

MPEG CC Strip

A Simple DVD SP Helper

MPEG CC Strip is a simple drop-on application that will take one or more MPEG-2 files, extract any Closed Caption (CC) information they contain into text files and give them correct and consistent time code information.

DVD players most often use the Subtitle mechanism to convey audio information in a visual form, but there are certain cases where traditional closed captions with their simple block characters and black background are preferred, especially when the information may need to be processed by special equipment provided by the user to compensate for some sensory impairment.

Closed Captions are a very low data rate mechanism for transferring textual and other information, encoding only two bytes per field in an NTSC video signal. There are two separate streams, one in field 1 (the top field) and one in field 2 (the bottom field), so a total of 4 bytes are transferred per frame, but only two in each of the streams.

Each of the two field streams can contain two channels of caption data and two channels of text data, space permitting. This field data is multiplexed together using the methods described in the standard EIA-608.

MPEG CC Strip allows you to remove the closed caption information from an MPEG video asset, perhaps for editing or replacement by another format or language. The removed data is transferred to a text file in the .scc format popularized by the Scenarist DVD authoring product.

One file is written for each field in which caption data is present in the original MPEG video. The file for the first field ends with the traditional suffix, .scc, while the second field file ends with .sc2. The body of the file name is determined by the name you specify for the MPEG video file, less any .m2v suffix.

If neither field contains closed cap-

Quick Start:

Choose the first file to convert, for example "MudPie.m2v"

If you want to append additional files, rename each of those additional files the same as the first with a numeric suffix, like "MudPie.m2v.1" and put them in a folder with the first.

So a Finder list will contain:

MudPie.m2v, MudPie.m2v.1, MudPie.m2v.2, MudPie.m2v.3 etc.

Drag MudPie.m2v onto the MPEG CC Strip application.

Specify a file name and location. Click Save.

When it is done, you will have one large file continuous timecode and no caption data. If the file contained any closed caption information, it will be written to a text file in .scc format. If both fields contained CC data, two files will be written.

tion information, no .scc file will be written.

The .scc file begins with a line containing the text "Scenarist_SCC V1.0" and subsequent lines contain a time code value hh:mm:ss:ff in drop frame format, followed by a series of 16-bit hexadecimal values, each representing two bytes, or one field's worth of closed caption data. Each 16-bit hexadecimal value is separated by a space or tab character.

These .scc files are similar to and compatible with those produced by the Macintosh program CCaption™ and the PC program Caption Maker as well as many others.

For a detailed description of the options and general behavior of this and other applications based on MPEG Append, see the MPEG Append documentation.

The timecode written in the .scc file output is that of the output MPEG file, which may be set in the Save As dialog.

The appended MPEG video file written by this helper has no remaining caption information.

This DVD SP Helper is useful for extracting and removing closed caption information from an MPEG video file. This may be useful to transfer the CC data to a different encoding or to simply remove closed caption information from a file.

The DVD specification requires that closed captioning extend from one end of a track to the other, if it is used at all. If only one segment of a track is captioned, you can use MPEG CC Strip to remove it, then use the companion application, MPEG CC Insert, to reinsert the captions with the required empty caption info in the adjoining segments.

Similarly, you can correct offset problems using the combination of MPEG CC Strip and MPEG CC Insert.

If the captions are late or early by a fixed amount, you can extract the .scc file with one timecode, then reinsert it with another.

If your captions were appearing throughout the segment 2 seconds late, you could extract the caption data with MPEG CC Strip with a starting timecode of 00:59:58:00 then reinsert the .scc file with MPEG CC Insert with a starting timecode of 01:00:00:00. At the end of this operation, the captions will appear two seconds earlier throughout the track.

If one or more captions appear early or late, you can extract them with MPEG CC Strip, change the timecode on the troublesome captions and reinsert them with MPEG CC Insert using the same starting timecode.

Once the closed captions are inserted into the MPEG video file, the timecode no longer matters. Any change to the timecode in the file made at a later time will not affect the synchronization of the captions to the displayed video.

MPEG CC Strip, like other MPEG Append tools, transfers markers originating in Final Cut Pro and encoded with compatible encoders then adds new markers at the junction of files. These markers will appear, pre-placed, when you use the asset in DVD Studio Pro.

You can choose to have the output file use Non-drop Frame timecode, or whatever timecode the first file uses using the pop-up at the bottom of the 'Save As' dialog.

For almost all cases, the default Drop Frame timecode is preferred because it avoids a persistent bug in DVD Studio Pro which causes audio synchronization problems during preview.

However, if you are using subtitles with markers in your authoring you may encounter another DVD Studio Pro bug which causes it to generate errors indicating that the subtitles cross a marker point when Drop Frame timecode is used. You can avoid this problem by using Non-drop Frame timecode (but your audio may seem to be out of sync).

MPEG CC Strip is based on MPEG Append, another DVD SP Helper. For detailed information refer to the MPEG Append documentation.

Cautions

MPEG CC Strip makes the bold assumption that you have some idea what you are doing (boy, does that simplify the programming).

If you give it a collection of files that are named appropriately, it will process them.

If you supply a combination of spreadsheet files, application files and your laundry list, you will not get anything useful on the output. But MPEG CC Strip will happily do it for you.

MPEG CC Strip for Mac OS 9 is free. MPEG CC Strip for Mac OS X is a paid product and part of the MPEG Append Suite for Mac OS X.