The Hidden Stories of Oceania

Hoya Liu, Ivory Lee

GENERAL OVERVIEW

- **What is our project about?**

For us, the use of technology, and more specifically virtual/augmented/mixed reality, has to be able to create an effect that would not otherwise be there without the technology, on the recipient end. We believe that the use of AR needs to create experiences that other technologies such as touchscreens and projections cannot portray. We want to create an application that takes the audience/visitor away from what is most obvious to them, i.e. away from the experience that they would otherwise experience in the museum without the application. This, to us, means the generation and the creation of a new narrative that would add on to the existing exhibition experience. Of course, the project we are proposing works hand-in-hand with the exhibition; however, it does not mean that the application absolutely needs visitors to learn/gain background knowledge from the exhibition before using the application itself.

We believe that climate change and the effects of it on the Oceanic region is a topic that calls for attention. The current exhibition, as far as we understand, does not really address the effects of climate change in the Oceanic region. If it does, only brief touches. We intend to create an application that invites different stories and voices from different Oceanic countries and regions to not only bring attention to specific, individual narratives, but also to create an overarching, harmonious one that invites visitors a chance to connect with the unfamiliar. The talk about climate change, nowadays, is common. But we believe that to a certain degree, people start to normalise climate change - especially kids that are born into this environment where they don't really have a form of comparison with what they are familiar.

The application that we wish to create is, therefore, targeted at elementary school kids. We chose to target kids because we believe that though they may not have seen climate change happening before their eyes, their brains and thoughts are more malleable to change. Bringing across climate change narratives, i.e. the unfamiliar, through a platform that they are familiar with, is, in our opinion, one of the most effective forms of education.

- **Why is this project relevant to its medium?**

We believe that AR is an important tool to use for the narrative that we want to convey because it allows us to add onto existing map plaques that will be showcased in the exhibition. We wish to tell

individual stories from each individual region that map plaques are representing and showing. From the floor plan, it seems that these map plaques will be placed all over the exhibition space at each respective area/region where they are represented in the exhibition space.

Scanning the plaques using the application would allow stories to pop on the screen. Once the user clicks the start button for each storybook, the story begins. What AR could do is add onto the existing learning material (from the exhibition) by giving visitors a chance to learn about individual stories and perhaps make it even more accessible for kids by conveying our message through a format that they are familiar with. These personal stories are intended to bring awareness to climate change, something not really talked about in the physical exhibition itself.

- **What learning experience do we want to suggest to the audience?**

What we want to bring to the exhibition is an experience to bring visitors closer to the theme and phenomenon of climate change and global warming and how that plays an impact in Oceania. Oceania may be one of the regions in the world in which most are most unfamiliar with, but it is the region in which climate change is currently affecting the most. Perhaps some visitors know details about how the region is changing and effected, but the conjecture is that most don't know about it and/or don't really care. This application is designed to make visitors care.

Perhaps, nowadays, it's harder for kids to realise the impact that climate change has on the world because they have not yet experienced enough to come up with an idea of what it practically looks like. We believe that this application will make users learn and reflect. We want people to know about the situation, how the situation will appreciate; we want them to reflect on what could be done on a wide-scale, but most importantly, how they could make a change. If we are able to give some information to a previously oblivious visitor about climate change and its impacts in Oceania, then we believe we have achieved our goal. We believe that allowing visitors to use their very familiar devices to learn about climate change is the best way to educate them.

- **Are there any unusual aspects?**

Telling and manipulating climate change stories from an area of the world in which we ourselves are unfamiliar obviously comes with its challenges. Because we cannot give first-hand accounts, we are reliant on secondary sources for us to come up with the narratives that we wish to create and incorporate into our application. If the purpose of this project is to educate based on first-hand accounts and narratives, then we must take extra care in using information that is only reliable and well-researched. At this moment, we do not have many sources to cross-check the stories that we have gathered, and have only relied on one Institute's information. For us to actually be able to implement this project, we need to have expert help to examine critically at the stories to see how valid and true they are. This is not to say that the stories we have gathered are not true, but rather a question of how depictive/representative of the current situations in Oceania they are.

DESIGN OVERVIEW

- **What is the context of our project?**

Our project aims to represent different Oceanic islanders' stories about climate change that we have created and simplified from interviews with islanders that Climate Institute conducted. These stories are based entirely from what was said in the interviews and include climate activists, architects, engineers, etc. from different Oceanic regions. Of course, we cannot account for all the individual stories in these regions, nor can we outrightly say that the stories are the only truths, but we hope that the message of our project can be projected in a positive way.

To generate the "voices" of the sea, we have put these stories into animation form. These facts and stories will be generated through scanning the map plaques in the museum space. The point of the storytelling is to allow the users to think and reflect about the ways in which they may have contributed to climate change, and thus the worsening of situation of the islanders. The application makes reference to daily activities that users may have taken for granted back home - having access to "unlimited" running water, "unlimited" electricity, etc - and combines them with real stories of those impacted in the islands by the effects of climate change. We hope that the users can connect the message of the application with the rest of the exhibition projects to learn and understand more on the impacts of climate change, even though it is not explicitly stated in the physical exhibition. The aim of this application is to raise awareness and prompt personal reflection from the users.

- **What is/are the core interaction(s) of our project?**

As plaques will be in front of each exhibit and on them, signs that encourage the audience to scan the plaques with their phones, the audience would be scanning, tapping, watching and engaging with the display on their phones. These interactions offers a learning experience to the audience, as they will learn about stories about a very prominent current issue. Through watching animations about individual islanders' stories, the audience may see the permanent exhibition in a different perspective. Though they have multiple ways to interpret the exhibition, through this interaction they will be also able to see them through the lens of climate change and see how close it is related to themselves. We hope that through the integration of interactive objects in the application that requires the user's participation for the stories to continue, we can emphasise how the user is contributing towards climate change or how it is on the user to impact and bring about change. The device is, therefore, the essential learning device in interacting with climate change in this exhibition. The application offers a chance to see the full exhibition in a way that they could not have done without their devices.

- **What is the navigation flow of our project?**

After being prompted to download the application and once the user has downloaded the application, the user is free to roam around the exhibition space. At each plaque, there would be a

prompt to open up and use the app. Opening up the app, the first thing that the user will see is the title page to get started, once the user chooses to begin the image scanning, the user will see a screen in which their back camera is triggered and the captured image displayed in real time. Once a plaque is scanned and recognised, the book appears. The book fills up the entire screen of the user. Once the story finishes and the user chooses to discover other stories to scan, the main camera page is once again seen. Image recognition is immediate, there is no transition between the main camera page and the popping up of the book. Within the book, transitions are made through fade in and fade out. Transitioning from the book back to the camera screen is also immediate (i.e. once the user clicks the "More Stories" button).

For more information on how the interfaces connect with each other and about particular buttons, please see part below and section "Experience Overview".

- ## **What is/are the interface(s) of our project?**

Ideally when one opens up the main application, he/she will see a title page with the a button to move to the main camera page. On the camera page, an information symbol is located on the top right of the screen. Clicking this information button brings out a small animation as to how to use the image scanning. Once an image is scanned, then the storybook interfaces pop out.
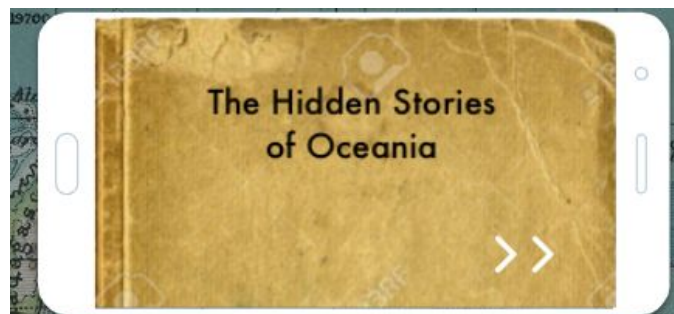
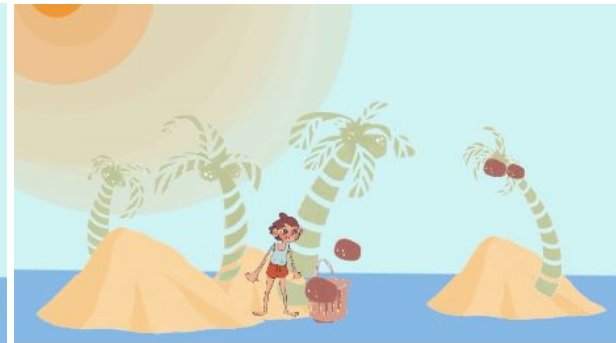*Image 1: Title Page of the Application*

For a clearer idea as to how the storybook interfaces weave together with one another, please see section "Experience Overview". Here is a short summary with some visual aid.

There will be four main interfaces within the storybook portion of the application: the title page of the book, the storytelling portion of the book, the interactive portion of the book, and the educational ending page. The title page will include the title of the book, a button to start the story and a "More Stories" button that allows the user to go back to the main camera page of the application. The storytelling portion is simply the animation that tells the story. The interactive portion is the interface after the storytelling section of the book, the stories, at this stage, are not yet complete. They require the help of the users to complete them. Through the clicking of buttons, the dragging of sliders, etc., users progress the story. By doing so, we hope to engage the users and allow them to contribute (either positively or negatively) to climate change. Buttons, sliders, icons will twitch and wiggle (visual cues) to capture the attention of users to make them aware that some

input from them is needed for the story to proceed. Once the story finishes, the educational ending page appears. This is where the user can learn about how their interaction that they took part in has impacted the protagonist; as well, it provides some ways in which the users can help people like the protagonist in the future.

Image 2: Title Page of the Storybook

Image 3: Sample of Animation in Storybook

Image 4: End Page of the Storybook

(Here is a link to the application in work:
https://drive.google.com/file/d/1xH4p936nd1cQxqUXAdIyBICLARsHXnMo/view?usp=sharing)

- **What are the media assets that we will use in our project?**

For this project, we will need illustrations(animations) and texts to accompany the animations. We tried to not use much text and use motion picture instead as this means that reading level and/or the ability to read, as well as language, will not be a factor in whether or not users can engage with our project. Anyone can engage and use the application, regardless of age or year group. The resolution of the animations need to be good enough so that even on the biggest of phones and tablets, the image is still of high quality. The size of the storybook changes on each device, but the aspect ratio (16:9 for our project) needs to stay the same. Specific to the prototype of the animation, we have asked an animator to help draw the illustrations, but we did the animations ourselves on Unity.

EXPERIENCE OVERVIEW

(one page)

- **Describe the overall experience of the audience member.**

The audience member will experience a blending of the two spaces - the real space of the exhibition, and the space of that the exhibit is trying to represent, stories from Oceania. Theoretically, at the beginning of the exhibition, there will be a sign that prompts users to download the app. This sign will be eye-catching in that it be will situated somewhere obvious and constantly emphasised before the user goes into the exhibition. The same type of invitation is also shown on each plaque that the users will visit, prompting them to open up their application and to scan the image in front of them. A small note is also written regarding the fact that a part of each story is interactive and that the user's help is needed for the stories to be told. In this way, the users can anticipate that some engagement in addition to just "watching" will be needed from them.

The user joins the AR experience by opening up the application and following the instructions in the application for how to scan the image (located on the plaques as well). Once the plaques are scanned, a book cover will appear, with the title of the book and a start button located on the cover. A "More Stories" button will also appear, allowing the user to go back to the main camera screen. Once the user clicks the start button, the story begins. The story is told through an animation, approximately 2 minutes long, able to understand without any sound, any words. There will be interactive parts in the stories (e.g. sliders, buttons), prompting the user to be part of the story and engage with it, before the story continues. The story will not conclude unless the user engages with the material. This is important to emphasise the idea that the user is part of the climate change experience; whether that be that they are helping the situation by learning about it, or by learning the different ways in which they are contributing to climate change. The story ends not on a positive note and with that comes a concluding slide, with the words, "How can you help [insert name of protagonist here]?". Clicking on the multimedia that accompany the words will bring out different ways in which the user could help the protagonist of the story. To officially end the story, users click on the "More Stories" button, in which the application directs back to the camera interface, able to search for another story.

- **Describe a specific moment.**

As soon as the user scans the different plaques and the application picks up the different scenes, the story book main interface appears, filling the whole frame of their phone screen. This story book interface does not destroy once the phone is moved out of the scene (i.e. when the camera no longer picks up the plaque in its frame). This do-not-destroy function means that the user is free to move around throughout the duration of the story. However, it is recommended that the user does not move very far from the plaque in which they have scanned and have chosen to learn the story of,

because stories pertain to the respective areas in the exhibition in which they are found. Users could thus then place their phones at any angle that they want, allowing ease of use and convenience.

Theoretically, once the user scans the plaque, they would want to start the story rather than exiting the page to go back to the main camera scene. If the user does click start, the book cover page fades to the start of the animation and is immediately played without the user's further prompt. The stories will stop at a particular moment in the respective stories in which users will need to participate in. To prompt and invite the user to engage with the content for the stories to proceed, certain elements such as sliders and buttons (which are also animated) will twitch/bounce up-and-down, gathering the attention of the user for them to realise that now is the time for interaction. We hope that after the first time that the users go through a story, they will learn and be familiarised with the fact that there is an interactive element to the stories.

Once the story finises, it will fade out to an end scene where the user can learn about different ways to help the protagonist. Clicking the "More Stories" button immediately brings them back to the camera home page, with another fade out effect.

CONCLUSION

We believe that to truly make an impact and to contribute to the amazing work that is already done for the exhibition, an application targeted specifically for kids (but still, not limited to them) is the best idea. The physical exhibition itself is highly educational but factual and we hope that educating through stories, something that everyone is familiar with, makes the content more attractive and easier to relate to and understand. Because the storybooks are not dependent on words or language in general, the application can be used and understood by everyone - no language barrier exists.

If we had more time, it would be worth investing in some sound recordings (voice overs for the stories) and maybe have a soundscape made from different voices of the sea that would be playing in the background of the use of the application . In addition to the plaques, if we were to have more time, we wish to create, in another scene in the application, a space where visitors are able to see 3D objects in the exhibition space that are intended to interact with the physical space in a way that speaks alongside the individual stories related to climate change that the visitors will experience through the scanning of the plaques. We believe that having this space of objects brings the stories to an even deeper and more influential level. Storms brewing, waves crashing, lighting striking, droughts, fires, sea level rise - these experiences could be shown in the exhibition space. The visitors could essentially be experiencing these effects of climate change "first-hand".

We are trying to make an honest exhibition about the region of Oceania, and exploring climate change through the stories of people there. Much of exhibition we're aiming is going to be voiced

from the people of the region themselves, rather than an outsider trying to represent them. This is an enormous, hugely important topic - and we will try our best to be as honest as we can in the curation and the curatorial process of it. With AR, we aim to give the visitor a more intimate glimpse into what the space of the exhibition is trying to represent, and hopefully a more urgent message of what the planet is going through, again, through the very specific (and yet universal) stories of people who are experiencing the effects in Oceania.