Received : November 06, 2021
Accepted : November 13, 2021
Published : February 08, 2022

Conference on Community Engagement Project
https://journal.uib.ac.id/index.php/concept

MAKING 3D ARCHITECTURAL ANIMATIONS TO INTRODUCE THE KOTAKU WORK PROGRAM IN BATAM FROM THE MEMBER OF DPR RI CEN SUI LAN

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Abstract

Representatives from members of DPR RI Cen Sui Lan who is located at the Orchid Business Center are important to assist Ms. Cen Sui Lan in introducing her work projects, one of which is KOTAKU. KOTAKU program has several outcomes to be achieved and one of them is the construction of an Open Public Area (OPA) in Batam. The lack of 3D animation as a medium is the main problem in the introduction of the output because it is still in the form of a 3D model. The method that will be used is applied research starting from problem identification, content design, content development, content testing to content evaluation. The results of this study are in the form of a video file that briefly describes the KOTAKU project using motion graphics and the OPA architectural 3D animation that will be sent using the (.mp4) format. With the development of this video, the recipient can use the video as a medium for delivering information which is expected to introduce the KOTAKU project, especially in the construction of the OPA in Batam.

Keywords: ***3D Animation, OPA, DPR RI***

Introduction

Cen Sui Lan is a member of the DPR RI from the Golkar faction. He has a representative based at Orchid Business Center Blok A2 No.3, Batam. Activities carried out from Monday to Saturday. Her representative is in charge of designing and developing content to be uploaded to Ms. Cen Sui Lan's social media accounts. Social media covered are Instagram, Facebook, and WhatsApp. The content presented is in the form of greeting cards, photos/videos of work activities carried out and also news about her work proposal. Therefore, the existence of information delivery media is very important to continue to support information to the intended audience, namely the community.

KOTAKU is a program organized by the Ministry of Public Works and Public Housing. This program aims to improve access to infrastructure and basic services in urban slums and prevent the emergence of new slums in order to support the realization of livable, productive, and sustainable urban settlements in Indonesia. The facilities provided by the KOTAKU program are as follows:

1. Improvement of environmental drainage.
2. Waste management.
3. Wastewater management.
4. Provision of clean water.
5. Provision of fire protection.
6. Provision of Open Public Area (OPA).

The implementation of the KOTAKU program also covers the city of Batam. In Batam, the KOTAKU program is implemented in 9 urban villages. The list of the 9 villages is as follows:

1. Baloi Indah.
2. Batu Selicin.
3. Belian.
4. Bukit Tempayan.
5. Duriangkang.
6. Kampung Pelita
7. Kampung Seraya.
8. Kibing.
9. Sei Pelunggut.

In this digital era, information dissemination can be done in seconds. One of the purposes of disseminating information is to be better known by the public. The process of delivering information must also be effective so that the intended audience can understand the meaning or message to be conveyed. The diversity of media makes it possible for anyone to convey something in various forms. Such as the use of print media and electronic media. When compared, electronic media has the advantage that it is more effective than print media. These advantages are easy access to information because it can be done anywhere and anytime, the process of disseminating information is relatively fast and the flexibility of the media because it can include audio and visual (Ariyanto et al., 2020). However, often the use of electronic media is not very effective in conveying the desired message or meaning

because there are limitations from the media itself. Therefore, the selection of the type of electronic media is also considered in the process of delivering information.

Multimedia is something that is used to convey or show something (Arifin & Fadhlillah, 2017). Creative industries use multimedia for various purposes ranging from art, entertainment, commercial arts, journalism and software services. Multimedia is composed of 5 components, namely text, images, audio, video and animation. Among the five components, animation is the most flexible component because it can include other components and also animation can help manipulate an idea or information into a visual in the form of 2 dimensions or 3 dimensions.

3D animation (3D) can represent something that has never existed before by creating visuals according to the creator's will in 3 dimensions which includes 3 main axes, namely X, Y and Z. Currently 3D animation is not only used for entertainment purposes such as films, videos. Games, TV Shows and Advertising. However, it is also used for Medical, Architectural, Legal purposes and even for Forensic purposes (Pratama, 2018). That way, creating an architectural visual in the form of a building design, it can be done through 3D animation.

One example of the application of 3D animation as a medium for conveying information is as in the research of Arhandha & Dewi, (2018) which aims to design a 3D animation to convey the dangers and impacts of smog on the environment. Researchers found that the media previously used to explain the dangers of smog were too flat so that there was a lack of public interest in knowing the impact of the smog itself. The researcher then designed a 3D animation-based film and distributed questionnaires to measure the effectiveness of using 3D animation as a medium for delivering information. It is concluded that the use of 3D animation is more effective than other media such as 2D animation, video or in the form of text.

Another example of implementing 3D animation is the research by Sumendap et al., (2019) regarding the design of 3D animation videos to introduce the culture of the city of Gorontalo in the form of a traditional dance, namely the Dana-Dana dance. The purpose of this research is as an effort to preserve traditional culture so as not to be marginalized by modern culture. Researchers chose 3D animation with the reason to make it easier for the audience to get information about the Dana-Dana dance. After developing the 3D animation video, the researcher distributed questionnaires to several respondents and concluded that 3D animation can be used as a media for introducing traditional culture. Based on the use case of 3D animation, it can be concluded that 3D animation can be used as a media for delivering information.

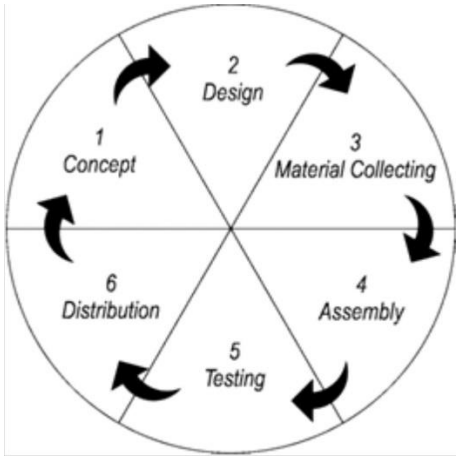
At this time, the representative of DPR RI members from the Golkar faction, Mrs. Cen Sui Lan, has problems in using effective information delivery media in the process of introducing Open Public Area (OPA) at Batam to be built in the KOTAKU program. Reviewing the background and problems experienced by partners, the author will design a 3D animation video to display the Open Public Area (OPA) in Batam that is contained in the KOTAKU program.

Methods

This study will use qualitative methods to obtain information related to the problems experienced by partners. Methods of data collection is done by

observation and interview. Observations are made through direct visits to partner offices in order to observe the problems faced by partners. Interviews were proposed to obtain information related to the background of the project and the elements that will be used in 3D animation. The main data source in this research is the representative of Ms. Cen Sui Lan. Mr. Victor Ang is in charge for taking care of the content that supposed to be uploaded in Ms. Cen Sui Lan social media accounts. Video development will use the MDLC (Multimedia Development Life Cycle) model.

Picture 1.
MDLC Model



Source: (Yasa et al., 2021)

The MDLC model had 6 steps which is:

1. Concept
   Reviewing from the data that had been gathered, author will make a concept of the video such as choosing the background music, script, video setting (frame rate, resolution, codec) and application that will be used for developing.
2. Design
   Based on the concept and idea, author will start to develop a storyboard for a better visualization in post-processing later on.
3. Material Collecting
   At this step, author will start to compose the 3D model based on the blueprints that the partners have given in the interview process using Blender as the application. After the modelling cleared, author will start to animate the camera movement and ends with rendering process. Next, author will create a motion graphics to support the intro and outro to be easily understand by the viewers. Author will also record a voice over to be used in the video.
4. Assembly
   Using all the footage and audio that has been gathered, final compositing will be done using Adobe After Effects. This step includes assembling all the material into a sequence using the storyboard as a reference. Final rendering will be using Adobe Media Encoder to easily convert the output into an mp4

format. Mp4 format is commonly used for file delivery purposes since it carried a small file size and good compression in the overall video quality.

5. Testing
   This step will be done by doing beta testing which is sending the prototype to partner so that it can be taken for review. If the output has a revision, author will quickly remake as the request.
6. Distribution
   When the final output that had been revised and accepted by partner, the author will distribute it via cloud storage to be easily shared among others.

This project will be implemented at the Orchid Business Center and will run from 1st September 2021 to 31st December 2021.

Result and Discussion

The designed video contains a combination of motion graphics elements and 3D animation. This video will also be accompanied by soft tech genre background music and narration will be delivered by the author. The content contained in this video is divided into several scenes as follows:

1. Introduction
   In this scene, the video will be accompanied by a narration that briefly explains the purpose of the KOTAKU program. The shot will be displayed on Picture 2.

Picture 2.
KOTAKU Introduction

Source: Author (2021)

2. KOTAKU Facilities
   In this scene, the video will be accompanied by a narration that explains the details of the facilities that will be provided in this program. The shot will be displayed on Picture 3.

Picture 3.
KOTAKU Facility Explanation

Source: Author (2021)

3. Implementation KOTAKU in Batam
   In this scene, the video will be accompanied by a narration that will describe which villages that will receive assistance from this program in the Batam. The shot will be displayed on Picture 4.

Picture 4.
Location of KOTAKU Implementation in Batam

Source: Author (2021)

4. Ms. Cen Sui Lan's Contribution
   In this scene, the video will be accompanied by a narration explaining how Ms. Cen Sui Lan participated in helping in this KOTAKU program. The shot will be displayed on Picture 5.

Picture 5.
A Brief Explanation of Cen Sui Lan's Role in KOTAKU

Source: Author (2021)

5. OPA Showcase
   In this scene, it will showcase the 3D animation the OPA design, for example the Baloi Indah OPA will be displayed on Picture 6.

Picture 6.
Showcase of the OPA in Baloi Indah Village.

Source: Author (2021)

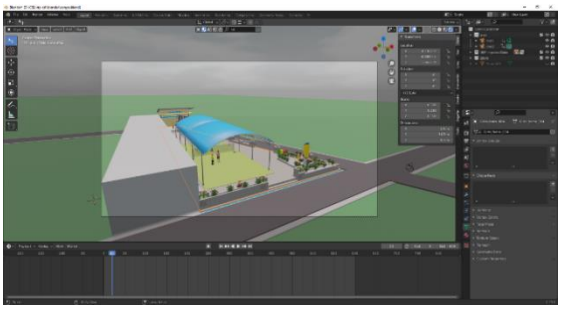
6. Implementation KOTAKU in Batam
   In this scene, the video will be accompanied by a narration that states the end of the video. The shot will be displayed on Picture 7.

Picture 7.
Outro

Source: Author (2021)

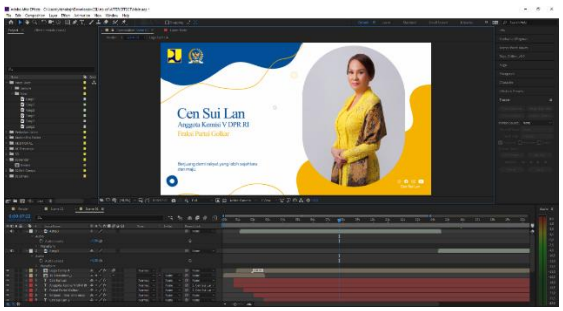
For the 3D modeling and animating is done inside Blender. The process itself start from making the building design based on the blueprints that has been collected during the interview session. From the design, author start to animating camera movement to create a dynamic motion and attract viewers to keep watching the video. All the 3D renders were imported to Adobe After Effects for final compositing. The motion graphics created to enhance the conveying process to make the overall video much easier to understand. The selection of background music also adjusted to the partner's request, namely music with the soft tech genre.

Picture 8.
3D Modeling and Animating Process



Source: Author (2021)

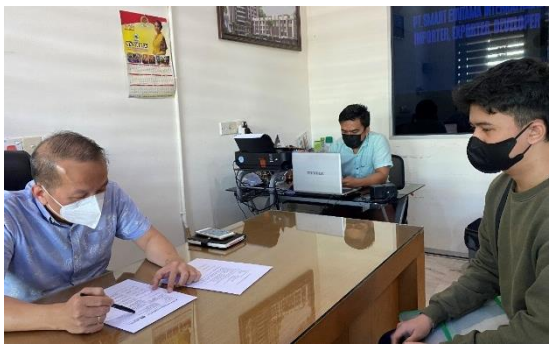
Picture 9.
Final Compositing



Source: Author (2021)

After completing the final video based on the testing result, author implement the product by uploading the final video to a cloud storage, namely Google Drive. At 29th November 2021, author will come to partner office to send the link and clear all the paper work. From that, partner can use the video as a media for delivering information related to KOTAKU program especially on the introduction of the Open Public Area in Batam.

Picture 9.
Implementation



Source: Author (2021)

Conclusions

Based on the results of interviews and observations made, partners need effective information delivery media to be able to represent Open Public Area in Batam that contained KOTAKU program.

After implementation, partners can use the video as a more effective medium for delivering information because in this case, the use of 3D animation can engineer the design of the OPA itself. So that the audience gets a more realistic visualization even though the RTP has not been built.

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