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Research Paper

Holographic Reflection Penglipuran Village Bali

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Abstract

Potential Penglipuran Village Bali become a developed tourism destination. In every region now found many tourist villages that area future. Tourist attractions like this are managed by the surrounding community, as well as the Village Penglipuran Bali. And by 2016, Penglipuran Village Bali and 2 Giethoorn villages in the Netherlands and Mawlynnong Village in India, have been named the cleanest villages in the world. This makes the potential for the Village to be better known by the wider community. With holographic reflection technology Penglipuran Village is packed into a multimedia dish that can introduce part of the penglipuran village.

Keywords: *holographic reflection, reflector, Penglipuran Village, three dimension*

1. Introduction

Village of Penglipuran Bali is a tourism village and the Balinese village which is the harmony and togetherness among the very good citizens. This Penglipuran is located in Kubu village of Bangli regency of Bali. Beginning in 2016 Penglipuran Village became one of the cleanest villages in the world juxtaposed with Giethoorn Village in the Netherlands and Mawlynnong Village in India. In addition to being a tourist village, Penglipuran Village is one of Bali's tourist destinations. Starting from a visit to the Village Penglipuran in 2016, making inspiration to be a packaging that combines technology today. Figure 1 is a self-taken image in 2016.

Holographic reflection technology is a technology that combines 3 dimensions with a reflector. With this technology and data collection on Penglipuran Village, a holographic reflection of Penglipuran Village Bali was created. It can introduce Penglipuran Village in the form of three dimensional visualizations.

Fig.1: Penglipuran Village

This application can be run with various platforms such as android, windows, mac operating system and so forth. By using pyramid reflector, this application can run well.

2. Related Research

A 3d hologram is created to visualize an object into a cartoon form. It is also studied by one of the researchers who raised a theme of three dimensions of rabbit breeding. In his writing explains how a rabbit from a small process becomes an adult until the birth of a rabbit. A 3D visualization is intended for children to generally like rabbit breeding[1].

3D holograms are also applied to the diversity of land, sea and air transport. As stated in the journal which discusses about 3d hologram of traditional transportation tools that exist in Java island Indonesia. Discusses the history of the old transportation to modern today. All forms of transportation are visualized in an article entitled 3D Hologram Transport Equipment Introduction[2].

In addition to the refinement of the previous article which discusses the traditional means of transportation. In this article discusses the visualization of 3D hologram introduction of transportation tool in Indonesia. In general, in Indonesia, the means of transportation in urban areas more than in the countryside[3]–[5]. This is influenced by different economic levels. To introduce all the means of transportation, developed the introduction of Indonesian transportation through a 3D hologram visualization[6].

A subsequent study of 3D Holograms was the study of one of the students from Muria Kudus University. Here discuss about the diversity of fauna in Indonesia. Indonesia is some country rich in

flora and fauna. Even one of the fauna of Komodo become one of the wonders of the world. With the existence of 3D hologram technology, this research also use visualization of diversity of fauna into a 3 dimensional object. In his article entitled introduction of Indonesian archipelago animals, discuss the fauna that exist in Indonesia are packed in 3D hologram[7]

3. Methods

Multimedia method applied in this research is MDLC (Multimedia Development Life Cycle)[8]–[12] The steps of Multimedia Development Life Cycle method as follows:

A. Problem Definition

Problem definition in this research is the increasing number of Tourism Village in each region, be it on the island of Bali and in Indonesia. With the existence of holographic reflection technology, making Penglipuran Village into a 3D Hologram visualization. It aims to introduce Penglipuran Village to the world with the help of 3D visualization of the Hologram. The steps in the problem definition are listed in Figure 2.

B. Genre and Character

Stages after problem definition, a characteristic sequence of characters is generated. Where the character has the nature of helping, competing, as a competitor, until the traits that are owned by humans in general. In this study the characters to be displayed are the parts of the Penglipuran village along with the explanation.

C. Location and Interface

Location in this research will show some objects from Penglipuran Village and arranged in such a way. The object of Penglipuran Village includes the shape of the house from Penglipuran Village, the resting place which is usually in front of the Penglipuran Village house, the temple of public worship and the temple where the dead family ashes. Each section is set location and sub-location. Where is a groove that will be implemented on a reflector. The specifications of the relationships between objects and their commands are like an activity (checking, using and giving). The tools used are menus that will show part of Penglipuran Village.

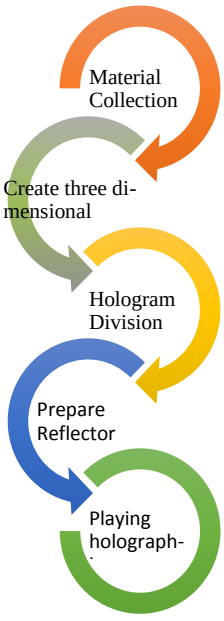

Fig.2: Problem Definition of Holographic Reflection

D. Plotting

The next stage after location and interface is plotting. At this stage the researchers make a merger between the action and existing activities to show the storyline. The dataflow diagram in this study is shown in Figure 3.

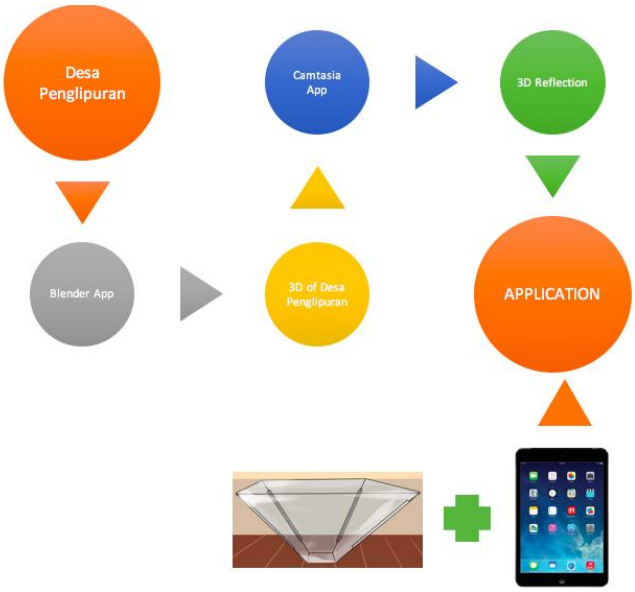

Fig.3: Design of Holographic Reflection

E. Scripting

In this scripting stage the researchers perform step by step to implement on all platforms. All materials that have been collected in containers and applied in accordance with the dataflow.

4. Results and Discussion

The result of this research is an introduction part of Penglipuran Village located on the island of Bali. Here is a view of holographic reflection of Penglipuran Village Bali. In Figure 4 and 5 is one of the existing house in Penglipuran Village Bali in the form of 3D hologram. Figure 6 shows the resting place in Penglipuran Village located in front of the house. In Penglipuran village there is also a temple where the deceased family, this is shown in the design of Figure 7. As well as the worship temple shown in Figure 8. From Figure 4 to 8 shows the building part of Penglipuran Village Bali.

Fig.4: House of Penglipuran village Bali

Fig.5: House of Penglipuran village Bali

Fig.6: Resting Place in Penglipuran Village

Fig.7: Place of ashes of the deceased

Fig.8: temple of worship

From the part of each building is applied its reflection. In accordance with the dataflow, this stage uses the Camtasia application facility. Camtasia application to help reflect into 4 parts. One of the four sections is shown in Figure 9 to 13

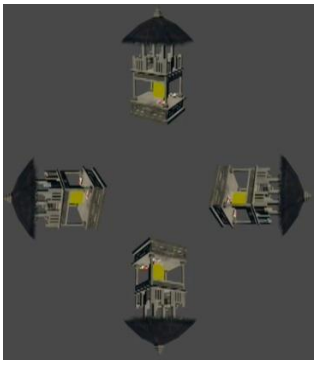

Fig.9: Objects that have been duplicated into 4 sides

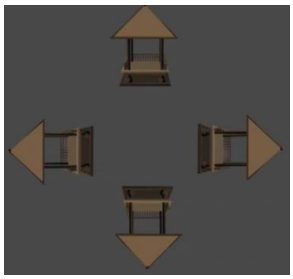

Fig.10: Objects that have been duplicated into 4 sides

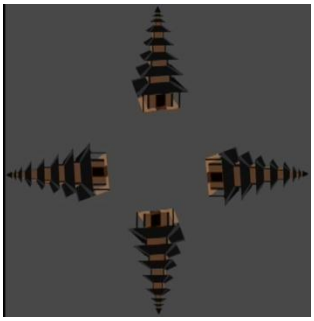

Fig.11: Objects that have been duplicated into 4 sides

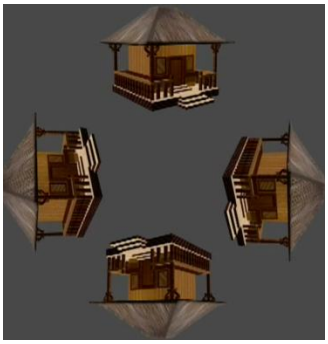

Fig.12: Objects that have been duplicated into 4 sides

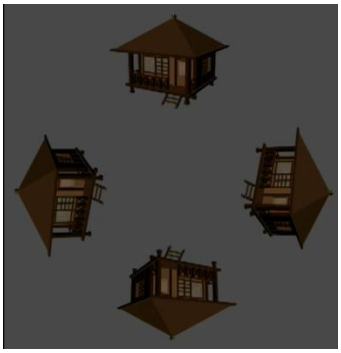

Fig.13: Objects that have been duplicated into 4 sides

The last step in this research is to experiment using reflector. All parts that have been through a 4-sided duplicate process, run into a video. Implementation of this research can be seen in Figure 14.

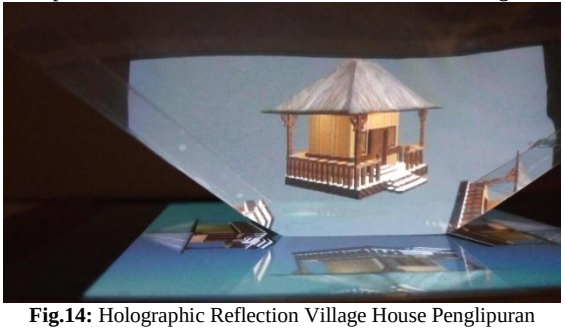

Fig.14: Holographic Reflection Village House Penglipuran

Fig.15: Holographic Reflection Village House Penglipuran

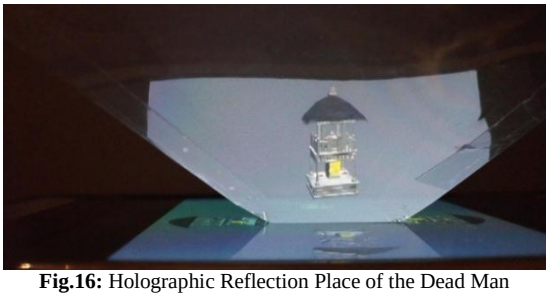

Fig.16: Holographic Reflection Place of the Dead Man

Fig.17: Holographic Reflection Temple Prayer

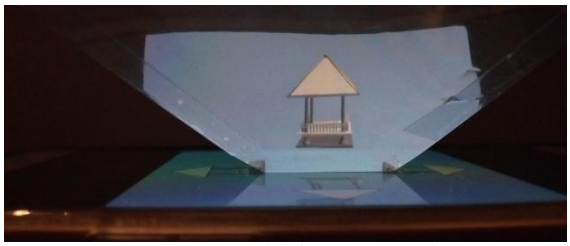

Fig.18: Holographic Reflection Place of Rest

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