

A Melodic Dream

Animation Project by Ashley Carter

COSC 3P98 Term Project

Overview

"A Melodic Dream" is a music-themed animation inspired by pop art / punk style. The goal of the animation is to represent the instruments of a song as physical shapes and have them animate in time to the music playing. The models, animation and planning were done by myself. The song used is "Whigg Meadow" by Evan Schaeffer (refer to [Citations and References](#) at end of document).

The project was modelled and animated in Blender. The audio was edited in Adobe Audition and then the final video was edited in Adobe Premiere Pro. This is the first time I've worked in Blender, though I have 2 years experience modelling in Autodesk's 3ds Max, as well as experience in animation in various programs.

Design

Art Style

The art style for the animation is based on pop art and punk / cyberpunk style. The core elements of this style I employed include flat colouring, bold, almost neon colours, heavily stylized elements, and the use of simple shapes like triangles and lines in interesting combinations. While most pop art is 2d, I translated those style guidelines into 3d. To match the whimsical tone of the music, I used simple shapes and bright colours to evoke a child-like feel.

Also, I decided immediately I would work in a stylized, low poly art style. The focus of the project was animation, so I wanted to put my focus on that rather than modelling. And as

someone working alone with only a small amount of modelling experience, I decided to keep the models simple. Hence I decided to work in an art style that worked with simpler shapes.

Composition and Lighting

I created a small scene containing various objects. The focal point of the piece is the large, reddish-pink heart in the center. All other elements are placed around the heart to create radial balance. The objects are all arranged in a small area of the scene, with only light near the objects and void as the background. This allowed me to play with different coloured lights and glowing effects.



A piece of concept art that was used to plan a rough composition and colour scheme. Created by Ashley Carter.

Lighting and glowing / bloom effects were a big part of the ambiance of the scene. I used coloured lights to create interest and to continue the bold colour scheme. A mix of spotlight and point lights were used to light the scene. The point lights used to make the stars glow were also animated.

Colour Scheme

The colour scheme is made up of bright, saturated colours that would pop and stand out against a black background. This was inspired by pop art which would use saturated colours against a black and white patterned background (see [Citations and References](#) for an example). The colour scheme is triadic, using a reddish-pink, yellow, and blue.



Colour scheme used in the project. Created by Ashley Carter.

Sound Design

Since the aim of the animation was to be timed to music, I first had to select a music track. I aimed for an excerpt that was between 20 - 40 seconds. Specifically, I was looking for a track that had distinct instruments, particularly a melody part and at least one drum part.

The track I selected is Whigg Meadow (see [Citations and References](#)). It features an electronic keyboard, bells, and a small drum kit. It has really interesting timbres from the different instruments and has a good sense of rhythm and repetition. Although the excerpt was short, it has a sense of buildup that I was looking for. From there, I was able to plan out how to represent each instrument and time when the key points of the animation would be.

I decided to plan this animation without a storyboard, and instead by instrument. Since the song was repetitive and featured distinctive instruments, I planned out motions for each instrument and then determined how to time them. Other than that, I did some sketches to decide the composition of the objects and the camera placement.

For each instrument, I decided on a shape that would represent it and a motion that shape would perform. Then, I made as many of that shape as needed depending on how many times that instrument was used or to fill up the scene.

Instruments List

Instrument	ID	Model	Animation
Electronic piano	P	Long 3d stripe coming out of the ground. Each one in a bar is a different model.	The line appears to grow out from the ground. Then at the end of the bar, it shrinks back into the ground.
High Hat drum	H	Floating music notes.	Very quickly growing larger, then shrinking again, such that it's largest when the high hat plays.
Bass drum	B	Floating stylized 3d crystal-like heart	Very quickly growing larger, then shrinking again, similar to High Hat.
Bells	L	Shooting star	Shooting downwards at a 45 degree angle. The motion starts when the bell first plays and lasts as long as the bell continues to ring and reverberate.

The song is a 4/4 time signature, so I divided my plan into four-beat bars. The excerpt totalled 8 bars. Then I listened to the song to track when the instruments would play notes. Most of the notes in the song were eighth notes, very brief, so they worked well with quick motions.

Animation Timing Plan

See the chart below for the instrument timing plan. Each main row (labelled by bar number) is made up of four sub-rows representing each instrument. The High Hat is not included because it plays every eighth note.

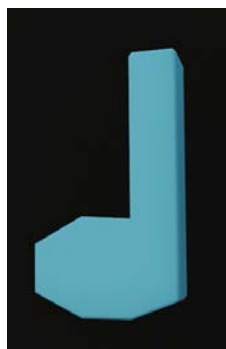
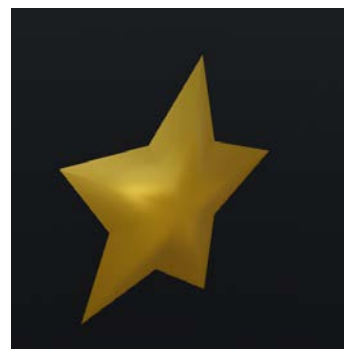
The third column (divided into 8 sub-columns) is the layout of each bar. It is made up of eighth notes (written in music as "one" "one and" "two" "two and", etc). Most of the song is made up of short notes, not held ones, so I represented it this way. Using this, and the rows of bars, I could write out what instrument played on which part of the bar.

Bar	Instrument	1	1+	2	2+	3	3+	4	4+
1	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	L	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	L	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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4	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	L	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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6	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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7	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	P	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Modelling

The project was modelled in Blender. Though this was my first time working in Blender, I was able to learn it quickly due to having experience in modelling. I understood most fundamentals, so it was all a matter of learning how to accomplish what I wanted in Blender itself. To this end, I followed a few blender tutorials.

The models are all either primitives (cubes, planes) or modelled in Blender by me. While I considered using premade models, I decided to model certain shapes that I wanted to stick to my art style and vision. I used modelling techniques like editing vertices and edges, chamfering, mirroring modifiers and subdividing to create the shapes. Although the models are all based on 2d shapes (heart, star, music note), since the project is 3d, I added depth to them.



Animation

The project was animated with keyframe animation in Blender, using point-to-point style. Since most of the animation had to be timed to parts of the song, I focused on the keyframes that needed to be synced first. The motions used in the animation were designed based on how the music felt. I took into account the length of the sound, as well as the timber or texture of the instrument in order to determine which sort of motions I wanted to use.

Since I wanted to reuse animations across multiple models (for example, the shooting stars), I used a hierarchy of empty objects, with the actual model being the child. That way, I could animate relative to the parent's position and scale, which could be changed to create some variance between the reused models. Also, since the music is repetitive, I was able to use cycles to loop certain parts. This way I could easily create lots of animations and animate over a longer section of the song while keeping a manageable workload.

References and Citation

Music

"Whigg Meadow" by [Evan Schaeffer](#). This work is used under [Attribution 4.0 International \(CC BY 4.0\)](#). Excerpts of the song were used and edited together to create a shortened version of the song. No other changes were made.

References for Art Style

The following images were used as inspiration or reference.



"Bright frame with star in pop art style" by Yuliamm13.
<https://www.dreamstime.com/bright-frame-star-pop-art-style-bright-frame-star-pop-art-style-diverging-multi-colored-rays-red-yellow-image188007595>



"Neon punk skull on vivid colors background funky pop art stock illustration" by TeaGraphicDesign.
<https://www.istockphoto.com/vector/neon-punk-skull-on-vivid-colors-background-funky-pop-art-gm1219804017-356926565>