Process Document

Animation Production Unit 3

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Designing from the Inside Out *(See PW1 - PW5)*

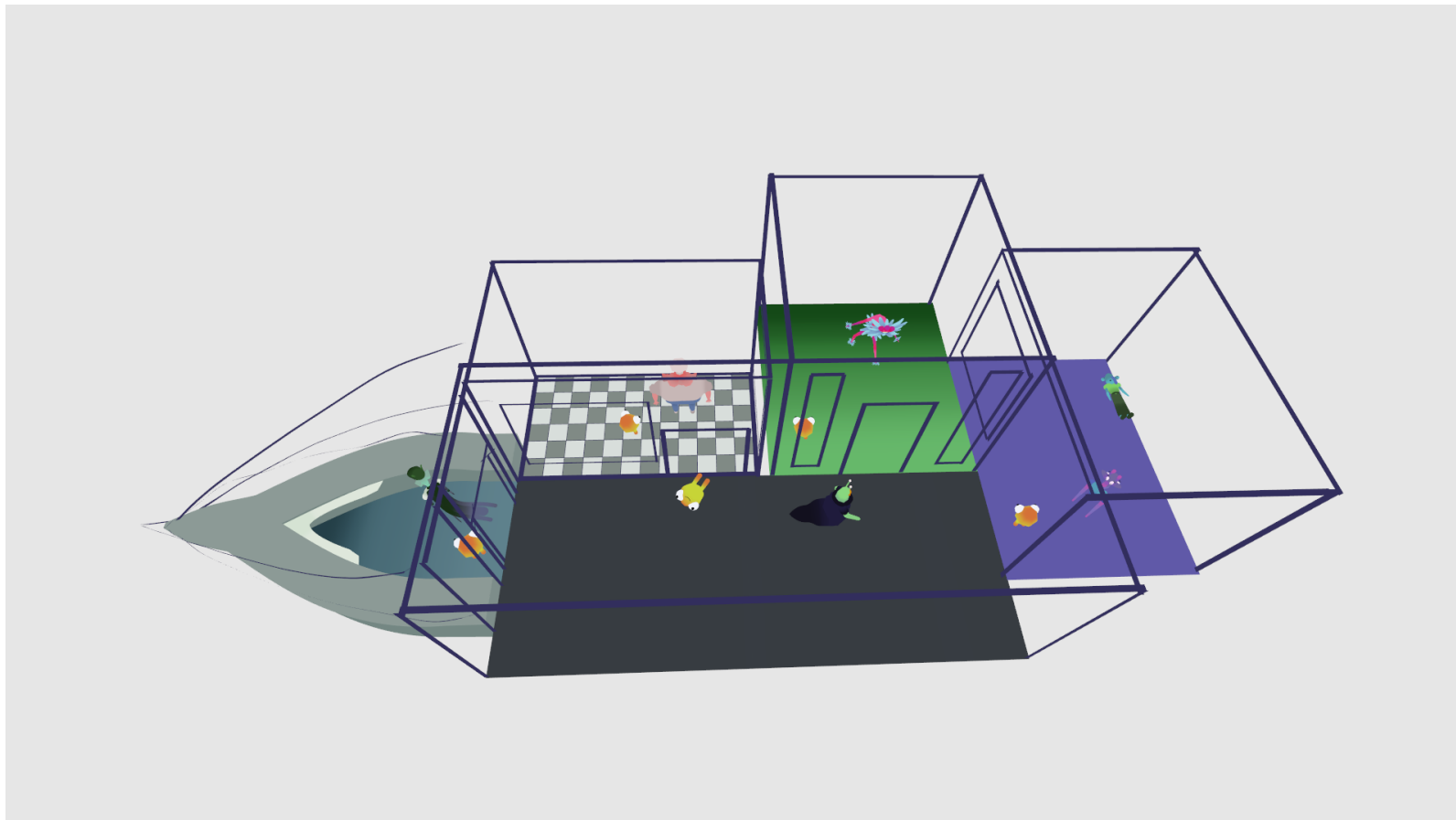
To begin the final production phase, my immediate objective was to construct the finalised spaceship. I intended to use my prior experience with Quill for every stage of the pipeline. I started with a rough 3D sketch of the rooms and their connections, using my previous 2D concept art as a reference. I then imported the character models into their respective zones to establish a real sense of the environment. During this phase, I discovered that working within the 3D VR space gave me a better understanding of how to tailor each room to the characters themselves, a perspective I would not have gained through traditional 2D software.

I began sculpting the rooms, considering the spatial requirements of each character. Each room's geometry defined the inhabitant inside. The Control Room was sleek, sharp, and minimalist, mirroring the Pilot. The Kitchen was wide and compressed to fit the Chef's broad body shape. The Garden was tall and vertical to match the Botanist's height and the plants. The Engine Room and Living Room were scaled to ensure all characters could move around comfortably. Once the floor plan was finalised, I addressed the verticality. By observing the characters, I determined the appropriate ceiling heights. The Control Room became open planned with curved ceilings, while the Garden was significantly taller. I ensured all roofs were high enough to accommodate the VR viewing angle, preventing the immersion from breaking due to clipping issues.

Architecture of the Panopticon *(See PW1 - PW5)*

Following the structural build, I proceeded to integrate the windows. This stage sparked a significant revelation regarding the intended audience engagement. I made the decisive choice to eliminate standard doors entirely, replacing them with open gates. Each gate was morphologically sized to perfectly fit the room's protagonist, allowing for free movement and unobstructed sightlines. I also chose to saturate the spaceship with massive viewing windows, installed both between internal partitions and on the exterior hull. This architectural transparency transforms the vessel into a veritable Panopticon, allowing the viewer to perceive almost the entire ecosystem simultaneously from a central vantage point.

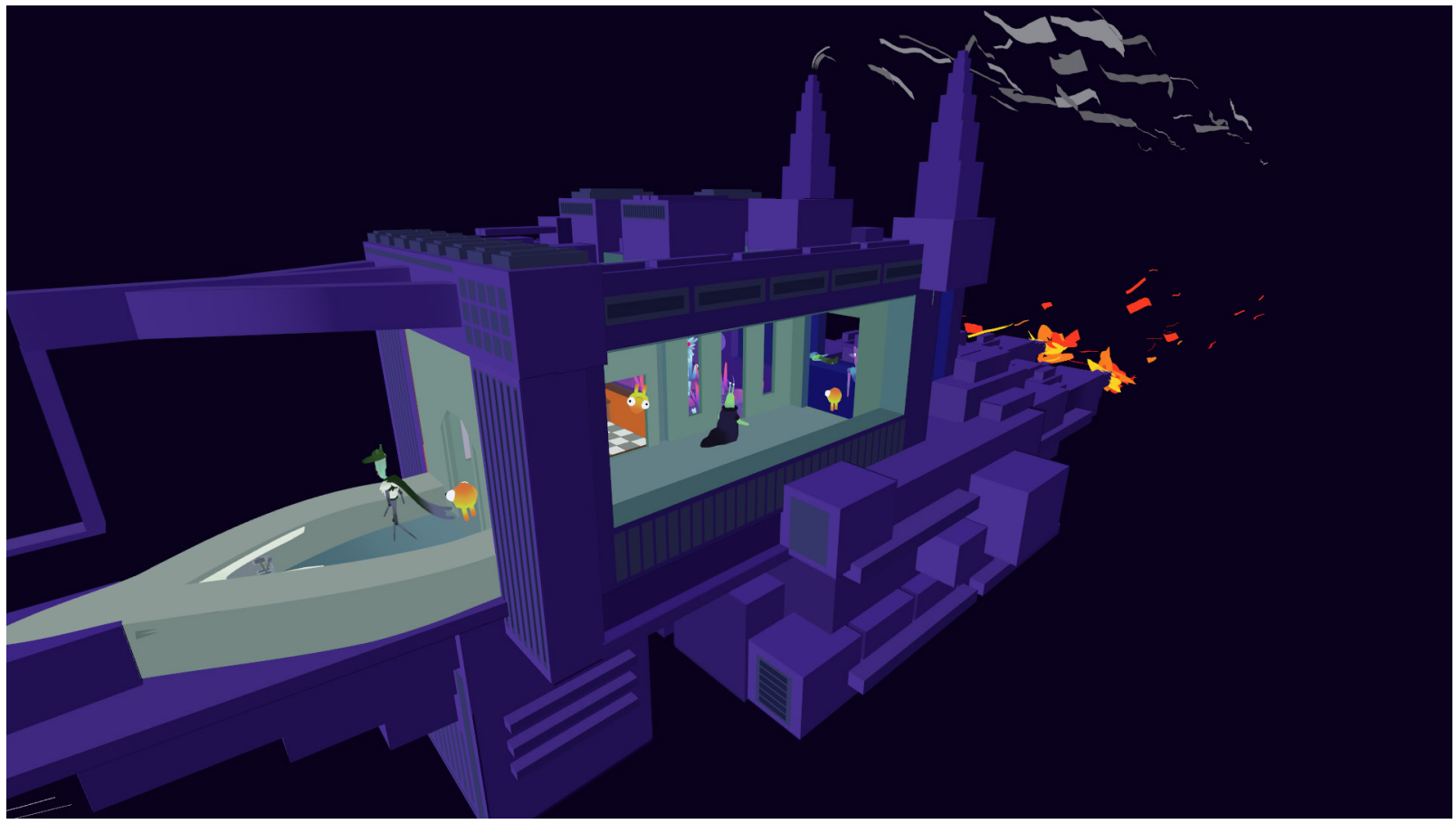
This design choice aligns directly with my theoretical concept of selective attention. I realised that while the geometry technically allows the viewer to see everything at once, the human brain cannot cognitively process every character simultaneously. This creates a tension between visual access and cognitive bandwidth. The architecture itself forces the viewer to become the editor of the experience. By removing the physical barriers of walls and doors, I placed the burden of narrative selection onto the audience, compelling them to choose which room to attend to while the others continue to perform in their peripheral vision.



Interior Texturing and the Living Ship *(See PW6 - PW9)*

With the wireframe complete, I refined each room individually, using folder structures to isolate specific zones. I aimed for the interiors to reflect their inhabitants. I gave the Kitchen a warm, slightly chaotic yet ordered aesthetic. The Garden was given a wild, organic beauty. The Control Room maintained a strictly minimalist appearance. The Engine Room was designed to feel like the pulsating heart of the vessel, while the Living Room served as a cosy communal space.

Upon completing the interiors, I built up the exterior, defining it as a spacecraft with distinct, digital industrial parts. Subsequently, I created looped animations for environmental elements that would remain constant. These included energy radiating through the engine room, rear thrusters firing, light streaks on the hull to simulate speed, and pulsating cables indicating power flow. These elements not only breathed life into the ship, effectively making it an additional character, but also reinforced the idea that the animation is a living entity. Even when the crew is stationary, the environment remains in constant motion.



Spatial Blocking *(See PW10 & PW20)*

Prior to starting the final character animation, I established a strict timeline to ensure the loop made sense. With multiple characters moving at once, the timing of their interactions was critical. To address this, I created a schematic animatic directly within the 3D space. Rather than drawing abstract lines to represent paths, I utilised the character models themselves to "block out" the scene.
I positioned the character models at specific intervals, moving them every 1 to 3 seconds, to create a stepped visualisation of their movement. This method was superior to drawing simple lines because it allowed me to gauge the actual volume of the characters within the space, ensuring they wouldn't crash into each other or clip through walls. This process allowed me to lock in the interaction moments, such as the exact frame the Cleaner cleans the mess or when the Chef hands off an item. This blocking served as an essential guideline for the production phase. I was able to animate directly over these "stepped" poses, ensuring that every movement was purposeful and synced, eliminating the risk of characters drifting out of time during the two minute cycle.

Kinetic Realisation *(See PW11 - PW13)*

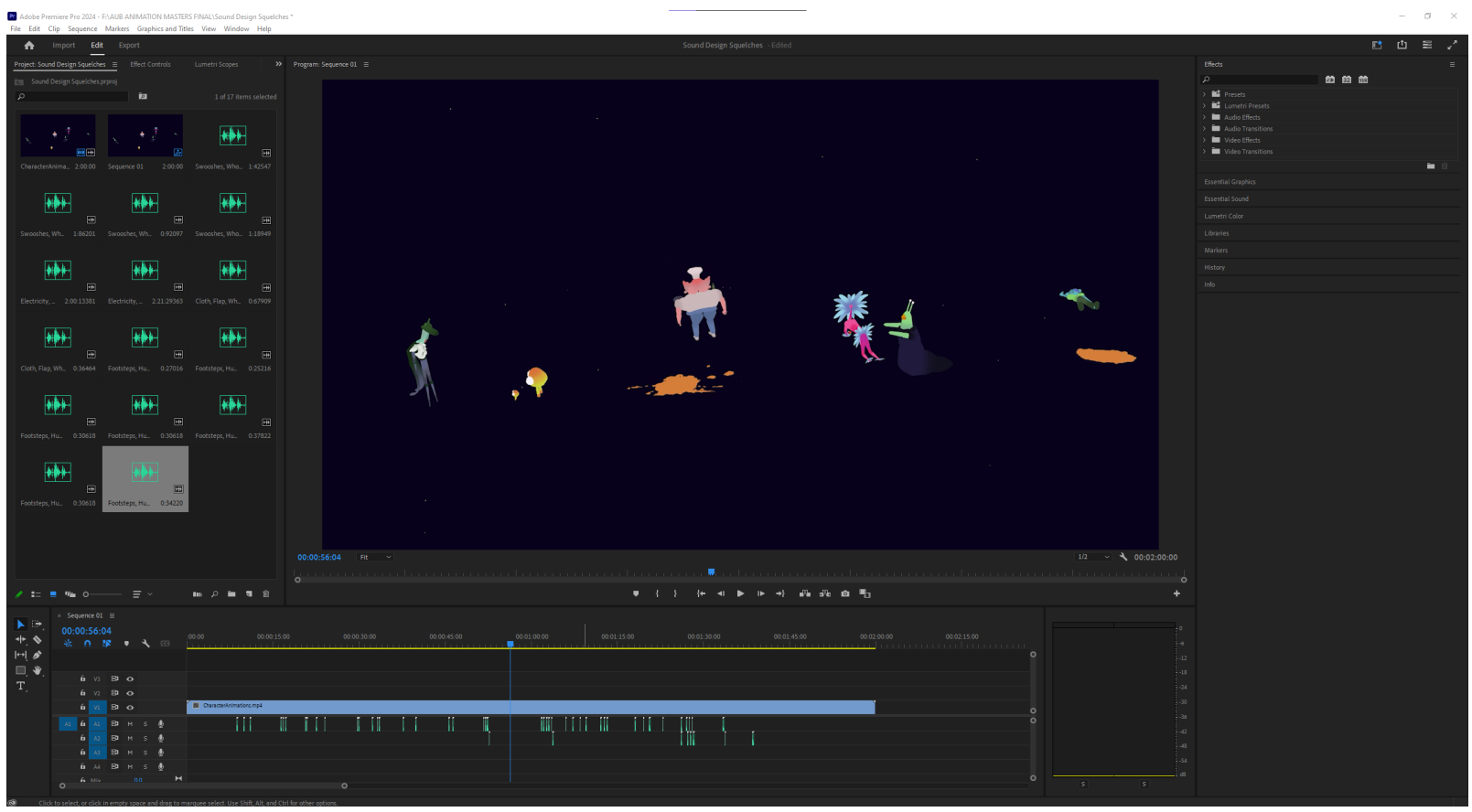
With the guide established, I proceeded to the final animation. First, I made specific changes to the character models to improve their performance. I noticed a limitation in the Chef's physique where his broad chest restricted the reach of his original two arms, preventing realistic two handed tasks. To fix this, I integrated a third arm into his chest, which resolved the reach issue and added to his unique alien silhouette. For the Alien, I inserted extra joints into the legs to allow for a fluid, ripple like motion rather than a rigid walk. I also modified the Pilot by straightening the cape geometry into a vertical line. This allowed me to use the Grab Tool in Quill to animate the cloth physics manually with greater control.

I defined specific movement styles for each character. The Chef was animated to be clumsy and heavy, yet erratic. The Botanist moved in quick sweeps followed by sudden stillness, mimicking a plant in the wind. The Pilot executed smooth, calculated movements, flying like an ethereal being. The Alien moved with fluid thickness, bouncing around and causing chaos. The Cleaner swept across the ship in long, elegant strokes. My method involved animating one character until they interacted with another, then matching up the second character's performance based on the animatic guidelines. I adjusted the frame rates to create a hierarchy of motion, validating my decision to pursue a non linear visual path

Auditory Spatialisation and Sound Design *(See PW15 - PW18)*

Following the completion of the visual animation, I integrated a spatial audio landscape to enhance the immersion. To ensure precise timing, I rendered a diagnostic pass of the animation with all walls and ceilings removed. This stripped view allowed me to isolate the character performances. For the Kitchen environment, I collaborated with a peer who produced the specific soundscape, while I generated the remaining effects. Using Premiere Pro, I mapped these sounds to the specific timing of the movements, creating distinct audio stems for each element, such as the Alien's wet splats and the Chef's footsteps.

I then imported these stems back into Quill, converting them into spatial audio objects. This stage required careful adjustment of the volume curves to determine how far each sound should travel. To ensure the sound remained grounded, I applied transform keys to the audio emitters, effectively attaching the sound source to the character so that the audio physically tracks them as they move through the 3D space. I approached the mix with a specific hierarchy of attention. The Chef's footsteps were mixed to be the dominant sound, reinforcing his mass. Conversely, the Pilot required a specific flying tone, and the Cleaner needed audible skidding effects. Finally, I layered in ambient background noise to ensure the spaceship felt pressurised and operational.



Technical Optimization and Asset Management

Approximately a third of the way into the animation phase, I encountered a significant technical issue. While the geometry count remained safe, the texture memory usage spiked drastically, making the file too heavy for standalone mobile VR export. I initially feared I would be forced to migrate the entire project to PCVR via Unreal Engine, which would have severely limited the accessibility of the piece.

However, upon conducting a detailed check of the file structure, I made a significant discovery. The "blocking" animatic layer, where I had placed the character models every 1-3 seconds, was hidden from view but not deleted from the project memory. Because this layer contained so many duplicate character models, it was consuming a vast amount of memory. By permanently deleting this now redundant guide layer, the file size dropped significantly. This optimization immediately brought the project back within the limits of mobile VR performance. This was a moment of profound relief. It meant that I could achieve my original ambition of a mobile friendly animation without compromising on the visual quality or complexity of the living ship.

Critical Reflection and Future Developments

I realised I could have condensed the loop by approximately 20 seconds. Had I executed a more detailed 3D animatic phase, I would have identified the slower moments earlier. However, the removal of the Passenger actually enhanced the scene. Because that character was isolated, they lacked integration with the connected crew. Eliminating the only non interactive element resulted in a more cohesive ecosystem.

In future projects, I would establish a library of assets and walk cycles. This would have helped create a smoother quality to the animation while speeding up the workflow.

I observed that the lack of blinking lends the characters an eerie quality. While this contributes to a distinct sci fi tone, it detracts from my primary goal. I intended for the characters to be perceived as biological organisms, not digital assets. Given more time, I would fix this, as blinking is essential for creating a sense of life.

I also uncovered an interesting narrative layer regarding the Cleaner. Technically, they are the only character getting satisfaction from their existence. While the rest of the crew is stressed, the Cleaner enjoys a perpetual feast. This implies that in this world, the character with the lowest role possesses the greatest freedom.

Titling and Future Scope: The Vessel Anthology

I have officially titled the piece VESSEL - A Loophole in Space. The primary title, Vessel, was selected as it reinforces the status of the characters as trapped lifeforms within a container. The subtitle creates a double meaning, alluding to both the sci fi setting and the structural loop format. This naming has sparked a broader concept for a potential anthology series. I envision a collection of distinct two minute looped animations, all operating under the VESSEL name but with unique subtitles. Future versions could explore different enclosed environments, such as a boat with aquatic creatures or a secluded woodland cabin.

If I were to pursue these episodes, I would design events that cross into each other's loops. Eventually, assuming the necessary technology, this could combine five to ten different vessels into a single, massive ecosystem. This would create a level of density where a viewer could observe the simulation for hours and still miss significant details, fulfilling the ultimate ambition of creating a world that exists independently of the viewer.

User Testing and Attention Analysis *(See DD15 - DD18)*

To test the design before the public release, I conducted user trials with friends and sent the project to family members to watch on their home VR headsets. I asked them to record these sessions so I could analyse their physical movements and see exactly where they were looking during the loop.

It was very interesting to observe the different paths each person took. Because there were no camera cuts to direct them, no two viewers watched the scene in the exact same order. Some users immediately turned around to inspect the engine, while others stayed focused on the pilot. However, despite these unique starting points, the footage eventually revealed a clear trend: most viewers spent the majority of their time watching the Alien.

Upon reflection, this is logical. The Alien is the first character to cause a disruption, and because other characters turn to look at or interact with it, the audience naturally follows their gaze. This unintentionally made the Alien the main protagonist, rather than just one equal part of the ecosystem.

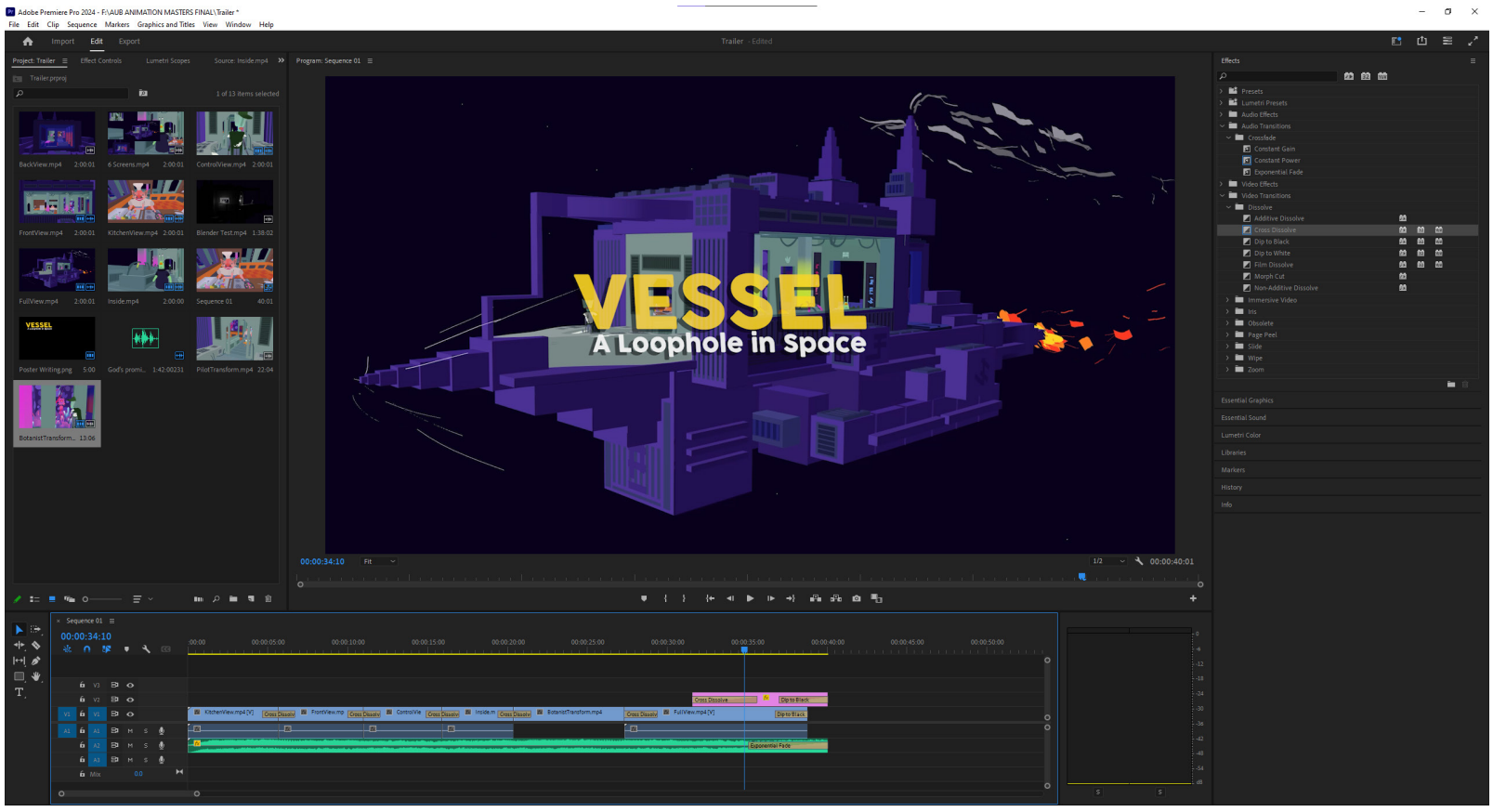
This finding is crucial for future projects. To ensure the viewer's attention is truly split, I need to avoid connecting the characters too closely to one single event. In the future, I aim to create a structure where every character has equal focus, with no clear main character or villain. This would force the viewer to split their attention even more, encouraging them to explore the space freely rather than following a single story path.

Marketing and Professional Positioning *(See DD8 - DD11 + DD19)*

To ensure the work reached audiences beyond the immediate academic context, I executed a multi format distribution strategy. I exported various 2D renders of the animation from different camera angles, enabling the piece to be viewed on standard screens by the masses. This included a visual collage, a split screen composition that displayed multiple viewpoints simultaneously in one video, mimicking the Panopticon effect for non VR users.

For the primary VR release, I selected the platform Theater Elsewhere. My decision to utilise this specific distribution channel was driven by data gathered from my previous units. My prior Quill animations uploaded to this platform had garnered between 5,000 and 11,000 unique views, indicating a highly active and engaged user base. Theater Elsewhere offers a significant advantage over standard repositories as it allows users to stream the content directly, preventing the need to download large files. This ease of access ensures that anyone with a headset can instantly inhabit the world I created.

To support this upload, I produced a suite of marketing assets. I designed four distinct cover images, selecting the most impactful composition to serve as the project thumbnail. Additionally, I edited a trailer using the previously exported 2D footage to generate interest. My objective with this robust release strategy is to maximise exposure within the immersive media community. I am positioning this project not just as a student film, but as a professional portfolio piece. I am hopeful that the high visibility on Theater Elsewhere will serve as a bridge to industry recruitment, placing my practice on the cutting edge of the VR animation sector.



Conclusion

In conclusion, VESSEL - A Loophole in Space represents more than just a technical exercise in VR animation; it is a successful proof of concept for a new form of spatial narrative. By rejecting the traditional cinematic cut in favour of a simultaneous ecosystem, I have moved beyond the limitations of the frame, treating the viewer not as a passive observer but as an active inhabitant of the story. The project demonstrates that narrative depth in VR does not require complex interactivity; rather, it requires a living world that respects the audience's intelligence and agency, rewarding their curiosity with details like the Cleaner's sub narrative or a miniature cooking show in the Kitchen.

This project positions my practice at the precise intersection of technical innovation and creative storytelling. The challenges I overcame, specifically the optimisation of memory for mobile VR and the integration of spatial audio, prove my ability to deliver high fidelity artistic visions within strict hardware constraints. This balance of artistic intent and technical problem solving is the defining characteristic of the current immersive media landscape.

As I transition into a professional career, VESSEL stands as a testament to my capacity for lateral thinking. It demonstrates that I am not merely an animator who executes instructions, but a creative problem solver who actively seeks to disrupt conventional pipelines to achieve unique aesthetic results. My ambition is to join a forward thinking studio that prioritises innovation over tradition, a team that is eager to break the established rules of the medium. I bring a mindset that consistently thinks outside the box, ready to leverage emerging technologies to invent entirely new storytelling techniques that have yet to be defined.

Epilogue: The Virtual Studio

Across the span of these three units, I have not only mastered a complex new software tool in Quill, but I have also fundamentally reshaped my approach to narrative construction. My proficiency in character design and worldbuilding has evolved alongside my technical understanding of the medium. The attached screenshot of my total logged usage reveals a cumulative duration of 665 hours, equating to more than 27 full days immersed in a virtual vacuum, inhabiting a world entirely of my own design.

This statistic makes me feel a duality of emotion. While I feel a sense of pride in the discipline required to achieve this volume of work, there is an unease regarding the profound disconnection from physical reality required to build these digital worlds. Looking ahead, I anticipate the evolution of animation tools that bridge this divide. I hope for future software that mirrors the hybrid capabilities of apps like Gravity Sketch, integrating Augmented Reality (AR) into the animation workflow. This would allow the artist to remain present in the physical world during the technical process, entering the immersive void only when necessary to view the design in its purest form.

There is a traditional adage in art that one must “take a step back” to gain perspective on their work. However, the future of this medium suggests a poetic inversion of this rule. With the convergence of AR and VR, the artist will no longer step back into reality to see the picture; instead, they will take a step into the virtual to discover the truth of the design.

Industry Report

My primary objective post-graduation is to secure a role within the immersive media sector, specifically positioning myself as a Spatial Narrative Designer rather than a traditional animator. Through the production of VESSEL - A Loophole in Space, I have identified that my strength lies at the intersection of technical innovation and experimental storytelling. I am not merely interested in executing pre-existing pipelines; I aspire to work within forward-thinking studios that are actively defining the grammar of VR and AR storytelling.

VESSEL serves as the central pillar of my exit strategy. It functions as a comprehensive proof-of-concept that demonstrates my ability to handle the entire immersive pipeline, from spatial pre-visualisation in Quill to character rigging, animation, spatial audio integration, and critical optimization for mobile hardware.

Crucially, the technical hurdles I overcame during this project serve as my strongest selling point. The ability to optimise high-fidelity texture assets for standalone headsets without sacrificing aesthetic quality is a high-demand skill in the current industry. By presenting VESSEL not just as an art piece, but as a solved technical problem, I position myself as a creative problem-solver capable of balancing artistic intent with hardware constraints.

My immediate entry to market relies on a data-driven distribution strategy. Leveraging my previous success on the VR platform Theater Elsewhere, where my work has garnered between 5,000 and 11,000 unique views, I am releasing VESSEL directly to an established community of immersive enthusiasts. This ensures immediate visibility without the friction of app lab downloads.

Simultaneously, I am utilizing the 2D “Panopticon” renders and the trailer to engage with the wider animation community on platforms like LinkedIn and Instagram. These assets are designed to bridge the gap for recruiters who may not have immediate access to a headset, allowing the work to be assessed on its narrative and animation quality alone.

In the short term, I aim to work as a VR Artist or Junior Animator, utilising my proficiency in Quill to speed up pre-production and concept phases for larger productions. In the long term, I aspire to move into a Creative Director role, leading projects that explore the convergence of VR and AR. As noted in my research, I believe the future of the medium lies in tools that blend presence with creation. I intend to be at the forefront of this shift, moving from building “disconnecting” virtual worlds to creating mixed-reality experiences that layer narrative over the physical world.

My Master’s degree has transitioned my practice from standard 2D animation to spatial design. I leave this course with a portfolio that proves I can build independent, living worlds, and a mindset ready to challenge the status quo of the animation industry. I am ready to take the step from the virtual studio into the professional one