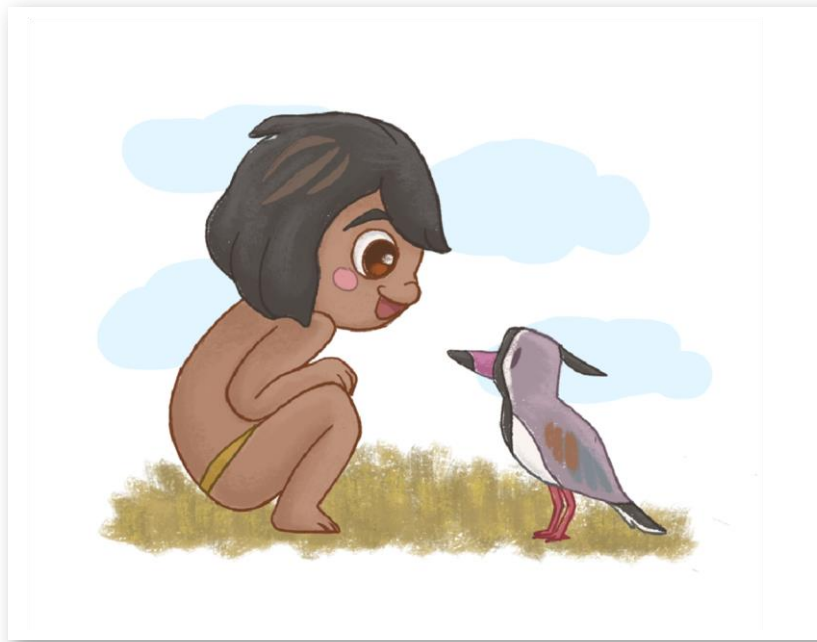


“Julia” (Karupale-Kipa)

Work in progress

Original story by Anne Chapman and Sonia Rojas

- **Project introduction**
-



Format of the Project.

Extended Reality Immersive (VR/AR) experience containing 2D animated narrative, and holographic interactive 3D animations that deploys diegetic narrations of the storyline.

The project is developed with VR/XR (Virtual Reality/Extended Reality) immersive interactive technology. When the prototype or app initializes, the introduction of the cinematic experience is presented through a head up display in the headset, tablet, or device for visualization such as HoloLens, Magic Leap, Valve Index, Oculus Quest 2 and Pro, or HTC VIVE. The story is presented by an introduction and instructions of how to navigate in the immersive environment, and how to follow the interactive episodes of the story. The viewer is guided through the episodes on a simulated topography of the “Tierra del Fuego”, rendering islands and channels. The topography is rendered in wireframe to show how the first-person avatar must approach by teleporting or walking through controller’s strides the symbolic elements of the narrative. The symbolic elements are presented on screen panels located in specific spots; bright areas of the virtual wireframed landscape to visualize and interact with the story play mode. The screens appear according with the progression of navigation by walking or teleporting. Then each screen, as the users approaches it, displays the 2D

animations containing the episodes of the timeline. The user must follow the screen stations to finally conclude in the last screen the epilogue of the narrative. While the user is navigating the immersive journey, 3D animations are displayed as 3D models to show interactively what each character of the story represents. In conclusion it is an immersive experience where the digital immersive world deploys interactive 2D animations in screens, and interactive holographic 3D spatialized animations that users can trigger and manipulate to obtain specific snippets of the film narrative. In the section Project Development Outline, this process will be explained in detail.

Target Audience.

Children audience between 6 and 10 years old

Technology target platforms.

VR/AR or XR technological platforms, run in Oculus Quest, HTC VIVE, Microsoft HoloLens, Magic Leap, Valve Index.

Distribution platforms.

Mainly Steam VR, Oculus VR, Microsoft Mixed Reality Portal.
Apple and Android Augmented Reality apps will be developed as well

Project background

Anne Chapman, a Franco-American ethnologist specializing in the indigenous peoples of Tierra del Fuego in southern Patagonia, Yagan and Selk'nam met and worked since 1985 with the last four women who spoke the Yagan language in the Chilean sector of Tierra del Fuego. Anne proposed to Sonia Rojas in 2003 to work together on a literary script based on her scientific research on the Yagan people with the aim of making a documentary. The two worked on a literary script in 2004-2005 that was finished by Chapman and discussed by Rojas. They then began the work of searching for images, at CNRS Images, Delegation Meudon, the place where Chapman kept 16-millimeter recordings of the originals of the documentary she had previously made "Homage to the Yagans" (1990). Anne Chapman and Sonia Rojas reviewed the material selecting what Sonia Rojas would use for the documentary "Julia".

Chapman and Sonia Rojas recorded the sound of Julia's literary script with their voices at Paris 7, Jussieu. The recording was made in Spanish, with English and French subtitles to be included in the documentary.

Chapman had recorded the Yagan chants of the last survivors in their language, the Yagan. The sisters Úrsula and Cristina Calderón made the original recording. Anne had envisioned using these chants in the documentary "Julia".

For different reasons Anne and Sonia could not go ahead with the project, then Anne Chapman passed away in 2010 and the project remained unfinished. Anne Chapman had granted Sonia in 2008 notarial authorization for the use of the necessary materials for the documentary, including the literary script "Julia" duly registered under the Chilean intellectual property registry, original photos of Yagans, her original language recordings and Yagan songs, and the images that were necessary from the documentary "Homage to the Yagans".

Today, the possibility of using Anne Chapman's literary script in an animated immersive film experience directed by the artist Ignacia Montenegro is the opportunity to pay tribute to the Yagan people through Julia's life and a tribute to Anne Chapman who rescued the memory of the southern peoples with her tireless work as an ethnologist.

- **Overall outline about the presentation of the project concept/setting**

The Story of Julia as a Concept

The concept is centered around the episode of the young girl Julia rebelling to the missionaries and European settlers' customs with strong determination. Perhaps, an isolated case that was rooted in real events, is told to represent how the cosmology and mystical experiences of the Yagan or Yamana people are presented through the journey of a girl that refused to be the subject of imminent acculturation and perhaps this attitude saved her to be part of the relentless genocide that affected many members of her community.

Julia or Karippale-Kipa her name in Yagan, was a girl that lived in the Wollaston Island near Cape Horn. She was born in Wollaston, and she was named after a specific site in that island. She grew up as a Yamana (the original name of the human group) child, and she was not "civilized" by settlers, explorers, or missionaries. Her upbringings were strongly guided by the traditions and cosmology of the Yagan people. According with oral accounts of the last survivors of her community, Julia lived around the last quarter of the 19th Century, and beyond the half of the 20th Century.

Julia remained alive in the memories of her descendants due to her strong will and determination to maintain unaltered the way of life of her beloved tribe, and at the same time exposing a natural reluctance to the introduction of the European customs, represented by food, clothing, and religious teachings: those being induced as a condescending daily life task in a sort of relentless imposition. Julia refused to follow the new way of life and rebelled against that fate by escaping the *Douglas Anglican Mission* at the Navarino Island, starting a journey of 450 miles of

coastal navigation to find haven in the islands and harbors situated in the Black Cape until eventually reaching a community of her tribe in the *Mejillones* bay, near the Beagle Channel.

Julia accomplished through this journey, according with contemporary accounts, a great feat that deserved to be narrated in the history of navigation due to the extreme geographical harshness of channels currents and climate inclemency. Julia knew very well the nature of her world, and she navigated fearlessly in her canoa, being accompanied by her dog. During her journey of two months, she fed herself with sea mollusks, "Cochallullo" (a seaweed), and birds' eggs. From time to time, she landed in some little island to rest, recover strength, and hydrate. Nature was her companion; therefore, she was in a natural state of communion with the environment, and she felt safe and protected by what otherwise foreigners considered a very hostile and merciless territory.

Julia's accounts later in her life are recounted by her contemporaries. Living in the Yamana community, she embraced and married a "Yekamush" or a shaman. Julia's husband was senior to her and died years later. However, Julia's thought of her husband as a shaman, who possessed mystical and witchcraft powers that Julia considered of great influence in her life, made her fear those mysterious forces. The "Yekamush" spirits were stark and have the strength to dominate and placate the tribal people spirits. Julia, years later after her husband's passing, told a story that narrated her husband returning from the grave riding an Orca, a killer whale, to take Julia with him. Julia resisted that attempt by singing dispelling chants during night and day and eventually driving away her husband's ghost that wanted to take her to the other world.

In 1921, Martin Gusinde, a German ethnologist, while working in an anthropology study of the natives of "Tierra del Fuego", knew about Julia, and he was so captivated by the stories he heard about her. He started compiling those oral stories and working with her. However, he was assisted by Yagan translators due to the Julia's inability to fully communicate in Spanish, but Gusinde was able to write 68 stories and myths fully narrated by her assisted by four Yamana translators. Thank to this effort, Gusinde could recollect the treasury of oral stories of the Yamana cosmogony.

Julia lived the last years of her life accompanied by the people she embraced with in the Mejillones bay and died peacefully there, living almost a century. She is recounted as the last person that refused to be dressed in western clothing, and it seems this stance proved what historians and ethnologist came into conclusion that those "civilized" garments were the seminal origin of diseases and acculturation that contributed with the demise of a whole native culture.

The setting of the Julia story

1. The story is centered in Julia's childhood time, and how she saw the world through her love of the natural landscape and the interactions she had with animals, birds, her equals, and adults from her tribe.
2. The story development continues when Julia is obliged to wear clothes, eat food strange to her, and to do chores that she was not familiar with. Example: the Europeans missionaries gave her people, and mostly the children cookies the Yamana thought were poisoned. Girls were introduced, and most of the time obliged to do domestic tasks like darning socks or stockings.
3. Julia refuses to wear clothes, eat strange food and follow religious teachings in the Anglican mission, and she flees the mission with her dog in a canoa made of a trunk. This canoa has a fire pit made of a little mound of dirt to start a fire anytime while she is sailing.
4. Julia starts her navigation alone, and most of the travel unfolds her interaction with the landscape, the coastal areas, and the islands she stops for solace. In each stop she is depicted talking with birds and animals like sea lions, fish, whales, penguins, and red foxes. She is happy because she escapes the stern cultural oppression she was experiencing. Alone as she is, sailing in the coastal areas, she is rendered in her little canoa with her dog, and holding the little oar while she navigates.
5. While she navigates, she spots on a little island a familiar construction, a hut, but nicely decorated with tree barks and painted with red, black, and white colors. She moors her canoa, lands and then approaches the construction slowly, and peeps the still dim interior. She cautiously stops at the entrance, then she is invited to get in by a nice male voice. Julia steps in, and the hut interior illuminates with vivid colors, and reveals a sea lion, a bird, a penguin, and a fox standing in a circle, and surrounding a fire pit. The sea lion with a thick but gentle voice communicates to Julia that they were expecting her, and they are ready to introduce her to the Chiexaus. The animal's advice begins to tell Julia about the sufferings of daily life, and how she will be prepared to face them through the creeds of these animal spirits. The animals' teachings show Julia how to cope with hunger, thirst, anxiety, and to not forget her roots, looking toward the future with optimism. They also communicate to Julia that her decision to escape the missionary's encampment was the correct one, and to not feel guilty if she left her people for a while.
6. When the Chiexaus ceremony ends, suddenly Julia is again in the canoa with her dog, and she spots again the place where the hut was moments ago, and she finds it is not there anymore, she looks at her dog, and her dog returns her gaze with a smile. They resume the travel, and while they navigate, they spot a bay with a group of people. She then approaches

the shore, and Julia recognizes that this are her people: this is the Mejillones bay community. Then Julia is received with her dog warmly, and the story ends with Julia surrounded by her fellow Yamana; her face at the beginning shows a cautious expression, but it gives the way to a tender smile. At that point the story ends.

The story unfolds unequivocally real events that affected the Yagan people, the enforced civilized acculturation, the strong will of the protagonist to resist those events and circumstances, and how the cultural values and beliefs of an ethnic group helped her to combat the process of annihilation of a whole human community.

Incorporated in this description is the Chiexaus ceremony, that explains the anthropological and ethnographic significance of this introduction rite. Which is also the root to understand how the Yagan native people saw the meaning of life, and how to endure and face what they considered a preparation for life. The Yagans were a happy community, despite the wrong perceptions assessed by the Europeans. They live a normal life, which is the typical attitude of the native American in facing nature like a being they must respect and love. They took from the land and sea what they needed, and they did not impact the environment because most of their adult life was spent at sea hunting and fishing. Contrary to the chronicles of western culture, they were not miserable human creatures as the Europeans labeled them. Julia is perhaps a historical case of survival, and thanks to her endurance, all the beautiful and mystical cosmogony narrative she memorized, was collected, and accounted by Martin Gusinde.

The Chiexaus Ceremony (Initiation ceremony)

Yamana boys and girls were introduced to a comprehensive ceremony in the manner of a harsh training to endure hardship during daily life when they become adults. Cold, hunger, lack of sleep, and thirst were among the target sufferings to overcome in this ceremony. Also, the girls were introduced to oral traditions like an equal gender skill that was not exclusive to boys only. As an outstanding oral tradition, they were instructed in the “Yoalax Myth” that revealed the heritage of cultural heroes, and this oral tradition passed from generation to generation. The ceremony took place within the “Chiexaus”, a hut that represented a cave laying on the seashore to shelter sea lions of a hair and two hairs. The Yamana people emulated the sea lions’ cave sheltering to perform inside their huts their initiation games. The hut became the performing immersive environment that simulated the sea lion cave.

The hut interior was decorated with wooden painted planks containing geometric patterns echoing the sea lion cave tonalities: the red color rendered the algae pigments that covered the cave

entrance, the white color rendered the foam of sea waves, and the black represented the mollusks that clung on the coastal rocks.

The ceremony introduction, attires, and skin painting procedures

The adults wore a crown called *Hapaxel* made of albatross skin that represented the foam cresting the waves. The face painting was primarily red and sometimes black. Martin Gusinde notes on volume III, page 813, ceremonial apparel descriptions:

Before Europeans forced the Yamanas people to wear western clothing, they elaborated their own fabrics interlacing their bodies in a handy and practical manner. Often, they knit tiny, bulged kilts laced with sea lion tendon fibers.

Scene performing a liberating psychodrama

It is dusk, and inside the hut is a Yagan ceremony keeper standing in preparation to begin the rite. The children get in and watch the painted wooden planks. The adults are seated on the hut floor around the fire pits praying in communion. Suddenly, a man or an adult female Yagan feel possessed by her guardian spirit, mostly embodied by an animal, a bird, a cormorant, a duck, a penguin, or a sea lion. The community has learned to mimic the animal sounds, then the possessed is full-bodied on their animal, while performing its sound and imitating the animal movements, until they become entranced. Then each adult member achieves the entranced state. Meanwhile, the rest of the participants dance, holding in their hands the ceremonial cane painted in red, white, and black, moving it in restricted movements in a vertical and horizontal axis, mimicking the constant wave movements hitting the coastal shore. They dance with short steps but at the same time keeping a smooth pace rhythm.

Chronicle of young girls that participated in the Chiexaus ceremony

We went for walks often. One day I went with the two sisters, Hermelinda, and other friends to a plain in front of the Beagle Channel, where the great ceremony, called Chiexaus, was held for the last time in 1933 when Cristina and Ursula were girls. By then Hermelinda was already a teenager. She participated in the ceremony the year before. She remembered with great emotion that great event. And in 1933, although Cristina was still a child, she was able to enter the hut of the Cheixaus because the director of the ceremony, knowing that this was the last time the Chiexaus would be presented, the last time after so many centuries or perhaps thousands of years, was aware that this moment would never return. So, he called all the young boys and girls to enter the hut, to see the design plaques that adorned the walls, and witness a scene enacted by the adults who sang and danced imitating their protectors' animals: the great birds of the high seas, sea lions, or fur seals.

- **Outline presenting the strategy and explaining the experimental nature of the project:**

The experimental nature of the project is represented by the interactive way the user or viewer unfolds the narrative of the film. In fact, it is a modality to produce the full immersion in the narrative's content. In this project there is a strong component of animation based on framerate and showing the characters in a naturalistic but stylized animated artwork. The scenes of the interactive film are structured by the continuation of the narrative that combines the virtual walking by the user's navigation system along with interactive panels located in the geographical settings of the immersive environment to engage the user in following the next episode to find out how it concludes. The progression of the narrative is not a kind of a slideshow spread-out on a virtual model. It is the phenomenological necessary engagement that the story deploys in a mixed modality of a timeline provided by the screen panels but supported by 3D animations outside the panels that also recount the story as a diegetic overlapped narrative.

The main goal of this interactive and immersive animated environment in incorporating the film as storyline is to produce "presence" to essentially perceive an aesthetic environment, where the scenarios are represented by the screens narrating Julia's journey progression. For example, when Julia arrives to the island that contains the hut, the users will experience her journey as well, as if he or she is embarked in a first person canoa with Julia. Then the user will walk toward the screen that deploys the 2D animation screening the Chiexaus ceremony. In the canoa the user will see Julia and her dog as 3d characters with stylized modelling and animation features. The user will share the canoa's travel with Julia while they navigate through channels and islands as they unfold interactively with the storyline. Another experimental feature in this project is how the user will discover interactive diegetic narrative components using hand gestures. The user will be able to transform the 3D elements that can trigger animated snippets by articulating the narrative as building blocks.

What is the difference between this immersive experience and a conventional video game format that contains cinematic scenes? The difference is rooted in the experimental methodology that overlaps the diegesis of narrative to provide the users with information while at the same time interacting with the story's environmental landscape. Also, the continuation of the story performs a navigational modality where the episodes transition and blend seamlessly to establish a conventional but progressive unraveling of the storyline. What is the difference with a 360 VR video? The fundamental component of this digital experience is to achieve presence through the compelling construction of 2D/ 3D animation embodied in the virtual landscape topology. The viewer must discover and unravel the story while the same simulated journey Julia experimented in her early years is being performed. The environment is designed with a rather abstract but symbolic aspect, to

not compromise the streamlined computation of the system. What better introduction to the merciless environment of Patagonia would be of a strong focus on the solitude and endless sight of islands and channels represented by 3D stylized models! The goal is not to produce a naturalistic or hyper-realistic scenarios, but to produce the phenomena of “presence” situated within an aesthetic rendition of the original geographical landscape.

- **Graphic and Technical Elements**

The prototype and final versions expose a stylized rendering shading combined with digitally hand drawn frame by frame animated sequences. The rendering of 3D models and characters are using wireframed shading style. The wireframe shading style will make way to full color render bright spots to highlight the areas of interaction.

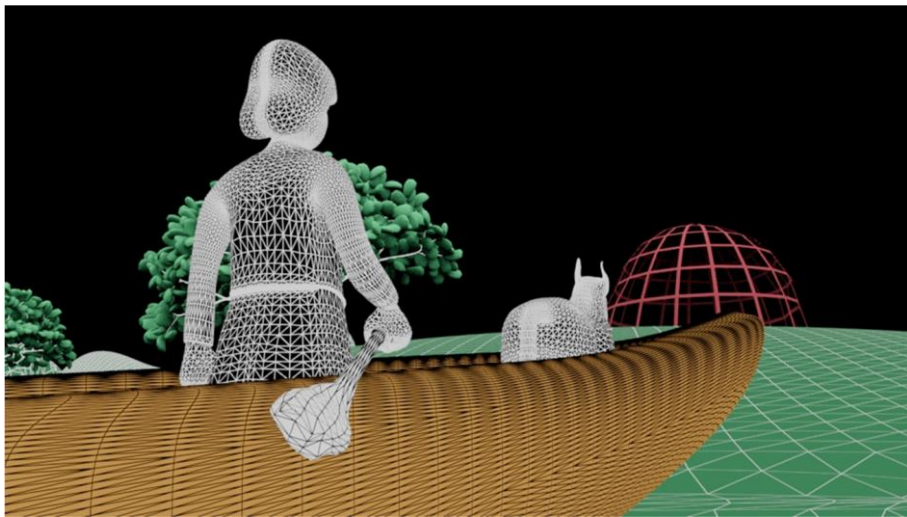


Figure 1. Julia approaching the Chixaus hut in the little island

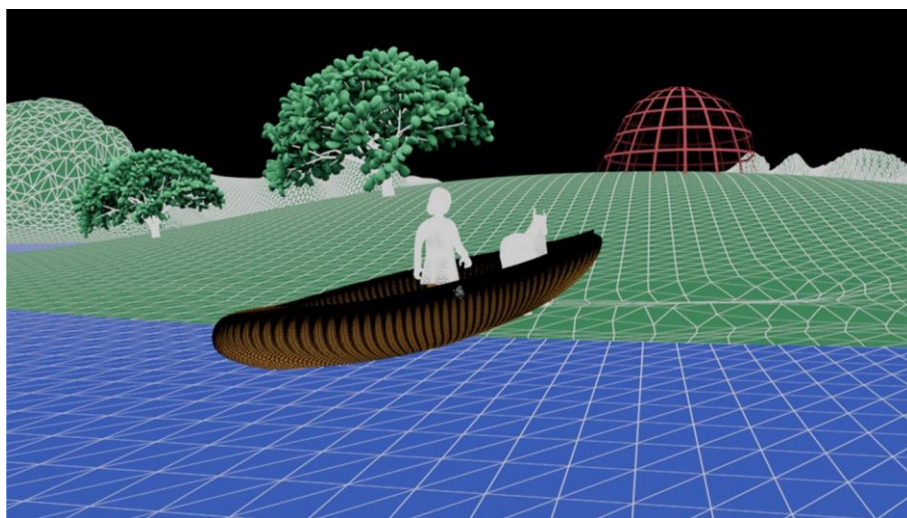


Figure 2. camera real-time view of the canoa mooring in the little island shore.

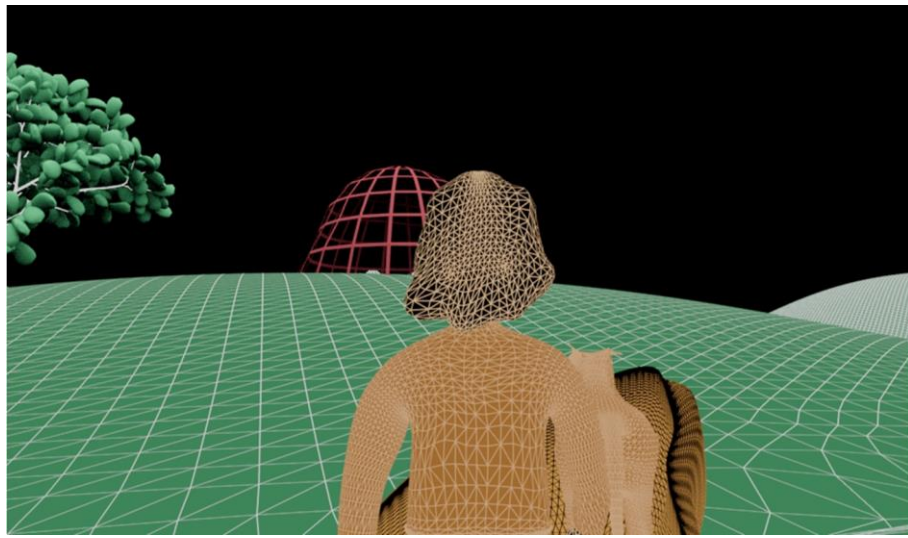


Figure 3. Immersive camera aspect of how the viewer navigates in third person with Julia and her dog.

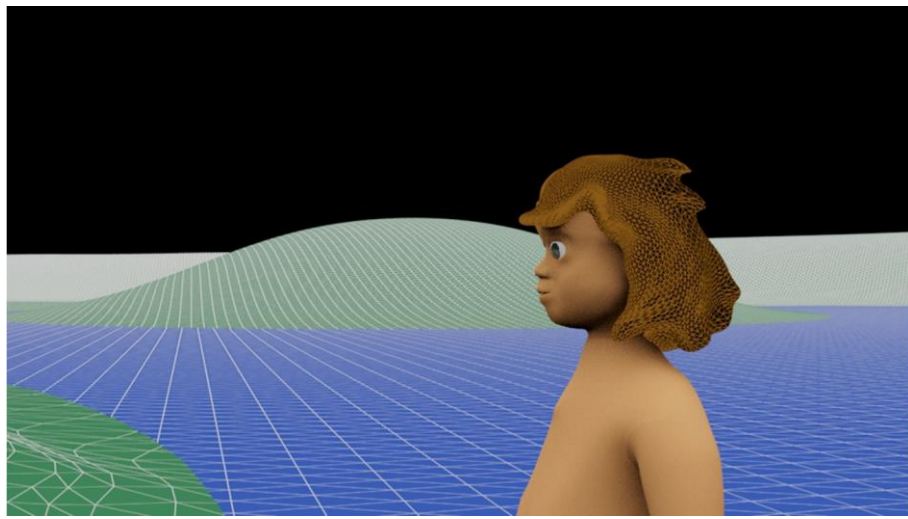


Figure 4. Rendering style for the immersive version of Julia making the journey through channels and islands.

The users will obtain in real-time change of render style while the interactivity is unfolding. The graphics will turn dynamic. The narrative along with the interactions triggered by the proximity of the animation panels is one of the components that implement diegetic transitions, for example when the Julia character is walking with the viewer her skin is rendered in wireframe, then once one of the screens is approached, Julia's shader changes from wireframe to smooth skin.

Since the experience is in XR/VR mode, the viewer must perform a physical walk to find the journey of navigation that Julia lived in real life. In this modality the immersive environment

determines a phenomenological navigation that involves an intuitive and perhaps not preconceived clue, unlike the ones video games provide as mini maps to visualize in head up display mode a possible guidance. In this case, the walk action is very important. In the XR/VR modality the teleporting action is not implemented due to the proposed engagement of the immersive piece. It is an experience that compromises the whole-body awareness, therefore when the path is walked and is near the areas of where the interactive screens are placed, the proximity will activate the screening of the story episode that corresponds to the point of journey where Julia stop in her real trip.

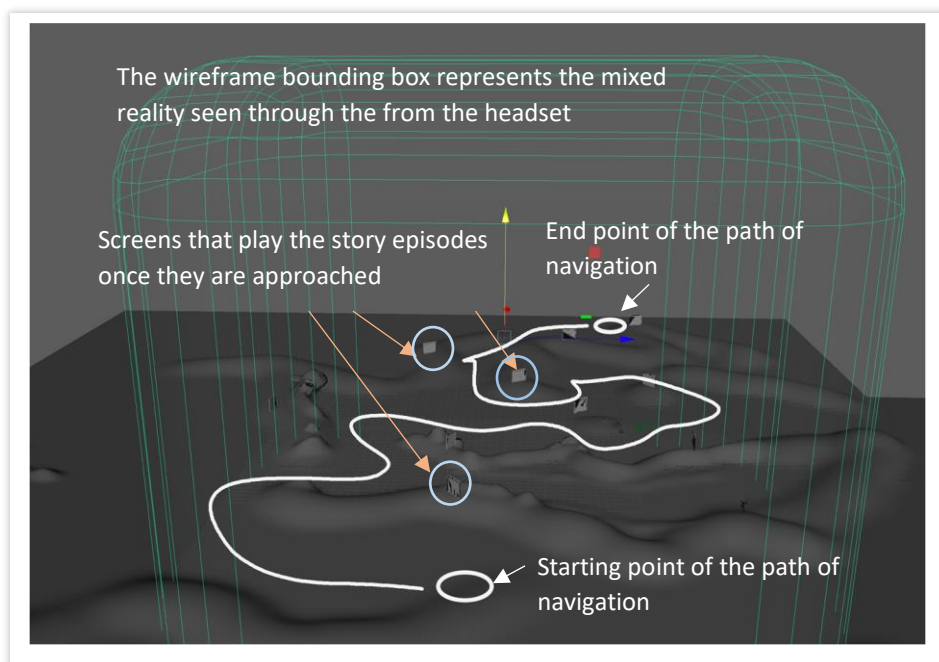
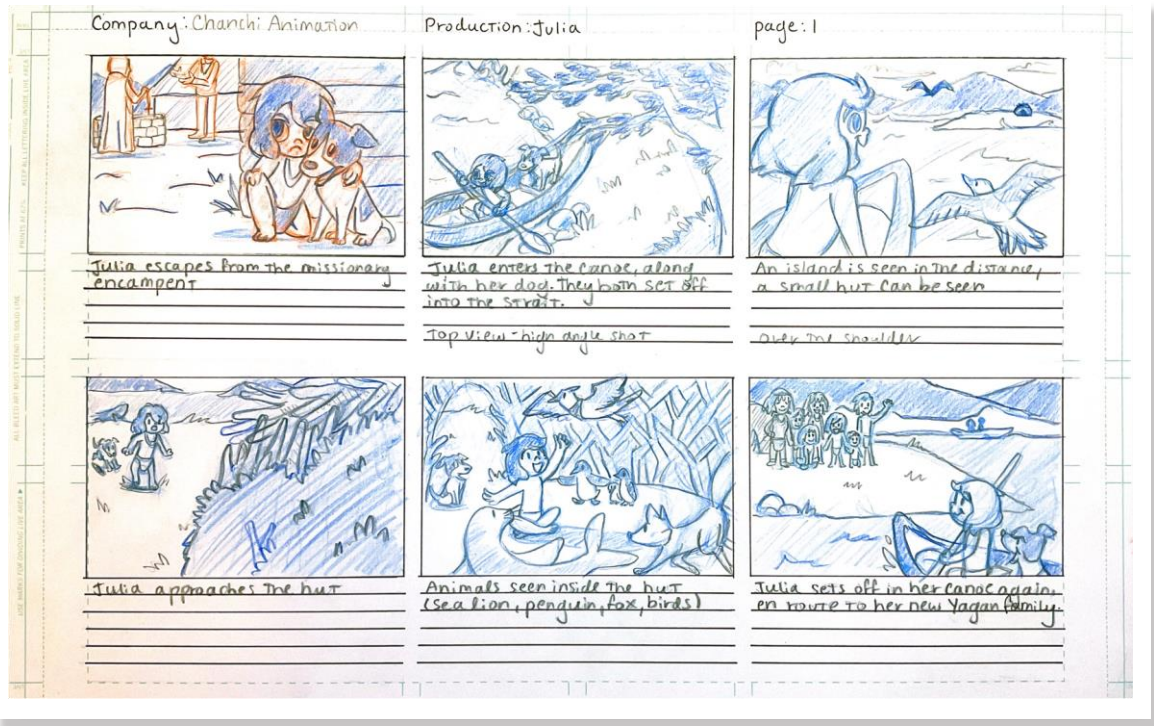


Figure 5. Visual rendition of how the user engages in the navigation journey inside the immersive environment.

Finally, since the experience is in XR/VR, which is Extended Reality, it is an important reminder that the novel component is the physical space to perform the immersive engagement from the users. An active involvement of the user/viewer body actions is necessary, from act of presence using collisions, to the tactile gestures to interact with and transform objects. In this case the user can stop or resume the animated episodes in the interactive screens. Accompanying the interactive screen, and planted through the journey, holographic 3D models can turn on while a detection occurs, triggered by body proximity. Since the headset modality is passes through video, all the 3D content will adopt the status of holograms throughout the whole journey experience. To recognizes this modality, the technology that Microsoft HoloLens deploys, and recently Oculus Quest Pro, is used. While the interaction is about the digital content in immersive world, the real world is visible through the camera. Real world space mixes with the virtual immersive space deployed in the headset.

- **The Storyboard**



The storyboard renders the whole concept of the immersive experience. The immersive experience will set the narrative for the viewer not only as he/she is watching the story, but they be in the middle of the world of the story.

- Panel 1 sets the whole episode of Julia rebelling at the mission. Certainly, the missionaries believe they are making a great human service to the Yagan, and specially the children. However, Julia perceives what is good for her, and does not believe so. Her companion is her dog, and he is going to be at her side throughout the whole journey.
- Panel 2 shows Julia in her journey escaping what she deemed as bad for her life, in an indomitable stance, but irredeemable for the missionaries. However, this attitude makes her avoid the fate of her brothers and sisters.
- Panel 3 shows when Julia sees the little island with the hut where she is going to see the Chiexaus, after navigating through channels and straights.
- Panel 4 renders when Julia approaches the hut, however, she is intrigued, and wonders why this hut is so far from everything. Certainly, she moves ahead with a mix of curiosity and an eerie feeling. A voice from inside lets her know they were expecting her. Julia cautiously approaches the hut's entrance. Inside it is very dark, then as soon as she peeks in, the hut illuminates with a beautiful shade of white with hues of black and red.

- Panel 5 shows how the animals inside introduce her in the Chiexaus ceremony. Julia listens to the animals' advice and wisdom, as she were receiving the blessings of the spirit of earth. Julia will not feel hunger, cold, or fear, and she will face whatever lays ahead of her journey. She is fearless and optimistic. But as soon she looks for her canoa, she turns back to find the hut is no longer there. She acknowledges that the spirits will protect her. She continues her travel.
- Panel 6 shows the scene where Julia finds the Yagan community of *Mejillones*, still unaffected by the settlers and missions: for Julia this will be her haven and shelter. The members of the community are speechless as soon as they learn about Julia's feat, and how she endured with courage that Journey.

Character concept for the 2D animations and 3D animations



Figure 6. Julia Karupale-Kipa.

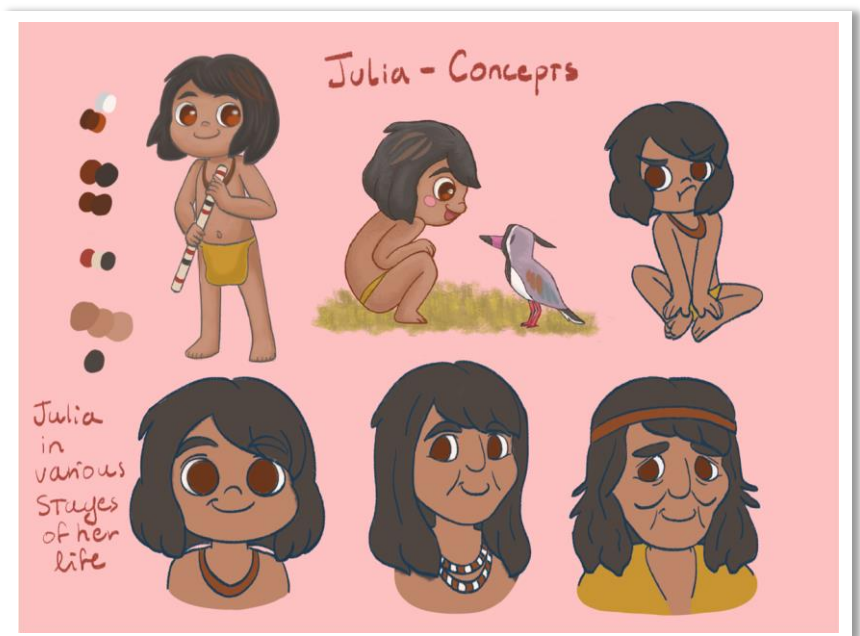


Figure 7. Julia Character Sheet