

The Making of *Angel Wing*

By

Lawrence W. Moore

Dr. Lawrence W. Moore
University of Miami
me@lawrencewmoore.com
<http://www.lawrencewmoore.com>
(305)804-3464

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Angel Wing is a piece for fixed audio and video media. It began as an experiment in sound, in which I recorded myself tapping, flicking, and slapping a metal stand to create a variety of metallic tones with rich harmonic material (Figure 1). I recorded the sounds using a stereo pair of microphones on my field recorder. The left and right channels were summed as I imported the audio files into Spear to perform work on the harmonic content.

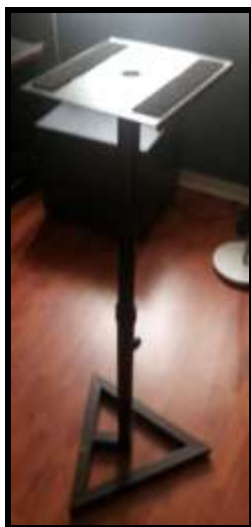


Figure 1 - Metal Speaker Stand

Spear is a freeware harmonic spectrum analyzer and editor. By using the editing tools within Spear, I was able to accentuate those partials that I wanted to have sound prominently and attenuated background noise or on-harmonic overtones that I felt did not enhance the richness of the metallic

ringing sounds. After making these refinements to the partial material within the files, I saved 4 transpositions of the files in addition to the originally pitched stem. These transpositions were an increase of 3 semitones, an increase of 8 semitones, a reduction of 3 semitones, and a reduction of 8 semitones. The resulting group of 5 stems was saved into 3 groups of time-stretched intervals. These included a non-stretched group, a 2x stretch, and a 4x stretch. Figure 2 shows the Spear interface. The markings show found partials and harmonic material varying in strength as lighter and darker images of the found sine waves.

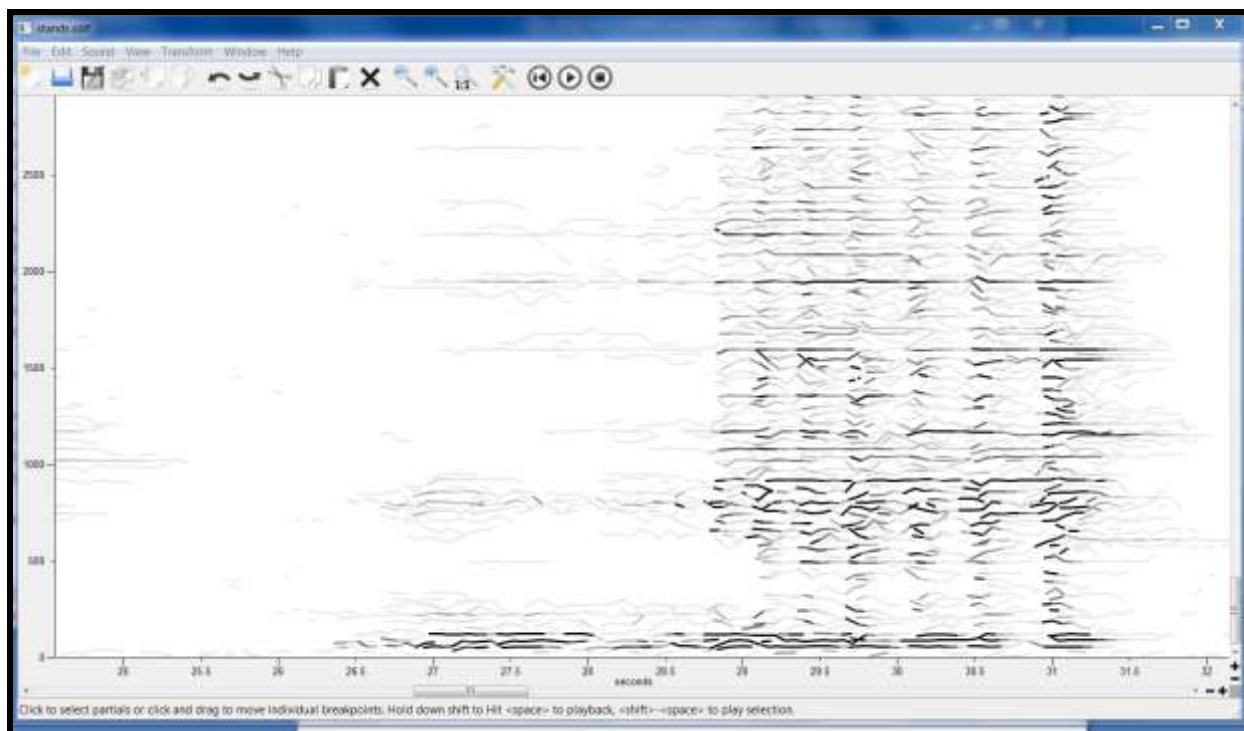


Figure 2- Spear Graphic Interface

I then imported all of the audio files into Cakewalk Sonar in order to arrange the form of the piece, control delay processing on the tracks, and control spatial panning and placement within a Dolby 5.1 sound field. Figure 3 shows how the 3 main groups, which vary in time stretching, are distributed across the overall form. Each of these groups has 5 tracks that vary in pitch as stated earlier. In portions, the groups of pitch-shifted tracks are offset to

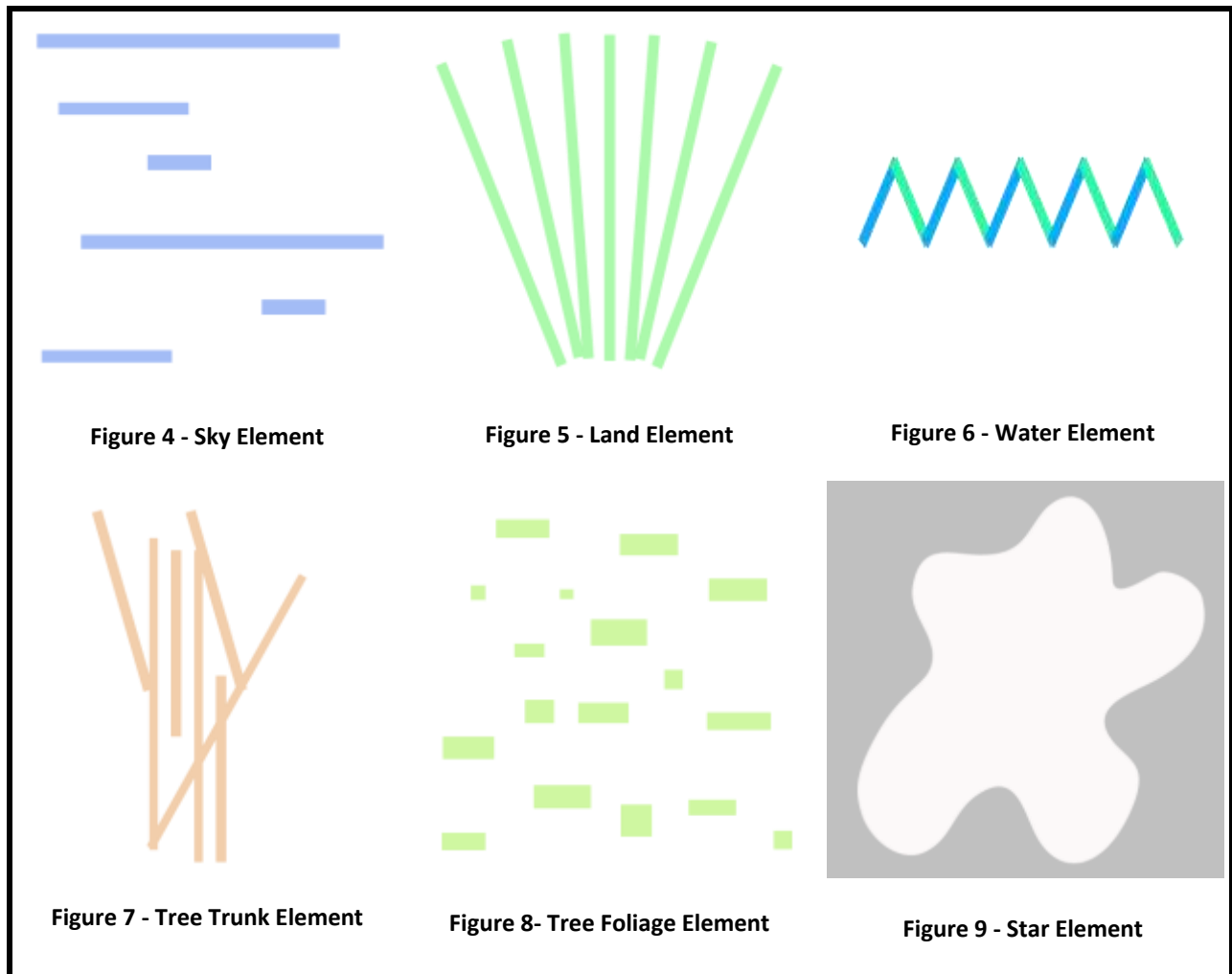
create melodic shapes from the sequential timing of pitch-shifted events, and in other portions, the pitch-shifted tracks are vertically aligned in time to create harmonic structures. Throughout the piece, the amount and timing of delay is gradually changed and shifted. I achieve this by sending the audio tracks to an auxiliary track that uses a duple/triple feel delay from the Istvan Kaldor VST Collection. The final region in the piece is an earlier event that was placed toward the end to add a sense of conclusion to the piece.



Figure 3 - Sonar Track View

It was only after fully completing the audio mix that I, from hearing the piece over and over in the mix process, that I entitled it *Angel Wing* due to the fluttering and rhythmically buoyant execution of the metallic tones. The form was arranged with a purely musical motivation, but I was struck by how it seemed to tell a story of angels interacting with our reality in playful, yet mysterious ways. At this point, I began work on the video with the intention to create a textured environment that would be colorful in both a mysterious sense as well as a playful sense. I began by creating some graphic elements in Adobe Photoshop to be used in semi-random distributions that would collage together to form an overall image. These images have transparent backgrounds making them easily suitable for creating collage

effects. I used Processing to semi-randomly distribute the images in rectangular regions of the overall view. Figures 4, 5, 6, 7, 8, and 9 illustrate these graphic elements. In addition to semi-randomly positioning the images, the RGB channels and overall size of each element are semi-randomly set to create a more dynamic collage effect, providing a sense of texture to the overall image.



The Processing script that I wrote began with distributing the elements for the sky and land. These distributions spread across the upper and lower portions of the overall view respectively. The color variation, size variation, and overlapping of elements created a textured sky and land background. The water distributions for the bottom left of the overall view came in soon after. The placement of the

tree trunk and tree foliage elements began next. Toward the end of the distribution process, the stars enter to accentuate the final gesture of the piece. The Processing script renders a QuickTime movie file, frame by frame as the textured picture forms over the full length of the piece. Figure 10 shows the final picture that is formed after all the distributed elements have come into place. This picture is reached by the end of the piece.

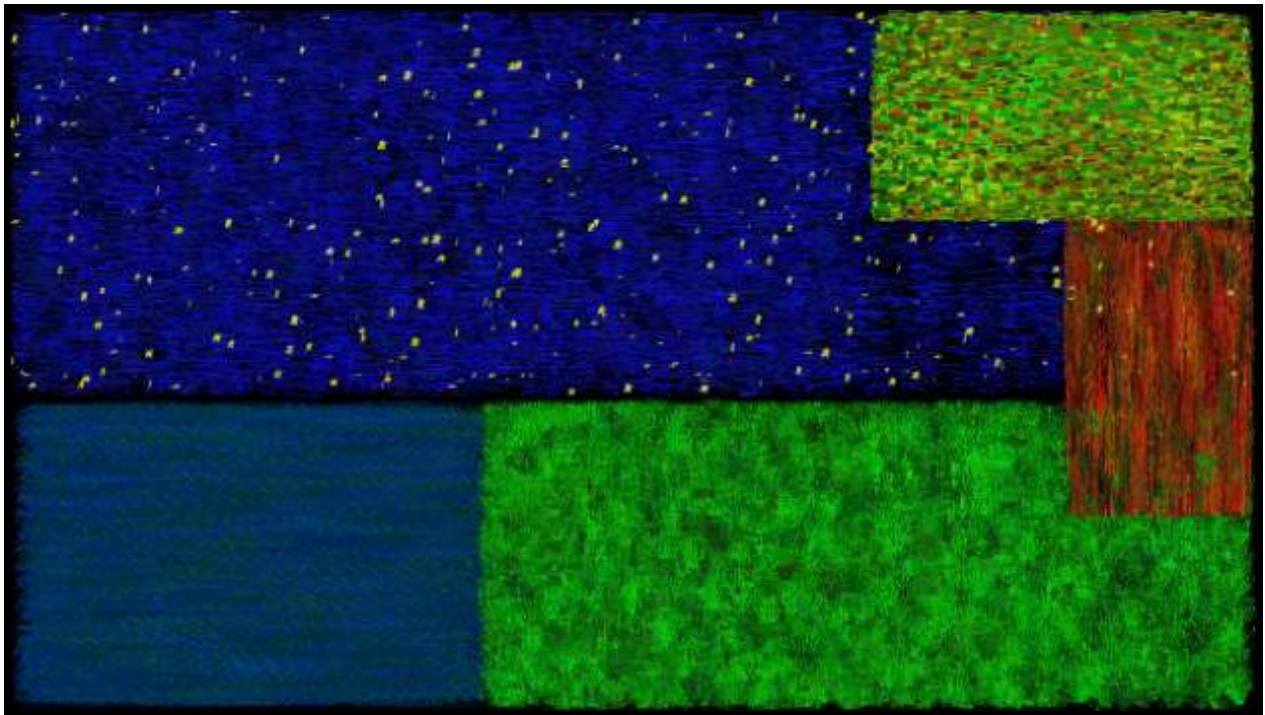


Figure 10 - Final Frame of Processing Video

In order to make the video more dynamic and grow with the music, I imported the QuickTime movie file from Processing into Sony Vegas. In Vegas, I used zoom effects to explore the full view of the growing picture in detail. I also used light ray effects in order to draw colorized rays out from many of the elements, giving the video more of a dreamy appearance. Over the course of the video, I use warping effects and coloring effects to pull out some of the colorization and textured shapes from within the video. Figure 11 shows the track view from Sony Vegas, where plugin effects and their linear

changes overtime are indicated. These video gestures and transitions were entirely driven by the accents and rhythmic activity in the music.



Figure 11- Sony Vegas Track View

Angel Wing began as an experiment in exploring the harmonic content produced by tapping a metal speaker stand in a variety of ways. The continued pursuit of molding the harmonic content of these recordings unfolded into a story in sound. The fluttering sounds of bell tones that were generated drove the aesthetic and story into the direction of non-physical spirits from the other side interacting with us in our reality. After the sound was complete, I was inspired to create a colored scene that was explored in texture editing and warping in ways that I felt brought to life the surreal experience that is *Angel Wing*.

Software Used

Spear 0.7.4. <http://www.klingbeil.com/spear/>

Cakewalk Sonar X1. <http://www.cakewalk.com>

Istvan Kador VST Collection. <http://www.joshgemmell.com/ik/>

Processing 1.5.1. <http://www.processing.org>

Sony Vegas Pro 10. <http://www.sonycreativesoftware.com/vegassoftware>