IOL Folio 1

2D animation in AR

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Abstract
I will experiment on 2D animation shorts in AR. My experiments will focus on how to compose the narrative with short 2D animations, responding to 3D environment in reality. I will conduct a series of experiment with different animation elements, such as pace, time, sound effect and voice over. I also hope to explore on the process of creating storyboards and animatics, which I just started to get familiar with. My final outcome will be a collection of 2D animation shorts and looping animations that connect together as a linear narrative. The findings from the experiments will be applied to my studio 2 project, a pop-up book with AR interactivity. Through the practice in this folio, I hope to better understand the process of creating 2D animation, as well as the sound and music for characters and interactive scenes for good storytelling.

Authors Keywords
2D animation; AR; physical 3D environment; narrative; pace; time; SFX; voice over; background music; character; storytelling; interactivity

Introduction

My practice

My practice sits within the field of 2D animation for AR interactivity. I have been exploring how to create compelling interactivity with different medium. Through projects I have created in Studio 1, CPS and APD, I was able to explore on applying digital arts and animation, with interactivity, in physical world.

Project direction

I hope to explore on how 2D animation can be an appealing add in AR interactivity through the experiments in Illusion of Life. I aim to create a series of animation exercises that will help me exploring further on how 2D animation can be applied as responsive storytelling element.

My project should allow me to examine the relationship between interactivity in AR and elements of 2D animation such as movement and sound. It should also serve as an exploration on how to create narrative within limited animation keyframes and also in looping animation.

Context

The 2D animation produced in this project will sit within the field of AR art, the study of color, motion, movement, sound and interactive elements. Some excellent practitioners that sit within the field are:

Yunuen Esparza
Her works, included illustrations and sculptures, often inspire the viewers to discover the meaning of ordinary objects. She plays with viewer's common perceptions and reveal the messages behind the work with augmented reality. Her artistic style is usually driven by her personal experience and cultural references, which reflects contemporary social issues.

Marc O Matic
A Melbourne artist and animator, who creates his work combined both traditional illustrations and immersive technology. His works tell stories with illustrations in engaging ways.

Heather C. D. Smith
Smith describes herself as an interdisciplinary artist, who tells stories with interactive experiences. Her works, with both 2D and 3D animation, focus on connecting the artist and the viewer through AR interaction. She works with AR to transform passive viewing experience into engaging interactivity.

My project will sit in the same field as the works from these practitioners successfully assemble animation and engaging interactivity through AR experience.

Related works
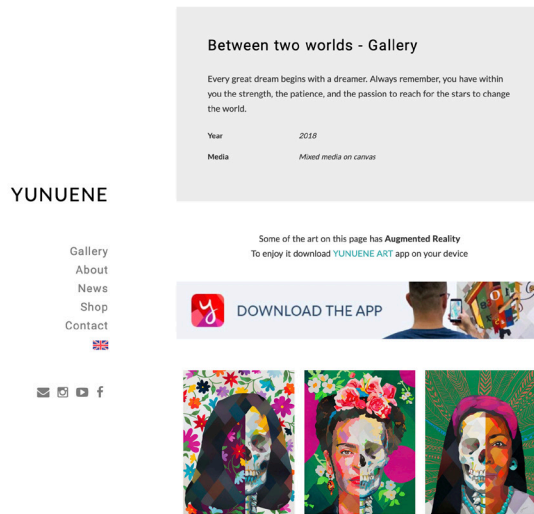
Between two worlds - Gallery
by Yunuen Esparza

Yunuen created different portraits in this art series. By using augmented reality, Yunuen reveals the representations of dream, strength, patience and passion within the characters.

AR interactivity is usually involved with discovery and response. I will experiment on implementing the concept of "revelation" using AR animation.
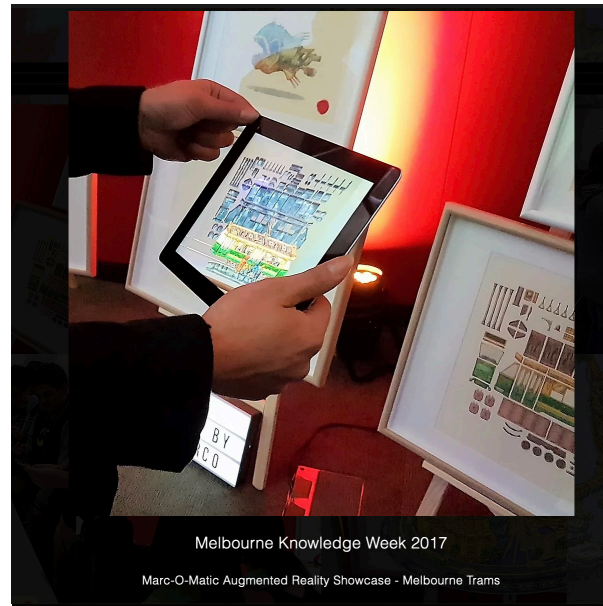
Melbourne Tram
by Marc O Matic

It is an AR art piece that Matic showcased in Melbourne Knowledge Week 2017. The looping animation shows an old tram assembled from the components off from the illustration and a funny scenario of the crowded vehicle.

This piece is a wonderful example of creating a simple narrative, explaining how a tram is put together and what it looks like up and running, within a 10-second looping animation. The AR animation brings the static illustration to life. I will experiment on creating short looping animations that can be applied to my character narrative.

COVID-19 AR Elixir
by Heather C. D. Smith

It's an AR interactive piece that Smith created when the pandemic hit the world. In this work, Smith put together different pieces of 2D animation in 3D place, as "experimental elixir", with music and sound effect, to recreate the experience of body and mind being in the pandemic.

Applying interactive 2D animation in 3D place, is one of the techniques I will experiment on. This work is a great example of applying sound and animation as a subtle guide for interactions in AR. I will benefit from analyzing the applied elements, how they are presented in space and how they are combined for narrative experience.

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Pitch

Method

The work produced in this folio will benefit me by providing a better understand of 2D animation narrative in short clips and looping animation. I will also look into how 2D animation work within AR interactivity. Through the experiments in this folio, I aim to create a collection of animations with connected narrative.

Response Ideation

In my Studio 1 project, I aimed to create a visual novel with human trafficking theme. I was only able to create partial preproduction kit for the game. In my reflection, I acknowledged that a "reading game" may not engage the target audience I have, which are children and teens, with short attention span. I want to create a short piece, involves 2D animation and engaging interactivity, informing the audience about human trafficking issue.

I changed my project direction to storybook. I aim to create a pop-up book with AR interactivity. I aim to build interactivity with the feature of AR. The 2D animations will be implanted to create character narratives and used as hints for interactivity. With animation and interactivity combined, the viewer will experience and connect to the story.

Outcomes

I will create a collection of 2D animation shorts and looping animations with narrative. These animations will have a connected narrative that reveals a completed story in 3D space. Some of the animations will also serve as interaction triggers and responses to actions. These experiments should benefit me from gaining a better understanding of animation narrative and the relationship between animation and interactivity in 3D space.

My final outcome should also be applicable to my studio 2 project, a pop-up book with AR experience.
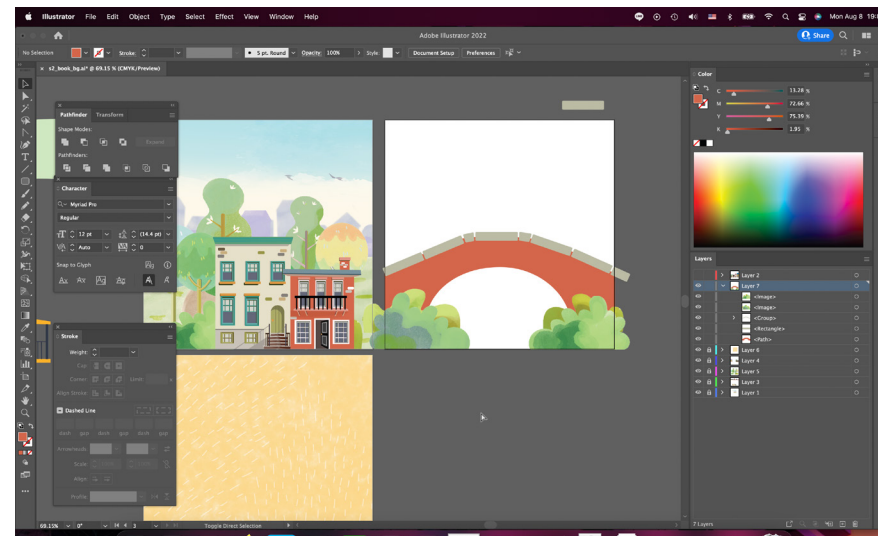
Ideation & Testing

Experiment 1

Aim:
Creating a looping animation in physical 3D space

Method:
I applied the character designs I've got from Studio 1 and worked with them in ToonBoom. I started out with the walk-ing cycle and idle poses for the characters. After creating three looping animated characters, I imported the clip into Adobe Premier to adjust the character placements with a photo of my prototype background. I then imported the adjusted animation into AR application, EyeJack, to test with the pop-up prototype I built.

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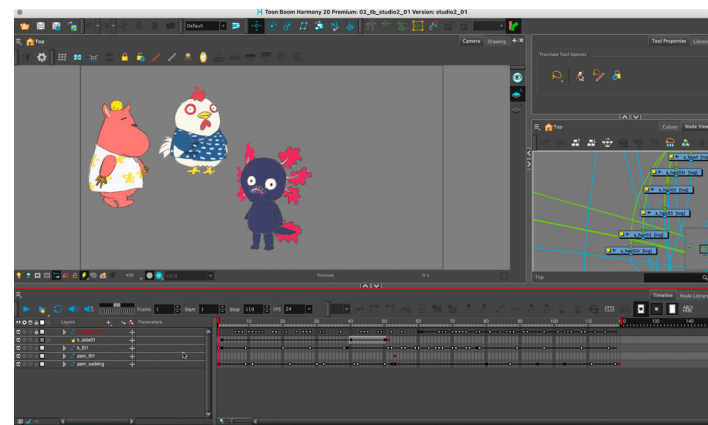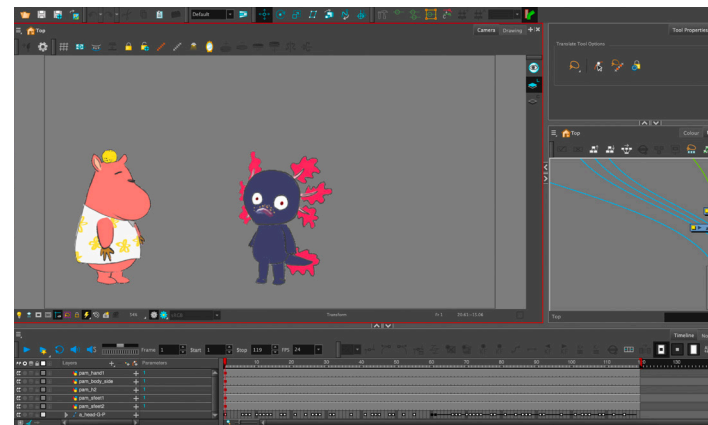
Reflection:

The first test successfully functioned in EyeJack. The characters are somewhat interacting with the physical 3D space, but not quite visible. To em-phasize the connection between the characters and space, besides from walking back and forth in the foreground, some possible approach can be the characters interact with the pop-up arts or interact with each others.
While the animation works in AR, the characters movements are rushing through, which is not the result I intended to have. I was still finding my way around ToonBoom. In order to create a storytelling vibe, It would be helpful to adjust the movements, with more keyframes, to a slower the pace.

Ideation & Testing

Experiment 2

Aim:
A short scenario, where the characters interacted with each other and space

Method:
I was experimenting with key-frames and trying to show some characteristics with the pace of actions and responses. I also experimented with character sizes and used size contrast to create a sense of foreground and background.

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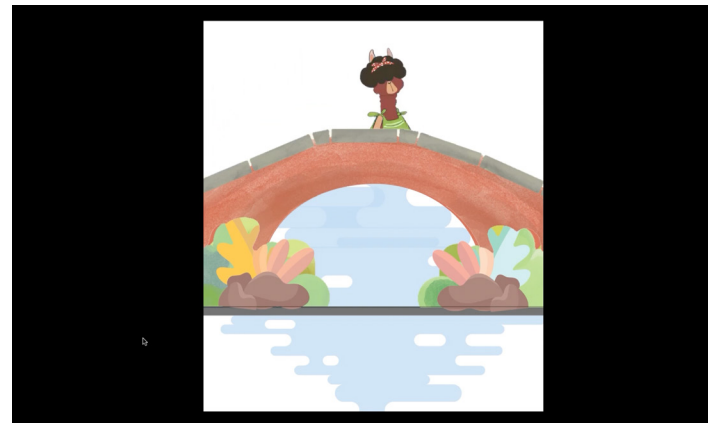
Reflection:

In the first video, Lynn, the alpaca, walks across the bridge, and disappear for a few seconds before coming back into the scene. While the sprite on the the bridge is smaller, the enlarged sprite coming back into the scene creates a sense of foreground and the bridge becomes background.

In terms of timing, I experiment how the sprite being absent then reappear created a sense of continuousness, where the character making her way down the bridge outside of the scene. However, the "break" between the character disappearing and reappearing was not long enough to create a good sense of her traveling down by the water.

I experiment on the timing for the characters reacting and interacting with others, which can be an add for showing different characteristics. I'm satisfied with each characters behaviors in the scene. However, each gestures does not last long enough and also with no breather for forming better characteristic impressions.

Some approaches to refine my result could be, in addition to gestures, adding sound effect to the characters to better portrait the personality, or giving more responding time in between for the characters and also the viewers.

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Ideation & Testing

Experiment 3

Aim:
Apply sound effect, voice over and background music to show characteristics and create storytelling vibe

Method:
I got licensed SFX and music from artlist.io. I used gibberish chatting SFX for the characters as their voices. I applied the background music to create a storytelling vibe. I used google voice as a placeholder for voiceover. I also had the SFX for each characters while the voiceover introducing them.

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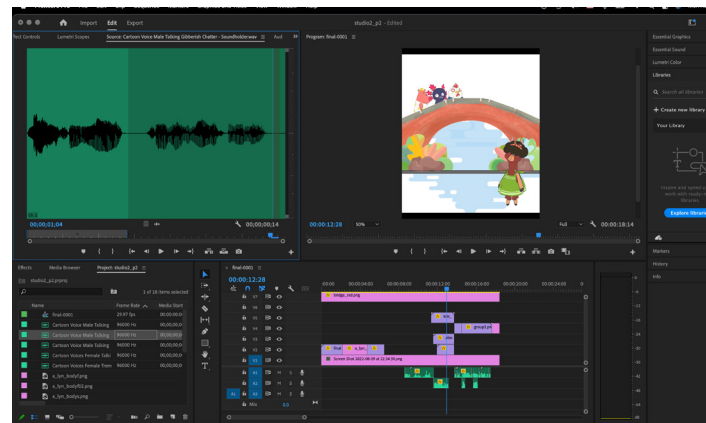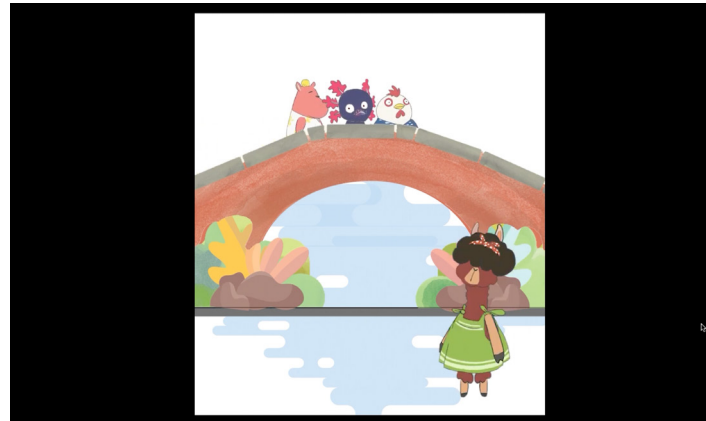
Reflection:

I experimented on these three different sound elements and tried to find a balance between the contrast of volumes and timing. The result I achieved reminds me of the stop-motion animation, Pingu. I considered the sound effect is a good add for better portraying the characteristics. I managed to find a fairly ok balance between volumes of three different sound elements.

However, the downside of using licensed music is that it does not fully complement your project narrative. It would be a better approach if I could work with a sound designer.

With this experiment, I also acknowledge that I should get my hands on a draft voiceover recording so that I can better scoping the time length for the animation. I would like to experiment more with the sound effect. As for now, the sound effect only serves as a part of the character, I should also think about how sound can be applied to invite the viewer for further interactions.

Reflection & Feedback

Further experiment

After my Folio 1 presentation, Nick suggested that I should first focus on the key points for engaging little loop. The advices on exploration of whole body actions and sound treatments for characters are good directions that I will apply to my following experiments. I should also work on character placements, so I could better stage the characters in the scenes.

The experiments I've got in Folio 1 are some good practice for me gradually picking up some basics of animated illustrations. I have also briefly touched on sound, music and looping animation in AR arts. I will continue working on character loops within scene settings. I will also further experiment with sound treatment in looping animations and AR responses. Hopefully the experiments will help achieving my intended outcome.

In the second half of the folio, I aim to create looping animations that are character narrative focused. I will start picking up Storyboard to create character animatics for the scenes that fit in my Studio 2 project. This practice should be a good support for me to better plan out the key moment of each scenes and leads to better development as well as better staging.

I will build on the findings from this part of the folio and continue experiment with sound, animation and triggered animation response. I will also review the referencing works to see what techniques I have been applied into my work and what others that I can further explore in order to achieve an emerging AR experience.

References

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