The Video F/X TapeMaker Plug-in for Adobe Premiere 2.0

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Video F/X TapeMaker is a free software plug-in, bundled with Adobe Premiere 2.0, which enables Premiere users to easily create high-quality, full-resolution video tapes from Premiere movies. TapeMaker directly converts Adobe Premiere movies to a
Video F/X-format edit decision list that can automatically be assembled on a Video F/X system. After recording the complete program, the broadcast-quality video is ready for duplication and distribution on video tape. Unlike traditional edit controllers, which can handle only video and audio editing, the Macintosh-based Video F/X is unique in that it adds the power of Macintosh graphics to video production in one integrated desktop system.

You can bridge the QuickTime to video gap with the following 5 easy steps:

1.   Create your Adobe Premiere 2.0 movie with timecode-based digitized video
2.   Choose the Export command from the File menu; select Video F/X EDL
3.   Gather your videotapes, graphics, and Video F/X EDL
4.   Call 1-800-955-8273 or 415-961-2800 for the nearest Video F/X Service Bureau
5.   Make a videotape from your Premiere 2.0 movie automatically using Video F/X

This ReadMe file contains all the information you will need for using TapeMaker. Please call the 800 number for the nearest service bureau or if you have any questions.

Installation and Compatibility

Note: The Video F/X TapeMaker plug-in for Adobe Premiere requires version 2.0 of Adobe Premiere and only runs under System 7.

Typically, you will have a folder that contains all your Adobe Premiere plug-ins (as well as the preferences file). Just drop the Video F/X EDL file into that folder. When you run Adobe Premiere and select Export from the File menu, "Video F/X EDL" will show up on the Export sub-menu.

Preparing a Project for Export to Video F/X

All QuickTime movies that appear in the Adobe Premiere program must have time codes and reel names. Video F/X won't be able to find the correct video clips on your source tapes without this information.

To begin with, all your source tapes should be striped with time code. There is no reliable way around this requirement. Striping is typically done before or during acquisition of the video. Some VCR's are capable of post-striping tapes with time code. If you own a Video F/X system, you can refer to the Video F/X User Handbook for VCR-specific information on tape striping.

Otherwise, you can contact a Video F/X service bureau.

Premiere 2.0 is capable of capturing time code along with audio and video when creating QuickTime movies. Special hardware is required to do this. See the Premiere 2.0 documentation for more information.

If you aren't set up to capture time code directly, you'll have to do it manually. First, write down the time code of the frame at the beginning of the sequence you've captured. To do this, try starting the movie capture right before a scene change or some other easily distinguishable frame. Determine the time code of the first frame of the new scene using your VCR. Then count back from the scene change to the first frame of the QuickTime movie. It is very important to get this right: your final program won't track the QuickTime movie otherwise.

After you import a QuickTime movie for the first time, select it in the project window and invoke the Timecode dialog from the Clip menu. Enter the reel name and the time code of the first frame of the clip. You should only set the time code and reel name once for every captured video segment. Any clips created by trimming the original clip will maintain the correct time code.

If you capture several segments as discreet movies from the same source tape, give all the movies the same reel name in the Timecode dialog.

A note about drop-frame time code: If your source tape has drop-frame time code, the "forbidden" frames will appear when you edit in Premiere — that is, you can set an in point of 1:01:00:00. Don't worry; this is all sorted out transparently during export. The video will be assembled correctly on Video F/X.

Using the TapeMaker Plug-in

You can export a Video F/X EDL at any point during an Adobe Premiere session, provided that the worksheet or project windows are active. Just **invoke the Video F/X EDL plug-in** from the Export sub-menu of the File menu.

You'll first see a standard file dialog with some extra check-boxes at the bottom. Because the export process creates a number of files, it's a good idea to **create a new folder** using the 'New' button in the standard file dialog.

Two audio checkboxes are provided in the standard file dialog. If your audio source material was monaural and was digitized from the A1 track of your source tapes, check the A1 box (and similarly for A2). If the source material was originally stereo, check both A1 and A2.

As part of the normal export process, the TapeMaker plug-in translates all of the **graphics** files in the Premiere EDL into Video F/X graphics files. The translated files show up in the same folder as the exported EDL file. Translation can take anywhere from 10-45 seconds per file and take up 20K-1.2 MB each, depending on the size of the original graphic file and options you select. If you don't want to save the graphics for some reason (e.g. you've done it earlier, or you're planning to use the internal graphics capabilities of Video F/X to import your Macintosh graphics), just uncheck the Translate Graphic Files box.

After you've invoked '**Save**' in the standard file dialog, dialogs will appear asking you to **specify the tape format for each source tape**. Just choose the format from the pop-up. If all your source tapes are the same format, check the 'Apply this format to all tapes' box. This box only shows up in the first dialog displayed. If your tapes are VHS, choose the S-VHS format. If you're not sure what format the tapes are, choose 'Unknown'. You can sort it out later on the Video F/X system.

If an out-of-memory or similar error appears while running the plug-in, try increasing the amount of memory allocated to Premiere. Select the Premiere application in the finder and invoke Get Info from the File menu. Set the current memory size to the largest convenient value (6 MB, say). If you are working with graphics files larger than about 100K, you will definitely have to increase the memory in this way.

The TapeMaker plug-in issues warnings when it encounters elements or transitions that aren't supported by Video F/X. If you don't want to see these warnings, hold down the shift key for a few seconds while invoking Export.

Once you have completed this process, you are **ready to go** to a Video F/X at a service bureau or in-house to auto-assemble your videotape. If you need the name of the nearest Video F/X service bureau or if you have any questions about this process, please call Digital F/X at 1-800-955-8273 or 415-961-2800.

Using a Video F/X EDL

To assemble your Premiere program as a video tape, you'll need the your source video tapes and the following files:

• The EDL file exported by the TapeMaker plug-in
• Any graphics files appearing in the Premiere program, translated into Video F/X format
• A folder for each source tape
• Any PICS animation files used in the Premiere program

All of these files, except for the PICS files, are generated automatically by the TapeMaker plug-in. They will all end up in the same folder as the EDL file. If you created a new folder from the plug-in's standard file dialog, you need only transfer this folder, along with any PICS files used in the program, to the Video F/X system.

By default, the Video F/X EDL created by the plug-in starts at time code 01:00:00:00 (one hour). If your record tape is striped differently, you can easily change the starting time using the Set Program Start dialog in Video F/X.

Open the EDL file in Video F/X using the File/Open command. To assemble the program to video tape, perform a 'Select All' followed by an 'Update Tape'. It often takes less time to auto-assemble a video than to make a QuickTime movie of the same program.

Compare the final video tape to the QuickTime movie generated by Premiere. You may want to

make some changes to the program after you've seen the results at full video resolution.

Note: Premiere allows transitions between two clips from the same source tape. Video F/X can't handle this situation, however (no tape-based edit controller can). If you want to create such transitions, you'll have to make a dub of your source tape. You can do this either before or after your Premiere session. If you do it afterwards, use the Modify Element dialog in Video F/X to assign the new source tape name to the relevant clips.

Tips and Techniques for Exporting Graphics

One of the most powerful capabilities of the TapeMaker plug-in is its ability to easily transfer graphics from an Adobe Premiere program to video. In most cases, the process is completely transparent to the user. However, an understanding of what's going on can often improve your results.

Creating High Quality Video Graphics

PICT files, PICS animation files, and Premiere filmstrips are always created at a fixed resolution and pixel depth. Video resolution is fixed also — at 640x480 pixels and 32 bits per pixel. If your graphics files are created at, say, 320x240, they may look fine in your QuickTime movie, but they'll have to be expanded during the export process to fit the video frame. This usually results in blocky, jagged graphics in the final video program. So, if you can, create your original material at 640x480 resolution. This goes for the Illustrator rasterizer in Premiere, too — rasterize at full-screen (and turn the anti-aliasing flag on).

Most sophisticated painting programs, such as Adobe PhotoShop, are capable of *anti-aliasing* (smoothing) images as they're being created or touched up. The benefits of anti-aliasing may not always be apparent in a QuickTime movie played in a small window, but anti-aliased graphics have a much more professional appearance at video resolution.

32-bit painting programs can create an *alpha channel* to go along with the RGB image. The alpha channel carries transparency information, so that the appropriate parts of the image will be transparent (or translucent) when the graphic is keyed (superimposed) over live video. The alpha channel is saved along with the RGB data when a PICT file is saved as a 32-bit image. Use PICT files with alpha channels whenever possible for superimposed graphics. They result in a much cleaner key than a chroma or luminance key. An alpha channel isn't necessary for an opaque graphic (that is, a graphic used in the Video A or Video B channel).

The Title window in Premiere automatically creates anti-aliased graphics with an alpha channel. And you don't need to set the drawing size of Premiere titles to 640x480. A Title file is object-oriented: it will be automatically re-rendered at full video resolution during the export process.

The Transparency Dialog

Using the Transparency dialog in Premiere really makes a difference. If your graphic has an alpha channel, select either 'None', 'Black Matte', or 'Alpha Channel' from the key type pop-up (they all have the same effect as far as Video F/X is concerned). If the graphic was created with a white background, select 'White Matte'. This option turns the untouched white background

pixels transparent and preserves the anti-aliasing information in the image. The "garbage matte" in the Transparency dialog is ignored by the TapeMaker plug-in.

If a PICT file without an alpha channel must be used as a superimposed graphic, you can use the 'RGB Difference' option in the Transparency dialog pop-up to turn a color (or range of colors) transparent. Other means of doing this (Chroma Key, Luminance Key, Image Matte, and Difference Matte) are not supported by the TapeMaker pop-up at this time. The result will be a hard-edged key. To soften the edges of the key, set the smoothing to either 'Low' or 'High' . When you select 'RGB Difference', the plug-in will synthesize an alpha channel for the image during export (this takes upwards of half a minute; please be patient).

If you choose a key option not supported by TapeMaker, a warning will appear during the export process. You have the choice of translating the graphic anyway. In this case, no alpha channel will be created. You'll have to use the Drawing dialog in the Graphic window to rectify the situation after opening the EDL in Video F/X.

If the same graphic appears several times in a Premiere program, it's translated into Video F/X format only once. If you've used different Transparency dialog settings for different instances of the same graphic, only the first set will be examined.

If the same graphic is used in both the video tracks and the super track, be careful. Unless the graphic was created with an alpha channel and a black background, the best approach is to duplicate the graphic file, give the files different names, and then use one file in the video tracks and the other in the super track. Otherwise, the opaque graphic will have its background color removed during the export process and end up looking odd on the final tape.

PICS Animation Files

PICS animation files can be used just like graphics files, with a couple of exceptions. Only the 'None', 'Black Matte', and 'Alpha Channel' keying options are supported for supered PICS files. If you want to key out a background color, use the Drawing dialog in the Layout window (opened via the Modify Element dialog) after opening the EDL in Video F/X.

Also, Video F/X ignores the rate set in the PICS file. If your animation was created with a rate other than 30 frames per second, you should adjust the source out point appropriately in the Modify Element dialog in Video F/X to be consistent with Premiere.

Graphics Miscellany

Filters applied to graphics in Premiere are not implemented by the TapeMaker plug-in. If you want to use filters, there are two simple ways. You can apply the filters to the image (using PhotoShop or any program that supports filter plug-ins) before importing it into Premiere. Alternatively, you can apply the filter to the image in Video F/X (using the Graphics window) after the program has been imported.

A final note: Bright, saturated colors that look great in a QuickTime movie don't work well in video programs. Fully saturated colors, particularly yellows and cyans, are literally illegal for video broadcast and create strange artifacts on video tape. Some paint programs have "NTSC legal" color palettes filled with muted, pastel colors and those are best to use.

Exporting Effects and Fades

Premiere provides a number of special effects that can be used to create interesting transitions from one video sequence to another. Video F/X supports a subset of these effects as *wipes*. Wipes are graphical transitions performed by the Video F/X hardware in real-time.

When a Premiere effect is encountered that doesn't have a direct equivalent in Video F/X, the closest available wipe is substituted. A diagonal corner wipe, for example, is substituted for a page turn. Most attributes of the Premiere effect, such as wipe borders and direction, are exported to Video F/X. The anti-aliasing flag in the Effect dialog is ignored: wipes are always anti-aliased in Video F/X to look better on video.

When you want to effect a transition from one audio clip to another, overlap the two audio tracks, create a fade-out in the out-going track where the clips overlap, and create a fade-in in the overlap region of the incoming track. Video F/X will combine the fade-out and the fade-in into one cross-dissolve element. If two audio clips in the A and B audio tracks are coincident in time and their levels are constant, Video F/X will <u>not</u> mix the tracks — only the A track will be heard. To mix two tracks, one has to be fading out and the other fading in. Audio filters are ignored by TapeMaker.

If an unsupported transition type is encountered (a graphic dissolving to another graphic, for example), a warning will be issued with an option to export the transition anyway. If you do export such a transition, an error will be issued by Video F/X when you assemble the program.

Limitations

The TapeMaker plug-in version 1.0 doesn't support some features of Adobe Premiere 2.0:

• Filters are not applied to graphics, movies, PICS files, filmstrips, or audio tracks
• Motion paths are ignored
• Only the first frame of a filmstrip is exported as a Video F/X graphic
• The Chroma, Luminance, and Image and Difference Matte key options aren't supported
• The "garbage matte" in the Transparency dialog is ignored
• PICT files larger than 1.2 MB can't be exported
• A graphic can't be superimposed over another graphic or PICS animation
• Video can't be superimposed over any other element
• Transitions involving two clips captured from the same video tape aren't allowed
• Transitions involving two graphics or PICS animation files aren't supported (see below)
• The third audio channel is ignored
• Digital audio elements (e.g. AIFF files) are ignored
• Use of the rubber-band lines to amplify audio isn't supported (attenuation <u>is</u> supported)

Some of these limitations may be removed in later releases of the TapeMaker.

Note: Graphics-to-graphics transitions are allowed on Video F/X systems that have a second frame buffer installed. In this case, open the list in Video F/X and replace the graphic-to-graphic

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transition with a Custom Event.

Please be sure to contact Digital F/X at 1-800-955-8273 or 415-961-2800 to get on the mailing list for the latest information on TapeMaker and to get the name of the nearest Video F/X service bureau.

F/Xpress for Creating CMX and GVG-compatible Diskettes

Digital F/X offers another product that will be of great use to Adobe Premiere 2.0 users called F/Xpress. F/Xpress creates CMX and GVG compatible 3.5" diskettes right on your Macintosh. In addition, you can export your EDL directly to an edit controller via the Macintosh serial port using F/Xpress. To order call 1-800-955-8273.

More on Digital F/X

Digital F/X, Inc. manufacturers and markets integrated digital video post-production systems including the Emmy-award winning Composium. Macintosh-based desktop products include the Video F/X Plus and TitleMan, the PostScript title and graphics generator.