and Network Interface Cards

In the Advanced section of the Apple Qmaster pane in System Preferences, you can restrict distributed processing activity to a particular network interface card by choosing it from the Use Network Interface pop-up menu. If you do this on a service node computer, use a different computer to submit Compressor jobs and batches.

Note: If you choose a network interface card from the Use Network Interface pop-up menu, configure all nodes in the cluster to use the same network.

Wide Area Network Browsing

You can enable wide area network (WAN) browsing by selecting the “Allow wide area Bonjour in domain” checkbox in the Apple Qmaster pane in System Preferences. For more information about using WAN browsing with your distributed processing network, visit <http://developer.apple.com/bonjour>.

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