

Allentown Symphony

Symphony Fantastique - Video Project

www.AllentownSymphony.org/SymphonyFantastique

Questions – Diane Wittry: 908-432-5188

DianeWittry@AllentownSymphony.org

This is an outline of the process, programs, and equipment that we utilized to create a 50 minute video to be shown with Berlioz's Symphony Fantastique. This process can be used to create any type of video multi-media to be shown during a symphony concert.

VIDEOGRAPHER/EDITOR:

About a year in advance, we identified four young videographers who owned their own camera and lighting equipment and who were also experienced with film editing. We were looking for people who had some classical music in their background. After interviewing each of these people, we selected the person best suited to the project who could also work within our budget.

STORY BOARD:

As we got into the project, I realized that I would have to be more involved in order to have the video really serve the music. I became responsible for created the storyboard timing sheet with the details and length of each video sequence so that the videographer had a specific time-line to follow in the editing process. It was agreed that 10 extra seconds would be added on to each video clip to allow for possible slower tempos during the live performance.

Storyboard Sample: 2nd mvt - The Ball

0:00	Smoke Rising
0:04	Harp Strings (Cut 1) Smoke interspersed with harp colors of smoke
0:30 - 0:37	Harp Scales - hands (Harp Cut 1)

0:37	Shadow Figures- Dancing at the Ball
0:56	Violin Cut 6
1:09	Shadow Puppets
1:18	Violin Cut 6
1:25	Shadow Figures
1:34	Shadow Figures
1:46	Violin - Figures alternating with the violin

SOUND CLIPS FOR FILMING AND EDITING:

We created sound audio clips to use during the live filming so that we could easily match the film action to the music. In our case, we were filming instrumentalists actually playing the same piece of music with the goal of synchronizing it later with the live music. These sound clips were used as the basis for building the film and then removed. For our Symphony Fantastique project we created 78 separate video clips.

TRANSFERRING FILES:

We utilized both “Dropbox” and “Yousendit” for transferring the extremely large video files back and forth during the editing process. Make sure you are working in advance because rendering and file transfer of these video clips will take a long time.

RESOLUTION:

Film Resolution: Video clips were filmed in 1920 x 1080 resolution, at 24 frames per second.

Final Video Resolution: It was determined that 1280 x 720 HD video resolution was sufficient for most projectors. No discernible resolution loss was observed between this size and larger files.

VIDEO EDITING:

Editing was performed using **Adobe Premiere Pro**. Sequence settings matched the video:

1920 x 1080 (16:9 ratio) Pixel aspect ratio: Square Pixels (1:0)

Progressive Scan Audio sampled at 48000 Hz

The video clips were exported to a 1280 x 720 format at 24 frames per second with 30000 bitrate sampling and 48000 audio, square pixel, progressive scan. During editing, each clip included a segment of the music corresponding to the timing in the score. Sound was included in the rendered clips to allow practicing cueing the video clips at predetermined points in the score. To create smaller files, the music can be left off the final video clips.

TIME CODE

In order to add a time counter for the conductor to enable them to better synchronize with the film, a master editing file was set up at 1280 x 960 pixels. A time counter was then added at the bottom of this screen. Video clips were imported into this file and then re-rendered to provide video clips with a black bar on the top and bottom and the counter. These bars are then cropped off by the video projector. The result is the ability to send a single split video signal to a monitor on stage for the conductor showing the black bars and time-code counter, while at the same time sending the signal to the video projector where it will not show the bars and the time counter.

We used the internal setting of the projector to crop the time-code off the bottom of the projection positioning the image so that it was “out of frame” of what the projector would project. Without this option you may have to run two completely different sources using two computers or Blu-ray players; one with the time-code, and one without.

LIGHTING:

It will be necessary to have stand lights for the entire orchestra. It is helpful if you can keep the last row at least 4 feet in front of the screen to reduce light bled on to the bottom of the screen. Overhead lights with blue gels can be used to create ambiance and provide a little more light for the musicians. It is also good to pre-set a light from above on the conductor so that their baton can be clearly seen by the orchestra.

SCREEN:

We own a large screen at our concert hall. It is a “Da-Lite” fixed frame front projection screen – 30 X 17 feet with a 16:9 aspect ratio.

We positioned this large screen behind the orchestra. Having the screen in this position, did affect the resonance of our sound, since it blocked the back of our shell, but we felt it was still the best position for the screen.

We projected from the back of our second balcony (instead of from the front of the first balcony) in order to not have to reseat important subscribers. Because of the increased distance to the screen, we had to purchase a different lens for the projector. The lens specifications are determined by the projector’s distance from the screen and the size of the screen. The projector manufacture will have a chart for each lens they sell that lists the lenses size projected over different distances. Be sure that you talk to the manufacturer’s sales representative to confirm your needs before making an expensive purchase.

PROJECTOR:

The projector we used was a **Panasonic PT-D10000U.10K** (10,000 lumens). This is a pretty bright projector. The brightness of the projector needed is really dictated by screen size. Screen brightness (the amount of light actually bouncing off the screen) is commonly measured in a unit called Foot-Lamberts.

Light reflected of the screen is measured in ft/lamberts, which is calculated by taking a projector's lumens output and dividing it by the square footage of the screen. In our situation, a 10,000 lumen projector on a 506.25sq/ft screen = $(10,000/506.25) = 19.75$ foot-lamberts. That formula should be considered a rough guide as it is effected by factors such as screen surface, and the manufacturer’s calculation of their projector’s luminance can vary. The base line for commercial cinemas is 16 foot-lamberts, but they operate in a totally dark environment. Light bleed from stand-lights or stage lighting will washout a screen quickly. Our tech person recommends 16 foot-lamberts or more.

PRESENTATION SOFTWARE PROGRAM

We chose a presentation software program to hold the video sequences and run the show. The program we used is called **Pro Presenter**. The program can play various media types. All our video clips were high quality Quicktime video.

Other video programs we looked at using were “VJ” programs used by video DJs in clubs. Some of these programs were: V Jamm; Arkaos Grand VJ; and Modul 8.

The video sequences were imported into the programs playlist, in order, with titles based on the timing and movement on the piece. A transition of 2 seconds was placed on each clip. The clips are able to play on demand when clicked by the mouse or when the spacebar is pressed on the keyboard. This allowed the assistant conductor running the video to simply press the spacebar as he/she followed the score and the conductor on stage.

PROJECTION COMPUTERS:

To show the video you will need two laptop computers. The computers are connected to a switching device. In the event of some problem with the main computer, we could switch instantly to the second computer which was also following the cues. One person works both computers. The main computer we used was a MacBook Pro 13", the specs were:

Mac OSX 10.7.4
Processor: 2.5 GHz Intel Core i5
Memory: 4GB 1600 MHz DDR3
Graphics: Intel HD Graphics 4000 384MB

We found that the program performed quite well and the ability to cue the videos on demand allowed the conductor to keep in synch with the video at critical times in the piece.

VIDEO SIGNAL PATH:

We primarily used VGA cable, which is an analog signal type connection, for video signal. You could use a lot of different connection types, but VGA is usually cheap and a very common input type for projectors and monitors.

The playback originated from the Macbook and went to an analog VGA switcher which allowed us to switch the source to the backup computer if the first computer froze up. From there it went to a splitter. One of the split lines went to the projector, the other split signal went into a Cat5 Video Extender. This is a little box that turns the analog video signal into a digital one so that it can be sent over long cable runs on fairly cheap category5 cable (this is computer network cable that you can buy at Home Depot). There is a second little box that decodes the signal at the other end of the cable run.

We ran the Cat5 cable from the 3rd floor balcony where the projector was, down to the monitor in front of the conductor's stand where the cat5 cable plugs into the receiving end of the extender boxes and is transferred back to VGA/analog for the monitor to plug into.

Connection Equipment:

The Splitter: 1 Ocean Matrix OMX-7240 Seamless Scaler (2 15-pin VGA inputs; 1 15-pin VGA output) + additional video inputs @ \$75 (rental)

The Cat5 Extenders: 1 VGA UTP Extender/Splitter (powered) with Audio via CAT5, receivers with VGA output (with audio): \$25 (rental)

The Cat5 Cable Runs: 2 - 250ft CAT5 cable reels @ \$10 ea. (\$20 rental)

CLOSING THOUGHTS: I encourage you to experiment with these ideas and concepts and to create unique videos to accompany some of your orchestra performances. Feel free to contact me if you have questions.