

Sorenson Media Squeeze 6

*Product Comparison Analysis:
Squeeze 6 - Adobe Media Encoder - Apple Compressor
& Telestream Episode 5 Pro*

Sponsored by Sorenson Media

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EXECUTIVE SUMMARY

With well over 100 presets, industry leading and best-in-class codecs and an integrated and included Review and Approval service account that supports collaborative efforts from remote locations, Squeeze 6 is the video transcoding application of choice for video post production in any market.

Squeeze 6 is superior in terms of quality and collaboration functionality up to a point that it justifies the price when compared to the encoding software users get for free included with Adobe Creative Suite and Apple Final Cut Studio.

Squeeze also performs better in both these areas than Telestream's Episode 5 Pro, despite this application being more expensive.

Not only does Squeeze 6 deliver more presets and more codecs to select from, the program also streamlines workflows including the ability to directly input video streams from a connected camcorder. It's also more user-friendly and better tuned towards workgroup post-production.

INTRODUCTION

Encoding or transcoding video is necessary in order to publish digital video to multiple media. The encoding process is done using codecs and to many video users is something of a black art. The inner workings of these codecs are interesting only to a minority of users. Most users of transcoding software concentrate on getting the job done and outputting best-quality video with a high encoding speed. They also want workflow automation and efficiency, ease-of-use and high productivity.

On Mac OS X, most creative users have at least two transcoding applications already at their disposal: Apple Compressor and Adobe Media Encoder. Compressor comes as a free transcoding workflow tool with the Final Cut Studio software suite. Adobe Media Encoder is part of the Premium Design Creative suite and of the Production Creative Suite.

So why should you buy encoding or transcoding software at all? The answer: quality, speed and efficiency for workgroup users. There is one product in the industry that looks like it has all the answers in those areas: Sorenson Media Squeeze 6.

Sorenson Media has developed a number of high-quality codecs like Spark and Squeeze is their transcoding application that is currently in its sixth version. Squeeze 6 offers an end-to-end transcoding and workflow solution, including an Internet-based approval system that you can also promote your videos from, embedded direct publishing capabilities that enable users to publish their finished product to Akamai servers, Twitter, YouTube, etc., and best in class codecs that beat both Media Encoder's and Compressor's.

WHAT TO LOOK FOR IN VIDEO COMPRESSION SOFTWARE?

There are some features or characteristics video editors look for in compression or transcoding software. Here is a non-exhaustive list:

- Performance, both in speed of transcoding and user-friendliness of the interface
- Automation capabilities such as batch-processing, clustering, publishing to online services, etc.
- High quality of encoding or transcoding results
- An extensive list of high-quality codecs to choose from
- Collaborative functionality
- Post-editing capabilities

We tested the performance of the three covered applications with regards to the above criteria. The following chapters reflect our findings.

PERFORMANCE, USER-FRIENDLINESS & AUTOMATION

Apple Compressor has the ability through the Apple Qmaster cluster system to process video files very fast—at least theoretically.

	Adobe Media Encoder	Sorenson Squeeze 6	Apple Compressor
Codec	MainConcept H.264	MainConcept H.264	Apple H.264
Preset	HDTV 720p	YouTube 854 x 480	YouTube 854 x 480
Actual Bit Rate	600Kbps	840Kbps	1Mbps
Time elapsed	15:00	6:15	9:00
DVD	-	MPEG-4	MPEG-4
2-pass Dolby	-	AC3	AC3
Actual Bit rate	-	7Mbps	6.2Mbps
Time elapsed	-	3:57	3:40

Setting up a QMaster cluster on a local network should be very easy, but in our testing environment, the cluster either did not recognise computers that were sharing their resources, or the cluster—or worse: Compressor itself—crashed during processing of even relatively small batches of video clips (20 clips of approx. 3 minutes).

Since transcoding with Compressor using clustering seems to require more technical knowledge than transcoding with any application without clustering does, we tested the three programs without QMaster being activated.

As can be seen from the table above, Squeeze and Compressor were about equally fast when encoding a DV Stream file to DVD, while Squeeze 6 was considerably faster than Compressor and Media Encoder when encoding to H.264.

Interface design is an important factor in efficiency. It determines how fast users can get results and how many errors they make in the process. User interface and guidance are especially important to new users of the software. In this area, Squeeze 6 is the only application that starts up with a welcome screen that is in fact a video player giving direct and immediate access to videocast introductions of the software.

Squeeze 6's main interface further resembles iTunes, with a sidebar containing codecs, presets, filters, publishing options, notifications, etc., a video player at the top and your video assets at the bottom. The interface is uncluttered and simple, and even novice

users will find their way through it easily, even without viewing any of the introductory videocasts.

Of the three programs, Adobe Media Encoder is the simplest but also the most counter-intuitive. Help is only available as an online Help system.

The application is hardly more than a video clip list window when started. Presets are available from drop-down menus next to the name of each loaded clip. These presets can be edited, and only when a user opts to do so a second window opens with a video player showing the video.

Media Encoder supports a very limited number of codecs —based on either Flash or H.264— and there seems no easy way to expand the number of codecs by using plug-ins or other add-on software. One can import presets, though.

Apple Compressor has a user-friendly interface with a preview window, a History list, a drop zone window for adding clips and the settings window where presets are found and edits can be carried out. Clips can be added by drag-and-drop, but adding clips by drag-and-drop to an already filled window proved to be a challenge. In Squeeze 6, dragging a file to the clip list is far easier —there is less eye-candy involved that literally sits in the way of the drag-and-drop process when the window gets full.

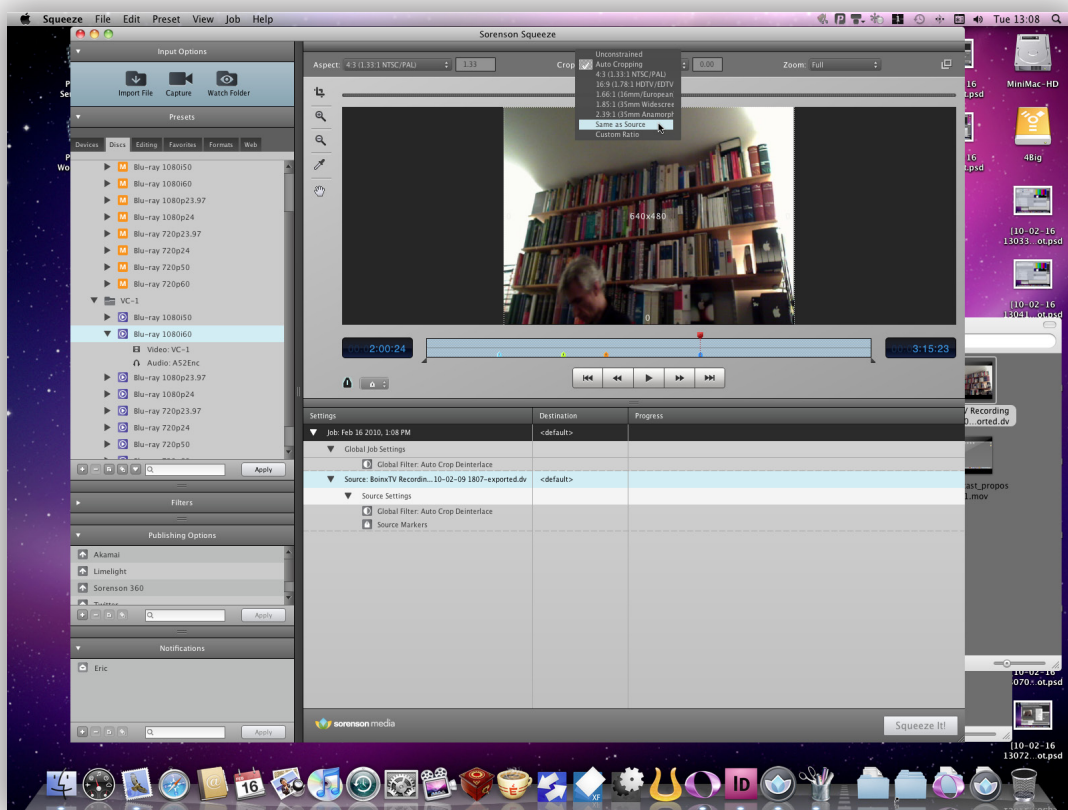


Compressor's preview window supports the addition of markers as well as cropping, but users can only add one type of marker and can't constrain crops to preset ratios. Compressor has the ability to create "droplets", which are preset scripts that live on a local desktop and automatically transcode video to a preset without explicitly opening Compressor when the user drags a video clip onto the droplet.

Compressor is integrated with Final Cut Pro, i.e. Final Cut opens the program when the user sends a project to Compressor. Finally, the Compressor interface is a loose conglomerate of windows which is a bit harder to manage when switching between multiple applications using the mouse.

Squeeze 6 has a unified windows interface — one click focuses the entire interface and all its panels. Cropping is supported in various ways, including many preset fixed ratios to choose from. Markers are supported too, with multiple types to choose from. We especially liked the ability to create a high-resolution JPEG image from a frame as well as a thumbnail image using markers.

The program further supports Watch Folders that can be located on a local desktop, but also on a network volume, effectively turning Squeeze into a workflow tool that goes beyond single user functionality. More surprisingly even is Squeeze 6's integration with Final Cut Pro.



When the user selects the Squeeze option from the QuickTime Conversion menu, a dialogue with a drop-down menu presents Squeeze 6's groups of presets lists. Once the user has selected the preset that he wants, the program doesn't have to open for the encoding process to start. Instead, the Squeeze engine starts up and immediately processes the project to the chosen preset settings. Needless to say, this improves on both speed and efficiency.

Although the latest version of Compressor supports Blu-Ray encoding with 1 preset, Squeeze 6 delivers some 16 Blu-Ray disc presets. It also supports direct and immediate — as part of a transcoding job — burning of a video to a DVD, whereas Compressor requires the user to first choose the burning option. Compressor does offer a couple of Apple designed DVD menus, but trying to change the default one resulted in Compressor becoming unresponsive for 15 seconds.



In Media Encoder, adding a preset is very much a matter of changing an existing one and saving it to a new one. In Compressor, presets can be created from scratch or existing ones can be changed and saved as alternatives. Sorenson Media on the other hand offers an online Preset Exchange. Here users can upload presets to for others to use, and download presets shared by other users. As the repository of presets grows, the Preset Exchange will become another time-saving feature that is only available with the Squeeze 6 product.

CODECS & QUALITY OF ENCODING

Squeeze 6 has in excess of 150 presets, grouped per workflow and per format. It has 45 Flash presets while Media Encoder has only 23. Squeeze 6 lets the user choose between its own Flash codec Spark Pro and On2 VP6. The Pro version of the Spark codec enables higher image quality than what users can achieve in other FLV video encoding utilities. On2 VP6 uses an arithmetic entropy compression formula that rigorously compresses

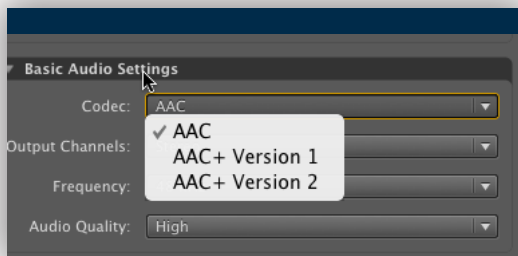
video data. Because the codec uses an elaborate compression scheme, video using this codec requires more processing power to play its frames. However, On2 VP6 may not always be the best choice.

If the aim is to publish Flash content for a target audience using a Flash Player 6 or 7, Sorenson Spark should be used. To get quality that can stand the comparison with On2 VP6 for these audiences, the Pro version of the Spark codec is required. A second reason why Spark Pro would be the better option is that the On2 VP6 codec is not designed for high data rates. — in excess of 1 Mbps. Higher bit rates than 1 Mbps demand using Sorenson Spark Pro. Spark Pro's decoding process is less CPU intensive.

Finally, if frames sizes larger than 640x480 pixels are targeted, Sorenson Spark Pro is likely to produce better results. The data rates of video clips using (or exceeding) this size tend to be greater than 1 Mbps.

Media Encoder has the On2 VP6 codec and Sorenson Spark (standard version) for Flash output in FLV or F4V format. Squeeze 6's Flash encoding speed was impressive. We encoded the same video clip to a Flash 9 FLV format and Squeeze 6 finished the job a couple of seconds faster than Media Encoder. However, the resulting file was slightly larger (3.2 MB for Squeeze and 3 MB for Media Encoder).

The quality of Squeeze's Flash video output with Spark Pro was as expected visibly better than when we used the Spark standard codec in Media Encoder.



Squeeze 6 has another edge over Media Encoder: audio encoding. Media Encoder only supports AAC, while Squeeze can also encode to Fraunhofer MP3 and Dolby.

Both Adobe Media Encoder and Squeeze 6 support the industry-leading MainConcept H.264 codec. This codec shows dramatically better results in terms of colour richness, brightness and pixellation than Apple's H.264 codec. The difference is visible particularly in High Definition results. Media Encoder doesn't offer the user any choice: it always uses the MainConcept codec, although this one can be slow.

Squeeze 6 offers users the Apple H.264 codec, the Sorenson or the MainConcept codec. Depending on the choice the user makes, the processing speed can be dramatically increased —Squeeze 6 even supports the Elgato Turbo.264 USB stick— or the quality can

be the absolute top. Squeeze also has over 40 different presets using the H.264 versus 29 for Media Encoder and only 15 for Compressor.

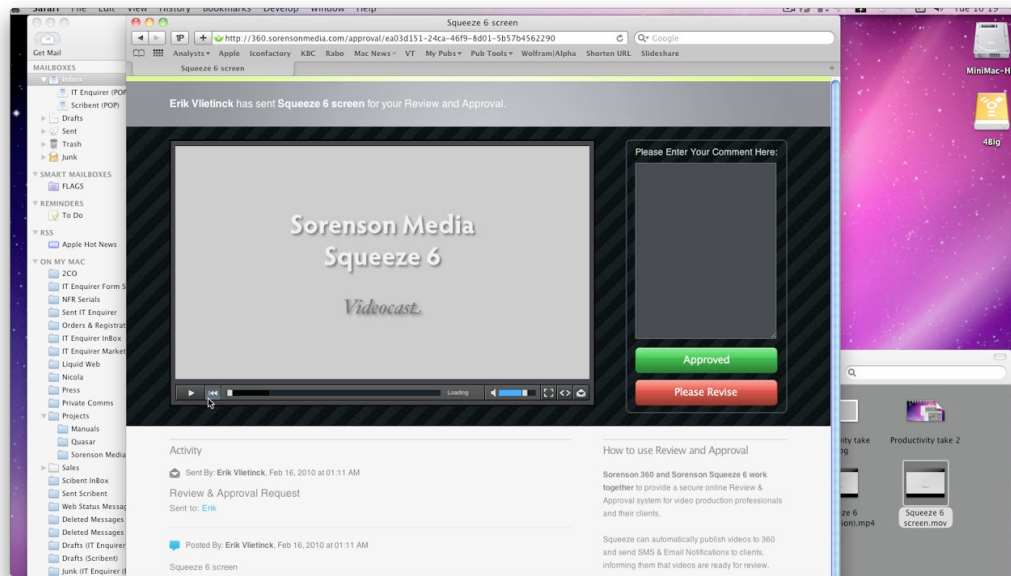
Compressor nor Media Encoder are capable of transcoding to Windows Media. Squeeze 6 has 15 presets for WMV using the VC-1 codec. It also supports a workflow involving the MXF metadata wrapper and native AVC-Intra. Compressor supports AVC-Intra but only as an import directly from Final Cut Pro projects.

In the area of codecs and presets, Squeeze 6 clearly has much more to offer than both Compressor and Media Encoder. By delivering more presets to choose from Squeeze adds benefits in terms of processing time. By delivering more codecs, it also ensures users will always find a solution to an encoding or transcoding problem, no matter how 'exotic' it may be.

COLLABORATIVE FUNCTIONALITY & HOSTING

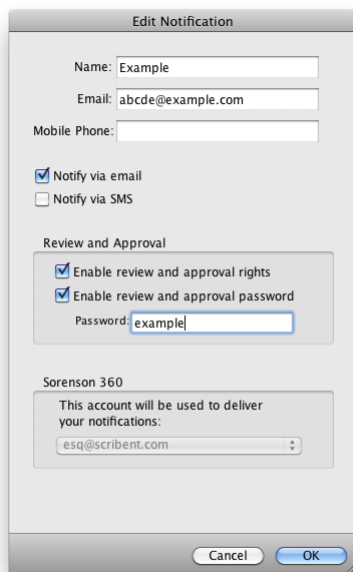
Video is increasingly being used for marketing purposes. Nielsen last published "Time spent viewing online video" post (http://blog.nielsen.com/nielsenwire/online_mobile/time-spent-viewing-online-video-up-13-in-december/) lists a 13% increase in people viewing video online.

All video producers need a review and approval system in place, but in many cases the people shooting the footage are also involved in the end result, making the workflow relatively simple. As video is increasingly involving more parties of which many are at remote locations, the workflow becomes more complicated and the need for a review



and approval system such as the ones that exist in publishing systems, becomes more apparent. Sorenson Media has recognised the need for collaboration capabilities with clients as well as co-workers well ahead of its competitors. The Sorenson 360 account is not just an online service, however. It is integrated with the Squeeze 6 application and buying Squeeze 6 automatically gets the user a complimentary Sorenson 360 account.

Compared to Squeeze 6, Adobe Media Encoder and Apple Compressor are 'old-school' encoder applications. They don't offer any structured or efficient collaboration or approval mechanism, requiring users to set up their own —often e-mail and FTP based— review system.



In contrast, Squeeze 6 has a Notifications panel in which the user sets up e-mail addresses and/or SMS text message server details as a preset. When the time comes to propose a video project to a client or a co-worker, the Notification preset is dragged to the video processing window. Alternatively, users can edit existing presets to include a Notification preset 'module'.

To start a review and approval process, users select a Sorenson 360 preset, add the Notification preset to it and press the Squeeze it! button to automatically publish the encoded or transcoded video to their Sorenson 360 account. Squeeze will automatically create the Flash file and send the e-mail message or SMS text message to the reviewer.

The reviewer gets a simple browser-based interface where he/she can leave their comments or press the Approve button, which will in turn trigger a Notification to the sender of the video. What makes the Review & Approval part of Sorenson 360 especially enticing is that users can start using it right away, without complicated setup or management.

Additionally, Sorenson 360 is a true hosting service —an alternative for YouTube so to speak— complete with Search Engine Optimization features. It offers multiple player skins, playback on all devices, and a look and feel that complement the Squeeze 6 interface.

No other transcoding product has such a system in place. Apple offers a server product called Final Cut Server —a full-scale Digital Asset Management system for video post-

production that is quite complicated to use and requires some hefty technical knowledge to set up. Final Cut Server costs an additional 900 USD.

CONCLUSIONS

Sorenson Media Squeeze 6 has the most complete set of presets of the three application covered in this report. The program uses the best available codecs on the market, such as the MainConcept H.264 codec and Sorenson Media's Spark Flash codec.

In most tests, Squeeze 6 performed either as good as Apple Compressor and Adobe Media Encoder or better. Squeeze 6 is the only application of its kind to also support Elgato's Turbo.264 HD USB stick for top performance.

We also found Squeeze 6 to be the most user-friendly application of the three, with excellent collaboration workflow tools. The Sorenson 360 service sets Squeeze 6 apart, and is especially effective in marketing video workflows.

Of the three programs under scrutiny, we found Adobe Media Encoder the least attractive, although the program has some good quality codecs on board.

SQUEEZE 6 VS. TELESTREAM EPISODE 5 PRO

While the two covered competitors come free with other software, Episode Pro with Flash 8 capabilities is Telestream's 495.00 USD encoder application for desktop transcoding.

PERFORMANCE, USER-FRIENDLINESS & AUTOMATION

Episode 5 Pro has an interface where you drag a preset to a video clip window. The Episode 5 interface is less complete when starting up the application, and clearly targeted at transcoding on 'auto pilot'. However, if needed, users can fine-tune their settings by double-clicking the clip in the main window.

There are a couple of problems with Episode's approach to fine-tuning presets. The first is that you can see a preview of the video clip as it is by double-clicking the clip. A video preview window then opens with three tabs at the top: Source, Preview, and Encoded. There is no direct comparison possible before and after filters have been applied unless users select these filters and then click the Preview button in the preset dialogue window, but worse is that we constantly ran into problems making the Preview and Encoded views work as advertised.

Another flaw in Episode 5 Pro is the fine-tuning part. In Squeeze 6, it is much easier to fine-tune presets because the interface is less cluttered, the Filters are clearly kept apart from the codec being used, and the user is initially presented with a Basic screen —if he is skilled enough, he can activate an Advanced screen. In Episode 5 Pro, all filters, codecs, settings and even preferences such as Entropy Type and Speed vs. Quality controls are all listed under the preset in a list that reminded us of online forms; not very user-friendly.

	Sorenson Squeeze 6	Telestream Episode 5 Pro
Codec	MainConcept H.264	Dicas H.264
Preset	YouTube 854 x 480	YouTube 854 x 480
Actual Bit Rate	840Kbps	760Kbps
Time elapsed	6:15	6:21
DVD	MPEG-4	MPEG-4
2-pass Dolby	AC3	AC3
Actual Bit rate	7Mbps	7Mbps
Time elapsed	3:57	2:27

Furthermore, the presets that allow users to select Blu-Ray or DVD authoring are buried under an Authoring menu — a detail perhaps, but one that may cost a beginning video editor a lot of time— and they require users to know the difference between 3Mbit, 5Mbit and 7Mbit encoding.

In terms of integration, Episode 5 Pro integrates with Compressor. The integration includes one preset that is made available in Compressor, with the user having to create other presets in Compressor, using the Episode engine if he wants to benefit from the integration. Squeeze 6 integrates with Final Cut Pro through the QuickTime conversion dialogue.

Finally, as can be seen from the table, Squeeze 6 is faster than Episode when encoding H.264. It would appear as if Episode is faster at encoding DVDs, but that is only because Episode gets you two separate files —video and audio— that you will need to bring together in a DVD authoring application. Squeeze 6 does this automatically for you, if you want it.

CODECS & QUALITY OF ENCODING

Both Episode 5 Pro and Squeeze 6 have in excess of 150 presets, grouped per workflow and per format. Both support Windows Media and Real Media. The codecs used by Telestream are more or less a mystery, i.e. they aren't listed by their name in the settings.

Squeeze 6 clearly advertises the codecs it uses. Episode uses VP6 only. The latter may not always be the best choice, as explained earlier.

Much to our surprise, Episode also doesn't use the best H.264 codec on the market. In fact, when we tested the Episode 5 Pro H.264 output and compared it to Squeeze output and the results were less than satisfying, with a lot of noise and a video lacking clarity. Only after changing some of Episode's settings (speed vs. quality was one of them) to levels that are advised against in Telestream's user guide, were we capable to obtain output that had the same quality as Squeeze's. Performance dropped to a level that simply isn't efficient in terms of productivity —more than double the figure in the table.

COLLABORATIVE FUNCTIONALITY & HOSTING

Episode 5 Pro has no collaborative functionality nor a hosting platform such as the one Squeeze 6 offers. It does integrate with the Episode Engine, an additional 3000.00 USD expenditure that allows users to run Episode with a server component.

Episode Pro also doesn't offer any review and approval capabilities.

CONCLUSIONS

Episode 5 Pro seems to be targeted at large scale encoding and transcoding operations that don't require the best quality or careful review of the results. In that respect, Episode is more of a product that users would like to have after having encoded their files with Squeeze 6. Even the desktop version of Episode seems to be targeted at users who have less of a need for transcoding quality but high demands in the area of mass-transcoding with the same settings.

Squeeze 6 focuses on quality and collaboration, and still offers the capability to mass-transcode files. When we tested Squeeze with a dozen files, it encoded them all without crashing. When we tried the same with Episode, we had one crash and one hang.