

CHARACTERS VISUAL CONCEPT FOR A FINE DINING PROJECTION MAPPING TITLED “SI DULANG”

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Abstract: *The internet and social media have established the world of fine dining and animation. There is an increase of competition in the business since people care more than just how the food taste or how the food is being displayed but also how they are presented to the table. One aspirating aspect on the presentation is by utilizing projection mapping in presenting an animated film that provide knowledge, information and entertainment to the customers that were measured to the themes, ideas and concepts of typical Indonesian food. This cutting-edge digital art in the form of a hybrid animation is believed to help both fine dining and animation industry to broaden the areas. This research purpose is to create characters' visual concept for “Si Dulang”. There are two characters that will be discussed in this journal which are Dulang the adventurer kid and Barong the mythology creature. In order to visualize the characters, the researchers have to understand the mythology figures in Bali and thus literature studies and observations of various projection mappings will be used as research methods. The outputs of this research are prototype of animated film, intellectual property right of character figures and art book.*

Keywords: *projection; mapping; character; visual concept; hybrid animation*

Introduction

Projection mapping is growing remarkably in the world of animation, art, science, education, culinary, and entertainment. Oftentimes, projection mapping techniques and technologies with advanced hardware and software are used at an event to provide an immersive experience for their guests and spectators. This projection mapping is done by using a projector that is projected from certain directions to the surface of an object such as a wall, building or table to create dimension, illusion and movement. Vivid Sydney is one of other annual festivals that uses projection mapping projected

onto several historical buildings such as the Sydney Opera House, this has been mentioned by Destination NSW on the original Vivid Sydney website. Based on the Arista ProAv article, other projection mapping that is used for light and art festival all around the world are Luma Arts Festival in United State, Toronto Light Festival in Canada, Berlin Festival of Lights in Germany and Circle of Light Festival in Russia. Projection mapping can also build emotional feelings between the audience and the space based on the Yekpere project by Ekim (2011).

Table projection mapping is a technique that is used for a fine dining immer-

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sive experience. According to Nonform-form, this type of mapping has been carried out by restaurants and hotel in several countries. By using a projector that is installed above the dining table projected on the white plates and tablecloth, the guests will be able to experience an animated video that is suited to the theme, ideas and concepts. These animations are normally played between each dish. Some will provide knowledge and information about the food and some for the entertainment purpose only or it can be a combination of both. Williams (2021) stated that one famous projection-mapped dining is Le Petit Chef by Skull Mapping that has been around for years now and has branches all over the world. Digital Projection (2022) mentioned that Meshico group provided a table mapping projection to several high end restaurants in Dubai.

Maruyama, Torii and Oshii (2014) mentioned that projection mapping can be done with several projections from a certain direction in a wide range of scale depending on the theme, idea and concept of the artwork that is used in a performance. Projection mapping techniques have been used in various fields such as media industry, film, entertainment, education, science and even commerce. Tourist places like museums and historical buildings utilize this installation by projecting an art. Guo, Chu, Liu, Qiu and Tan (2018) stated projection mapping can deliver a virtual world into the real world by using RGD depth sensors and projectors by optimizing the framework and stabilization.

According to Gregoire & Spearas as quoted in Amerlia & Grag (2016) fine dining is one of the services that a restaurant can provide to the guests. Harrington, Ottenbacher & Kendall (2011) said that there are six factors which influence the customer behavior in choosing a fine dining restaurant. These factors are promotion, price, quality expectation, place settings, dietary and variations or the characteris-

tics of the menu. The relation to these factors are affected by gender, age and dining frequency. Atmosphere, interior design, reputation and friends' recommendation are also affecting the quality expectation from the customers.

According to the research conducted by Namkung & Jang (2017), two biggest contributing factors in customer satisfaction are the taste of the food and the presentation of the dish. Based on Shamsuddin, Islam & Islam (2013), ideas and concept art for a film, video, game, animation, illustration or image are demonstration of displaying a visual design from a designer or an artist's conceptual imagination. These compilations of illustrations or drawings are often known as concept art. In creating a project, character design and environment design are needed to make a believable world.

The development and various existing forms of projection mapping have encouraged the researcher team to create something spectacular with our own finest Indonesian cuisine. In January 2021, a representative of MDN offered to collaborate between animation studio and Universitas Multimedia Nusantara in joining hand to work on a fine dining table projection mapping research. This project involved two fields and three lecturers from UMN, hospitality represented by Adestya Ayu Armeilia and animation represented by Yohanes Merci Widiastomo and Christine Mersiana Lukmanto. Some students were also part of the team working together in the process. This table projection mapping is created for the purpose of giving an immersive fine dining experience to the guests, providing them with knowledge and information about the Indonesian food, specifically Balinese cuisine and its mythology, as well as giving the guest an entertainment while enjoying their food. The title for this fine dining projection mapping is "Si Dulang".

This article will be focusing on how the character's visual concept was designed and visualized for "Si Dulang" by using Balinese mythology, its traditional menu and story as a reference point for developing the visual concept. The Balinese mythology that will also be discussed in this article is specifically the use of Barong, a mythological Balinese creature for it was the starting reference for the concept of the character in the projection mapping.

Barong is the most famous Indonesian mythological creature. When visiting tourist places, visitors might come across Barong figurines and merchandise. According to Wonderful Indonesia, this creature represents an ancestral or natural spirit that is believed to be a guardian. The shape of this character is combined from various animals such as lion, tiger, pig, dog, cow and dragon. Barong wears a mask, thick fur, gold and red accessories. Baliaround article stated that Barong is symbolized as the good character in a Bali dance called Barong dance performance that often shows the relationship between Barong and Rangda who fight against each other as good and evil characters. They both become the icon of Bali throughout the years.

Based on these backgrounds the research questions that will be elaborated in this article is:

How is the visual concept design for the fine dining table projection mapping applied in the project titled "Si Dulang"? The research is focusing on the design of the two main characters in this 3D animation, a 15 year old child named Dulang and a mythological creature named Barong.

The purpose of this study is to discuss the visual concepts of "Si Dulang" and how it represents the mythological figure, food and the story. The purpose of this study is to provide a visual concept that will be used in the animated "Si Dulang" which will be performed before the guests enjoy-

ing the meal to give an immersive experience of fine dining. The outputs of this research on character visual concept is a prototype of an animated film, intellectual property right of character figure and art book.

Methodology

To start a research, data collection and data analysis will be done from the literature and various projection mapping observations. From the analysis, researchers will be looking at the set menu and the story that has been decided by the team. Reviewing the existing data and examining the problem, the design team will create the visual concept, style guide and color palette. Moving on to drawing experiments on the shape, visual styles and color, the illustrator will create a final look on the character from each side, poses, facial expression and accessories. The result of this research will be in the form of a prototype of the film, intellectual property rights of character figures and art book.

One famous projection mapped dining is Le Petit Chef by Skull Mapping that has been around for years now and has branches all over the world. This projection mapping features a small chef who cooks and serves the dishes on the diner's plates. These 3D dishes will be replaced with the real one by the servant once the animation ends. Le Petit Chef continues to provide an immersive dining experience with projection mappings that tell the story of Marco Polo's discoveries. This two-hour animated video show provides an immersive experience while the guests enjoy their meal. From this observation we learn how the animated film gives knowledge of the food and how the show performed technically. They use one projection for a four seater table. Currently, Le Petit Chef can be enjoyed by the people of Indonesia, especially in Jakarta.

Result

This project is a research project by UMN FILM animation lecturers and UMN hospitality lecturers who have collaborated with MDN since 2021. "Si Dulang" is a projection mapping project that is made purposely to maximize the fine dining experience which will be projected to the dining table for each dish that is about to be served. This film is curated to give information of Bali cuisine and a story that involves Balinese mythology creatures. The researchers aim to give knowledge to the guests while entertaining them with the visual. The team consist of Adestya Ayu Armeilia from hospitality UMN who is in charge for the menu and cooking, Yohannes Merci Widiastomo from animation UMN who writes the story and Christine Mersiana Lukmanto from animation UMN who takes a lead in the visual concept art process. These people work with an animation studio MDN and few students.

This research objective is to illustrate character visual concepts for a table projection mapping application of fine dining titled "Si Dulang", some intellectual property rights of character including Dulang and Barong and also the art book and the prototype of an animated film. The picture below in Figure 1 is the concept art book cover of "Si Dulang".

There are five characters that have been created in the film "Si Dulang", how-



Figure 1. Art book of "Si Dulang" (Source: Personal research documentation)

ever the ones that have been registered as intellectual property rights are Dulang, the big version of Barong and Rangda. The researcher have illustrated the little version of Barong, however in order not to create any misleading of the mythology character of Barong, the team decided not to show the character in the film. Kecalang or the head of the village will be registered as the intellectual property right later. Figure 2 shows the visual of the five characters.

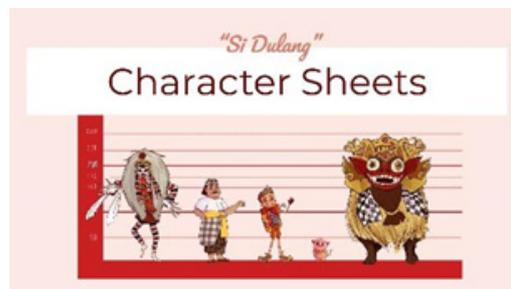


Figure 2. Characters Line Up In "Si Dulang" (Source: Personal research documentation)

The illustrated characters in 2D are brought to 3D form through modeling, rigging and lighting process. This one rendered image is used as a guide for the color and lighting for the film, this will make it easier for the post production team to do the compositing and editing. This Figure 3 reveals the style of the 3D form that the researcher is aiming for of this "Si Dulang" animated film.



Figure 3. Characters Line Up in the form of 3D (Source: Personal research documentation)

The prototype is done in the studio at UMN with the help of the MDN team and with one projector above the table. The animation of "Si Dulang" is projected onto the table that is covered with a white table and onto the white plate. Thus, the color of the projection is visible clearly. The duration of this prototype is five minutes, including the motion graphic and 3D animation. Figure 4 illustrates the prototype and how the arrangement is done for the dining, the placing of the plate and the utensils.



Figure 4. Prototype of "Si Dulang"
(Source: Personal research documentation)

Dulang is the main character of the story of an adventure of the little chef. He is very good at cooking but still eager to learn more on how to cook the various Indonesian dishes authentically, therefore he deliberately travels across the countries, meeting new people and learning how to cook with them. To accomplish his mission, he always carries a bag filled with various cooking utensils. Dulang's determination is a cheerful kid, brave and has a high curiosity. He is a 15 years old kid from Betawi and therefore he has a brown skin color. He likes to help other people and it is shown in the story where he helps Barong to fight Rangda. In Figure 5, it shows the pose of Dulang in the 3D form.



Figure 5. Dulang Pose for animated "Si Dulang"
(Source: Personal research documentation)

The visual of concept of "Si Dulang" is analyzed from data literature studies and observations. Tim Templeton from *The Boss Baby* (2017) helps the researcher to determine the age of the Dulang and Russel from the film of *Up* (2019) help to create the psychological characteristic. These references are shown in the form of a moodboard to give the illustrator a better idea of how the character will look like. This mood board include the physical references, style references, costume, psychological references and color palette. The moodboard is shown in Figure 6, showing how the process of brainstorming with the references of the visual, style, costume and even the psychology reference of the character.

A three-dimensional chart of Dulang was also made, to elaborate Dulang's physiology, he is a 15-year-old Betawi boy with a height of 160 cm and a weight of



Figure 6. Moodboard of Dulang
(Source: Personal research documentation)

48 kg who has black hair, brown eyes and tan skin. He has a slim and tiny figure but still looks fit, healthy, agile and energetic. He has a unique characteristic where he can taste the food in his mind before tasting it.

The sociology of Dulang can be described as someone who comes from the middle class who has an occupation as an explorer and is still studying homeschooling. When is not doing his adventure, he lives with his parents in Jakarta, the capital city of Indonesia. Betawi is one of the most ethnic groups who live in the center of Jakarta. His place in the community is just a general citizen. He learned cooking since he was very young from his mother and since then he takes it seriously. Figure 7 indicates the character sheet of Dulang with the accessories, poses, facial expression and the color palate.



Figure 7. Character Sheet of Dulang
(Source: Personal research documentation)

Dulang's archetype psychology is the explorer who likes freedom, someone who seeks for an adventure. Dulang's strength is that he has good courage and high curiosity. He is motivated by self-improvement when it comes to cooking since it has become his passion. Being gullible is one of his weaknesses as someone who is very too easy to trust others. Sometimes, he feels never satisfied with his cooking skill and this is what drove Dulang and encour-

aged him to explore further on his cooking skills. His aim is to become a famous cook around Indonesia and therefore he does his adventure to learn various cuisines in Indonesia and slowly gain his fame. Dulang's temperament is skeptical and extroverted.

The design that has been illustrated by the team is brought to the 3D modeling team and then rigged and given a lighting effect to get the style that has been given by the visual art concept team, this is illustrated in Figure 8. Throughout this process, it can be concluded that the Dulang character has been created quite smoothly without any major revision.



Figure 8. Dulang in 3D form
(Source: Personal research documentation)

Barong is a mythological creature as a character that needed the help of Dulang to fight against another creature. Barong figures as a four-legged creature which is the combination of the form of lion, tiger, pig and dog with gold accessories and several small red diamonds. His role in the story is a protagonist who wants to protect the people in his village from evil creatures. However, he has one fatal weakness: when he is hungry, he will lose his power and therefore he needs Dulang to cook for him. In Figure 9, it expresses the pose of Barong in the 3D form.



Figure 9. Barong Pose for animated "Si Dulang"
(Source: Personal research documentation)

The visual concept of Barong is made based on the existing figure that is already known by many people. The researcher analyzed data from literature and observation of a picture of Barong at Barong dance in Ubud, Bali. In the making of the Barong character for "Si Dulang", the research team still kept the physical form from the original figure and explored more on the accessories. The moodboard illustrated how the references are used to create Barong character. The color gold symbolizes the dynamic character of Barong, red indicates that Barong is brave and brown shows that the character is strong and reliable. The Wario character in the Super Mario game is a reference to the physiology of the character. The process of brainstorming with the references of the visual, style, costume and even the psychological reference of the character is displayed as a moodboard in the Figure 10.



Figure 10. Moodboard of Barong
(Source: Personal research documentation)

Barong's three dimensional character is also made in the form of a chart. The Barong's physiology is designed based on lion, tiger, pig and dog body figure. They are four-legged animals. Barong is illustrated with long fur and gold accessories with red diamonds. His age is unknown because he has lived for a long time and no one knows exactly how long he has lived in this world. He has a height of 260 cm and a weight of 200 kg who has light brown hair color and red-orange eyes. The gold accessories mean that he is dynamic and triumph. The red diamond represents his strength and reliability. His posture is very big and a little bit obese but still looks strong and scary.

Looking at Barong's sociology, he has a unique lifestyle and connection with others surrounding him. He acts as a warrior who protects his village. The residents like to have him around, however he likes to live by himself and sometimes will go to residents. Barong is known as a food lover in the village, so sometimes they offer him food. In the story in "Si Dulang", he was in need of food after a fight with Rangda. Then he meets Dulang who is willing to cook for him to get back his strength to have another battle with Rangda. The character sheet of Barong with the accessories, poses, facial expression and the color palette is illustrated in Figure 11, the character sheet of Barong.



Figure 11. Character Sheet of Barong
(Source: Personal research documentation)

The Barong's archetype psychology is the outlaw who is a competitive person but also careless. Barong has a tendency to hurt others because he is very strong and reckless; however his love for the village is stronger and he only uses his power to fight Rangda. His ambition to defeat Rangda is enormous and he is well aware of his weakness that he gets weak when he is hungry. Thus, he tends to eat a lot to always be prepared for a battle. Barong's temperament is temperamental and introverted. Sometimes he can lose his temper and that is the reason why he isolates himself and lives alone. The process in the making of Barong is the same process as Dulang and it is shown in Figure 12. When the illustration is done, it is brought to a 3D model, rigged and given some lighting to get the character style. During the rigging process, it was taking more time due to the problem with the four legged mechanism of rigging and the accessories that are attached to the model.



Figure 12. Barong in 3D form
(Source: Personal research documentation)

Discussion

The setting of this film is in Jakarta 2022 when Dulang goes for an adventure to cook and learn various Indonesian dishes. Therefore, the character will be wearing the outfit that will suit in the same year. The outfit for Dulang is the one that is comfortable enough for him to move

around the countries; wearing a blue sleeveless shirt, brown Bermuda short pants, long white socks and light brown boots. On the other hand, Barong will be wearing timeless accessories according to the myth. Therefore, the time set for the film will not be affecting the costume design of Barong.

The process of making Dulang and Barong characters has a different approach during the research data collection and data analysis. When creating the Dulang visual concept, the researchers need to learn about the characteristic of Betawi facial features in a 15 years old kid with an addition of adventurous traits. The team decided to give a bandage on the face of Dulang to show the adventure side of him on the design. Barong character is more complex to design as a more thorough research on Bali culture needed careful consideration. In the design process, the team created two versions of Barong, the normal version and the mini version of Barong. However, the team was advised not to change the figure of Barong as it can cause a misunderstanding of the myth. With this fact, the team failed to add a remarkable design on Barong.

With this research, the researcher team learns that creating a visual concept for a mythological character will need to consider where the myth comes from and the meaning of the design details from head to toe of each mythological character.

Conclusion

The researcher has been focusing on how to develop character that suits the culture, the food and the story in order to give an immersive impression of the projection mapping on a fine dining. The research objective of illustrating character visual concepts for a table projection mapping application of fine dining ti-

tled "Si Dulang" has been achieved. The intellectual property rights of character Dulang and Barong have been registered since November 2021, the artbook has been completed in January 2022 and the prototype of an animated film has been created in February 2022.

Dulang and Barong were made to be a part of the story to create an immersive experience. This visual concept is one of the achievement of research results that can be used in the projection mapping for fine dining. Data collection and data analysis are used to design the characters. The process of creating the visual concept is time and resource consuming because the revision happened several times based on the changing of the storyline. When the story changes, the concept will change slightly. The reference Tim Templeton from *The Boss Baby* (2017) and Russel from film *Up* (2009) play an important role in creating the three dimensional character of Dulang. It's the same deal with the photos of Barong dance in Ubud by Wahyu Pratama to design the visual concept of Barong.

The challenges in designing main characters are that the characters are able to attract the attention of the audience and are able to reflect back on the audience emotionally and psychologically. Determining the target audience of the film plays an important role in deciding the character's age because the filmmakers can consider how the character can relate to the audience by delivering the story that is easy to understand. Therefore, Dulang a 15 years old kid, is chosen as the main character because it is the age when they are still eager to learn and have a lot of passion to achieve their dream. The target audience of the fine dining is ranged between 30 to 50 years old and families that usually will bring children to experience fine dining.

When creating a visual concept of a mythological character, the knowledge of

the local culture of the character's origin is needed. It is advised not to change the figures drastically as it normally has meaning and is sacred to the village. Therefore, Barong who plays a protagonist in the story still looks alike with the typical Barong that we all know. It still has the shape of a lion, tiger, pig and dog. The flaw in this research is that the designer is unable to create more of a characteristic or unique Barong character in the film "Si Dulang". It is hoped that in the future research, the researchers are able to go deeper into how to create a unique mythological character.

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