Deep Dive into Animation: Creating an Original Animated Short

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Deep Dive Into Animation: Creating an Original Animated Short

by

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An Honors Capstone
submitted in partial fulfillment of the requirements
for the Honors Diploma
to
The Honors College
of
The University of Alabama in Huntsville
4/30/2024

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Link to Final Video:

https://drive.google.com/file/d/1wYLU-i45ofIih30YPd15wfZWz8bKView/view?usp=drive_link
Abstract

Inspired by both my love for mermaid stories and the mysteries of the deep ocean, “Thalassophobia” is an original animated short film that tells an action-packed, atmospheric, and simple original story about the adventures of a mermaid and her struggles with loneliness, connection, and fear of the unknown set in a mysterious fantasy version of the deep ocean. Primarily using 2D animation, digital illustration, and video editing software, I aimed to develop the film from an original story and script to storyboard, rough animation, and fully colored final film using original backgrounds and characters.

Introduction

Despite being terrified of swimming, I have always had a fascination with ocean life, be it real or fictional. Growing up, I have distinct memories of rewatching a documentary on deep ocean exploration and constantly rereading a large interactive book filled with various mermaid facts, stories, and speculation. Despite how much the ocean covers the known planet, much of it still remains a mystery and lends itself to being a creative setting for fantasy and horror. Naturally, this interest in the deep ocean and mermaid stories would bleed into my art as an animator and concept artist.

The Concept Art 328 course offered a fun opportunity to express these interests in a character design assignment where I designed a deep sea mermaid and a small fish companion as part of a larger cast of characters. The course Short Film 425/426 allowed me a chance to try to expand on these two characters further when pitching ideas for an animated short film. While my film idea didn’t make it through as one of the projects to be worked on as a class during the
semester, it was during this time I learned about the Honors Community of Summer Scholars program. Provided the funding and structure by the HCSS program and now with a bit of short film production experience under my belt, I decided to try my hand at developing a 2D short film independently as an opportunity to involve myself in all the steps of short film production.

Pre-Production

Before beginning the animation stage of production, I had to fully write, storyboard, and otherwise conceptualize the film and its characters. Although I wouldn’t officially start pre-production until late May 2023, I had technically started brainstorming earlier that year for my story pitch as part of my Short Film 425 class. While it helped to not start completely from scratch, allowing myself time to revise earlier concepts into what would better fit my vision for the film, I still count this as arguably the most difficult stage of production because of how aware I was that these earlier decisions would heavily affect production down the line.

Character Designs

This was one of the most straightforward parts of the process, already having designs from my Concept Art 328 class to work from. Their designs remained very similar to their original iterations, simply being further stylized and simplified for a 2D animation. During this process I had designed an additional new character, a large ominous sea monster that would chase the characters throughout a large cave system. Their old designs are compared to their newer designs below:
The characters’ older designs from Concept Art 328:
Further refined and stylized final versions of the characters (plus a new character):
Scripting

After finalizing and revising the main character designs, I worked on writing a script to best outline the story and gauge how much time I would need to account for in animation. I struggled a good deal with this step, having to make several passes and revisions along the way. Because I don’t consider myself a confident writer, I sought script-writing advice and input from animation professor Nicole Hart and colleague/alumnus Vaughn Oeth. With their help, I was able to find a better balance between seeing out my creative vision by writing a compelling story and creating a project that could realistically be finished by myself during the initially intended 10-week time period. I floundered a bit (pardon the pun) with writing an original story rather than writing an adaptation of pre-existing work, but with encouragement from colleagues, I was also able to overcome this worry. I made the decision to create this film without using dialogue, not only because the characters were underwater but as a practical decision since omitting dialogue would save time on finding voice actors, recording lines, and animating lip syncs.

In earlier drafts of the script, the main character, a frightening deep sea mermaid named Cera (named after the suborder of angler fish called Ceratioidei), was focused on trying to get her next meal, a round oblivious fish, in a series of slapstick scenarios until a much larger, hungrier sea monster had come along, and both would have to work together to escape despite their differences. This version of the script didn’t flow well to create a convincing friendship between the two characters by the end, and I received helpful feedback that the audience may not connect with a character whose main motivation is to eat a cute harmless character, so this idea was scrapped. Wanting to refocus the story, I rewrote Cera’s character to be a more seemingly frightening but ultimately harmless character rather than the outright hostile character from before so that her connection with the fish later in the story would make more sense. The rewrite
became a simple sort of ugly duckling story focusing on themes of loneliness and connection despite differences while maintaining the premise of a deep sea chase sequence where the characters are trying to escape a large sea monster.

*The results of my script writing process are shown here:*

https://docs.google.com/document/d/1YHU8z6iNUcbF6VTr_NdzAG_1oiIxUiy4/edit?usp=drive_link&ouid=103753213251743940034&rtpof=true&sd=true

**Storyboard**

After finalizing the script, I created a storyboard to better visualize each scene and see how well events flow from one to the next. I ended up making a few cuts and revisions for the sake of clarity and to save on production time.

*Link to the full storyboard:*

https://docs.google.com/presentation/d/14TYoL7KOQXmjKX6eAPBXXVxQrjyUEXRn/edit?usp=sharing&ouid=103753213251743940034&rtpof=true&sd=true

**Animatic**

With the storyboard finalized, I created an animatic, drawing and revising any other necessary boards to convey major movements and timing and editing these to sound in a video to most accurately convey the pacing and runtime of the final film. Much of the sound design used in the animatic, including the music, is placeholder sound, and I plan to replace it further down the line when I finish the film. In hindsight, much of the film was paced too quickly, resulting in me having to adjust the timing of certain scenes during the rough production stage.

*Link to the animatic video:*

https://drive.google.com/file/d/1tUmWvYsEcCAiA-I5ZamF2yp31JclDsIQ/view?usp=drive_link
Color Script

Alongside the animatic, I created a color script following the main story beats of the film to start planning how I wanted the final film to look and to see visually how well one event can flow into the next while conveying the right tone. This also helped me better plan the final look of certain background environments and to help them look more cohesive.
Rough Production

My animation process worked very similar to a professional 2D pipeline, working from rough keyed animation to inbetweens and using timing charts to better outline the additional drawings needed for a fluid movement. After character animation for a shot was fully animated, I would add rough effects animation for effects like bubbles or steam. I used the 2D animation software Toon Boom Harmony and a Wacom Cintiq drawing screen tablet throughout the animation process. I initially had a bit of difficulty animating swimming locomotion for the mermaid, so I was happy to find professional mermaid videos available on Youtube to use as reference. Certain shots proved difficult to animate given my inexperience with animating or creating moving backgrounds, but thankfully I was able to make use of Toon Boom’s camera feature and pegboard feature to assist in this process. Most of the film in its current state is still rough keyed animation.

Swimming locomotion:

Key animation vs Inbetweens:

Key animation example: https://drive.google.com/file/d/1EEeTOwJM9Kx-NQD_Ek3BYOLXMAk-7LK/view?usp=drive_link

Inbetweens example: https://drive.google.com/file/d/1y0cZAszeG2g6wPPJ5WeEkknVa_5XwNHU/view?usp=drive_link
Examples of Effects Animation (in blue and red):

Backgrounds

During the rough production stage, I also worked on creating all of the 2D background assets for each shot, starting with simple layouts with perspective grids to use and reference for key animation to properly place characters in a scene when animating. After layouts were completed, I would then design and sketch the backgrounds before coloring and rendering the final background assets to be used in the final scene. As mentioned before, I spent a lot of time trying to plan how to approach moving, resizing, and overlapping background assets, especially for the scenes taking place in the cave system. To solve this, background layers needed to be oversized so that the edges aren’t visible from behind newer overlapping layers. Some backgrounds involving moving cameras also needed to be specially sized to take into account for screen resolution.
Example of background process:

Layout stage:
Background design/planning:

Final colored/rendered background:
Examples of background layer separation:
Example of layer planning for moving backgrounds:

Final backgrounds extending outside the bounds of the frame to account for overlap during movement:
Final Production

Once rough production is completed, the final production stage would include cleaning up/lining, coloring, and compositing each shot and editing them together for the finished edit of the film. Although most of the film is still in the rough animation stage, I was able to develop a few shots further to a final look to have a better understanding of the process.

Cleanup and Color

A few shots were developed to cleanup and color, referring to character reference sheets and reusing color palettes between scenes for consistency. Color didn’t account for special lighting in a scene, since they would ideally be corrected during the compositing stage.

*Cleanup vs Flat Color:*

![Cleanup vs Flat Color](image)

Compositing

After a shot was fully cleaned up and colored, I would composite it in Adobe After Effects to add effects and adjust colors and lighting for use in the final edit of the film.
Original shot vs Composited Shot:

Final Edit

Finished shots would be edited together to sound in Adobe Premiere Pro. Since most shots used the same timing in the animatic as the would in the final shot, the original cut from the animatic would be simply swapped out with the final. Because many shots at the point of writing this manuscript did not make it to their final composited versions, I am using their most updated versions in the edit in the meantime.

Link to the final version:

https://drive.google.com/file/d/1wYLU-i45oflih30YPdl5wfZWz8bKView/view?usp=drive_link

Conclusion

Overall, while I did not develop my film nearly as far as I wanted it to be, I achieved my goal of gaining experience in all aspects of 2D animated short film creation. This was a great learning experience for me and gave me a wonderful opportunity to express myself creatively and gain new skills in both animation techniques and pipeline experience. Had I the opportunity to redo this project, I would have attempted to downscale the project a bit more and enlist help from fellow classmates to assist in the more tedious steps of the production process like cleanup and
color. Similarly, I would have attempted to restructure my time and create harder deadlines to stick to to complete the film more viably in the proposed time frame. In the future, I plan to finish rough animation and take the film all the way through to final production including compositing. I may possibly enlist someone to compose original music for the project and to help with sound design, a step that I struggled with. This project included many firsts for me, including my first time writing an original script and my first time using moving background assets. Despite my various fumbles throughout this project, I am optimistic for the future, having new knowledge and experience to build from and excited to work on finishing this film and any future projects.