

Rig Implementation Using Duik Bassel Plugin In 2d Animation “Terjebak Hoaks”

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Abstract. The method of making the appearance of moving pictures from a huge number of objects is known as 2D animation. To generate positions and movement of objects without having to sketch them one at a time, the procedure of supplying bones (rigging) is necessary (frame by frame). The Duik Bassel plugin was used to apply the rigging technique to the character's body in the 2D animation. In order to automate the rigging process in After Effects applications, Duik Bassel is a specialized computer tool (plugin). The rig technique using the Duik Bassel plugin helps animators when creating character poses, reduces complexity, minimizes pose and object motion time, and still gets the same number of frames when compared to making animation in the traditional way (frame by frame). The icon in the Duik Bassel user interface can be recognized by the user because it is in the form of a human bone image. The goal of this project is to create the 2D public service animation video "Terjebak Hoaks" in .mp4 format. Later on, ICT Watch will use this movie as a platform to disseminate information on digital literacy in relation to how to slow the spread of false news via the website s.id/cekhoaks.

Keywords: 2D animation, Rig, Duik Bassel, Hoax.

1 Introduction

"Terjebak Hoaks," one of the project-based learning initiatives, will create a product in the form of a 2D animation video that raises issues related to the significance of digital literacy to stop the spread of false news or hoaxes., through the website provided by the ICT Watch client, namely s.id/cekhoaks. You may examine information, learn how to look for hoaxes, and access a number of additional tools on the s.id/cekhoaks online page.

The problem has been brought up in keeping with the circumstances at the moment. The Head of Diskominfo claimed that there were almost 800,000 websites disseminating fake news, according to a quote on the kominfo.go.id page. [1] Therefore, there is a need for socialization on hoax prevention and other issues pertaining to the hoax itself.

Hoax is an attempt to deceive or trick the reader or listener into believing something, even though the creator of the fake news knows that the news is fake [2]. So with the 2D animation video “Terjebak Hoaks”, it is hoped that it can have a positive impact on the socio-cultural aspects of the community so that it does not easily spread news without correction and carefully review the truth.

[3] 2D animation as a medium for conveying information and learning media consisting of a series of image objects in the form of humans, animals, objects, and writing that can assist clients in conveying information about how to check the truth of an information through the website s.id/cekhoaks [4].

Duik Bassel is a special computer program (plugin) used in After Effects applications that functions as rigging automation in motion creation. [5] The rig technique using the Duik Bassel plugin can help in accommodating the suitability of motion poses because in making 2D animation “Terjebak Hoaks” using the Duik Bassel plugin the author does not do the frame by frame drawing process but still gets the same number of frame images in motion and character poses and reduce complexity when creating animations using frame by frame drawing techniques [6].

2 Literature Review

2.1 Hoaks

Hoaks are fake news or fake news that can make the audience who reads the news deceived and believe an information that is not true. Hoaxes are very dangerous for readers who are not critical in digesting a public information they get and do not do a search for the truth first from a newly obtained information, whether the news is true or not. This can mislead other readers if the hoax is spread and can indirectly form false public opinion [7].

2.2 Animation

Animation is a combination of art, cinematography and technology that moves several images into a complete video or film. In the arts, animation has an attachment to the 12 basic rules of animation principles. Cinematography has a scope of knowledge in the use of frames, sequences, cut unit counts, continuity, point of view, camera angles, scripts, image transitions, and so on. While in technology, there are devices used in the process of making videos or animation films, such as computer software, sound recorders, cameras, and human resources [8]. Animation has several types, namely traditional animation, 2D animation, 3D animation, stop motion and motion graphics [9].

2.3 Rigging

Rigging is the process of adding bone to the character's image design. The process of giving this bone is intended to help the process of character animation motion. Rigging technique is usually used in 3D animation but over time this rigging technique is implemented in 2D animation as well. This helps in minimizing the time and process of creating 2D animations [10].

2.3 Duik Bassel

Duik Bassel is a comprehensive rigging and animation tool used for After Effects. Duik Bassel has a rigging feature that is usually found in 3D software and then adapted to be applied to 2D animation. In addition, Duik Bassel has quite complete features in the field of animation. Such as setting keyframes and interpolation, motion animation, exposure animation and so on – and there are also automation features for motion of objects such as swings, springs, wheels, and others that make it possible to bring movement to life. Duik also has a very useful camera setting feature. for both animators and riggers [11].

3 Research Methodology

3.1 Brainstorming

The purpose of brainstorming is to get an agreement and ideas from each team member and project manager regarding the brief that has been given by the client in the process of making a 2D animation video “Terjebak Hoaks”.

3.1.1 Script

The first stage in the process of working on a 2D animation video script “Terjebak Hoaks”, is to understand the purpose of the brief given by the client, namely ICT Watch. Then the brief is used as a reference in developing story ideas for the script later. The purpose of brainstorming is to help the process of making scripts to be more organized and not run away from the brief that has been given by the client.

The story is about a student named Siti who is confused about some information she gets from a class group. He does not know which information is proven to be true and which information is fake news. Then his friend, Andi, explained through a virtual meeting that information can be checked and verified through a website s.id/cekhoaks provided by ICT Watch. Andi explained what features are available on the s.id/cekhoaks website, such as watching movies about hoaxes, reporting hoaxes through the WhatsApp chatbot, then how to check the truth of information through the s.id/cekhoaks website. In the end, Siti was no longer confused in receiving information and finally knew how to check the truth of the information.

3.1.2 Storyboard

The first stage in making a storyboard is to brainstorm related to the rough draft of the storyboard from the script that has been made previously. The brainstorming process helps in understanding the appropriate picture based on the script. Storyboard work begins with a rough draft of the storyboard. In the process, it is done using a picture book, by making several parts as the embodiment of the video scene. After the rough draft of the storyboard is agreed upon, the storyboard is compiled and tidied up, which will then be made a cinematic storyboard.

3.1.3 Asset

The stages of the process of working on the 2D animation video asset “Terjebak Hoaks” is to brainstorm about what assets are in accordance with the script and storyboard that has been made. perform an analysis of what assets are needed. Where later the required assets such as characters, properties, backgrounds, as well as sets. The assets required are as follows:

a. Character

The first step in the process of working on character assets is brainstorming related to character sketches that match the character of the characters in the animation video “Terjebak Hoaks”, namely Andi, Siti, Abdul. By understanding the shape language that becomes a guide in compiling each character.



Fig. 1. Characters of animation video “Terjebak Hoaks”

b. Property

The first step in the process of working on property assets is brainstorming with the aim of being able to understand and describe the right property to match the previous script and storyboard. After getting an agreement regarding the property to be created, the layout process is carried out manually before being traced digitally.

c. Background

The next step in making the background is brainstorming with the aim of getting a mutual agreement regarding the background according to the atmosphere of the story based on the script and storyboard. Looking for references and creating moodboards so that the results match and the style is similar to characters, properties, and other assets.

3.2 2D Rig Techniques and Tools

In general, the technique used in rigging 2D assets for this 2D animation video “Terjebak Hoaks” is the skeletal animation technique using a plugin called Duik Bassel. This plugin helps to create a representation of bones in the characters (rigging) from the results of images produced by Adobe Photoshop and then inserted into the After Effects application. After the image file is entered, the plugin will help unify the process of reinforcing the pieces of the

character's body for each character. This document discusses the entire process of making a short film that the author wants, starting from the storyboard, making character designs, cutting the limbs of the characters to be moved, the process of reinforcing the body parts of the characters (rigging), and uniting all the motion elements together so that produce animation short films. Apart from the technique, in the process of rigging 2D assets for 2D animation videos, they also take advantage of the effects provided by After Effects, namely the slider controller.

3.3 Reference collecting

In making the 2D animation video “Terjebak Hoaks”, icons that are characteristic of Batam City will be inserted, such as the Bareleng Bridge, food and drinks typical of Batam City, and the Batam City Grand Mosque. For this reason, reference collection is carried out to later be used as a moodboard that makes it easier for illustrators to create asset designs from what was previously agreed upon. Such as Bareleng bridge, Masjid Raya Batam, Tarempa noodle, Obeng tea, City view landscape, Siti’s bed room, Andi’s bed room, Abdul ber room, and Internet landscape.

3.4 Sketching 2D Asset

The sketching process is the first step in creating 2D assets for the 2D animation video “Terjebak Hoaks” that will be done. All of these assets were created by the Project Based Learning team, the 2D animation video “Terjebak Hoaks”. The list of assets required for the “Terjebak Hoaks” 2D animation video includes: Character Sketch, City Sketch, Andi's Room Set, Siti’s Room Set and Abdul’s Room Set.

3.5 Rig Design

The rigging design for 3 characters, namely Andi, Siti and Abdul, has been carried out. The installation of bones in this character is intended to be used later in forming the desired character's motion pose.

3.5.1 Mouth Rig dan Eye Rig

Here is the position where the character's mouth will be moved with the slider controller which is an effect of Adobe After Effects. By creating a vector image of the shape of the mouth of the character separated based on the pronunciation of the sound of the letters. It aims to provide a dynamic effect when the character speaks. So that the pattern of the mouth created is in accordance with the dubbing of his voice. Vector image of character's eyebrows and eyes separated based on their expressions. For animation of blinking character eye movements using the Duik Bassel rig. Then the controller that will be used in Duik Bassel is the slider controller.

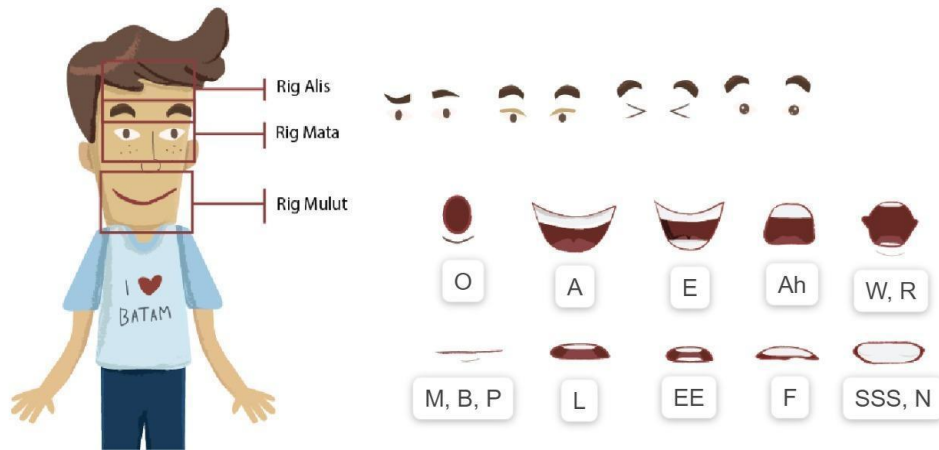


Fig. 2. Andi's Character Mouth and Eye Rig

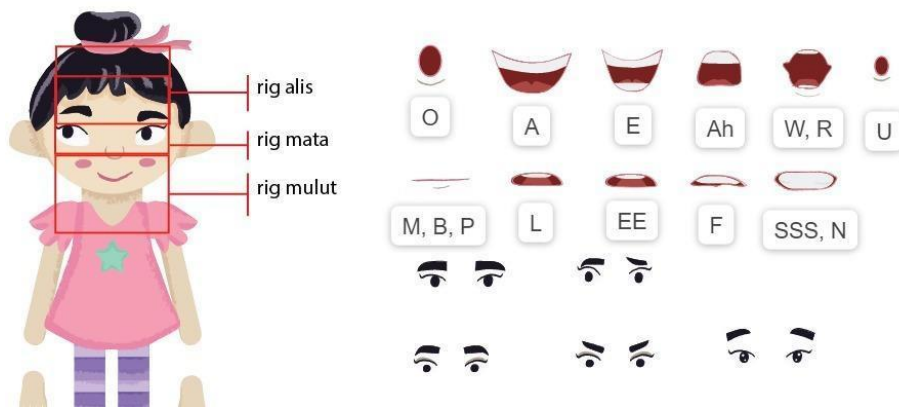


Fig. 3. Siti's Character Mouth and Eye Rig

3.5.2 Andy's Rig

The following is a design for installing bones on Andi's character which will be moved using the Duik Bessel rig. There are reinforcement points on the neck, shoulders, elbows, abdomen and hips. On the legs there are points of reinforcement at the hips, knees, and ankles. The type of controller at each point will be distinguished according to human movement in general. Because it can rotate at the wrist, shoulder, and neck, it is planned to use a rotary controller. Then at the top of the shirt collar, stomach, and hips, use a controller motion that can only move to the right and left. While the torso uses a controller that can only move up, down, left, and right.

3.5.3 Siti's Rig

The following is a design for installing bones on Siti's character. Just like in the previous Andi character, Siti's character has the same character's body reinforcement points and at the production stage it is designed to have a controller movement that rotates on the chin, both shoulders, and wrists. Then at the top of the shirt collar, stomach, and hips, use a controller

motion that can only move to the right and left. While the torso has movements up, down, left, and right.

3.5.4 Abdul's Rig

The design of giving bones to Abdul's character is as follows. Abdul's character in the production stage is designed to be given a Duik Bassel controller on the chin and wrist that can be rotated 360 degrees. Then the torso can move up, down, left, and right. While in the 3 point section the clothes can only move to the left and right.

4 Implementation and Result

4.1 Andi and Siti's character rig

The installation of rigs on the characters of Andi and Siti has something in common. In the stage of making the Rig, Andi and Siti's characters begin by pairing a pin puppet as a marker for which part you want to move according to the design stage. There are 19 points of installation of this puppet. After that, it is followed by each other's parents so that they are connected to each other.



Fig. 4. Andy's Character Rig



Fig. 5. Siti's Character Rig

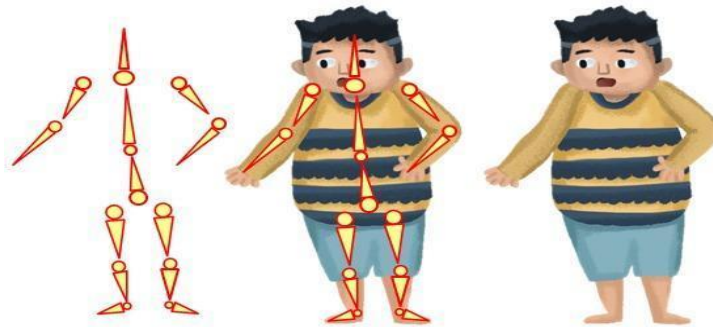


Fig. 6. Abdul's Character Rig

4.1.1 Mouth, Eye and Eyebrow Rig

In the process of making the mouth, eyes, and eyebrows rig using the effect slider controller in After Effects. First, create a mouth, eye, and eyebrow design with various mouth shapes, eyeball directions, and eyebrow shapes according to the character's needs, in Adobe Illustrator. Then when it is imported into After Effects, all the mouth, eyes, and eyebrows are arranged into one composition called "lipsing", eyes, and eyebrows. then each mouth, eyes, and eyebrows are given a one second pause so that the movements of the mouth, eyes, and eyebrows change when making expressions on the character using the slider controller.

To make the eyes blink using the Duik Bassel plugin. The stage starts by creating a path on a new layer above the right and left eye layers using the pen tool in After Effects. then the path is added to a matte set so that the path can adjust to the eye shape of the character that has been created. then add a slider controller from the Duik Bassel plugin. then on the first key the eye position is open, then set the key as needed to make a wink in the eye by changing the previous path using the convert vertex tool following the eye pattern. then repeat the blinking eye keyframe by typing the loopOut() program code.

4.1.2 Hand and Foot Rig

Hand and hand rigs use the same method, starting with installing 3 pin puppets as markers. After that, do the giving of bones in the place where the pin puppet has been installed. After the three bones have been installed, the parent of each bone is 1 to 2, while 2 to 3. Once connected, click on the auto rig feature on Duik Bassel. Then the hand will be able to be moved equipped with rotary controllers in each part of the wrist and foot.



Fig. 7. Andi and Siti Hand and Foot Rig

4.1.3 Sleeve and Neck Rig

On the sleeves and neck, if you have given a pin puppet, you will immediately be given additional controller features in the Duik Bassel plugin. The type of controller given is a controller that can rotate 360 degrees. Because in the original human body the arms and neck can only rotate approximately 180 degrees, then the animation will adjust to the character's movements. After the controller is installed, the parent assets arm and neck to each of its motion controllers.

4.1.4 Body Rig

For the rig on the body there are 4 pin puppets in it. On the shirt itself there are 3 pins, while the other 1 is in the lower abdomen area which is the border of body movement with the legs. After being given the puppet pins, bones pins are given on the clothes and for the lower abdomen, bones pins are given that can move right, left, up, and down. After that everything is in the parent. From pin 1 shirt to 2, pin 2 shirt to 3, and pin 3 clothes to the lower belly pin.

4.2 Result

The final result is a 2D animation video Stuck Hoax in .mp4 format which lasts approximately 2 minutes which will be given to ICT Watch clients to be displayed as a medium of information about digital literacy. In the 2D animation video "Terjebak Hoaks" which is produced in scene one, the atmosphere of the city of Batam is shown complete with the Bareleng Bridge and the typical Batam Grand Mosque. made with a size of 1920 x 3240 because in this scene there is a BOOM camera movement from top to bottom following the movement of the floating flyer. The problem when making scene 1 is in the camera settings and the arrangement of the design assets. This is because the arrangement of the design layers in Adobe Photoshop is still combined, making it difficult for the process of laying assets when setting the camera to get the

composition of space and depth. The solution to this problem is to do layer management and neat naming in Adobe Photoshop. Then when the flyer flies, to give the impression of being carried by the natural wind, the pamphlet is given a CC cylinder effect. However, giving this effect makes the pamphlet not open and tends to bend. So the thing to do is to explore the settings given by the CC cylinder.

The results of the implementation of the rigging method on the characters of Andi, Siti, and Abdul in several 2D animation video scenes "Terjebak Hoax" are as follows scenes 2, 5 and 8. In scenes 2, 5, and 8, the results of the implementation of the rigging method on Andi's character in which Andi's head moves his head to the right and left when talking to Siti. The head movement is the result of the implementation of the Duik Bassel rotary controller by adjusting the keyframe rotation on the Duik Bassel rotary controller which is located on the head of Andi's character. Andi's hands move as if making body gestures to give orders and explain to Siti. The hand movement is the result of the implementation of the hand rigging controller setting whose focus is on Andi's character's finger by setting the keyframe rotation and position of the hand rigging controller. The keyframe position setting is to produce the movement of Andi's hand that raises his hand up and when he waves his hand, while the keyframe rotation setting is to produce a rotating finger movement according to the movement of Andi's hand.

Then the motion in Abdul's character is the movement of the head down and up which shows the head gesture of a person who is sleeping. The motion is the result of the implementation of the rigging motion of the controller rotation which is on the head of the character Abdul which is carried out through the process of setting the keyframe rotation on the head of the character Abdul. On the hand, the same thing is done by adjusting the keyframe position of the rigging controller of Abdul's character so that it can form hand movements that look like they are folding their hands on the table.



Fig. 8. Scene 2



Fig. 9. Scene 5



Fig. 10. Scene 8

5 Conclusion

Based on the project creation process that has been carried out using the rig method with Duik Bassel and the After Effects software that has been described, the conclusions are as follows:

1. Produce 2D animation video “Terjebak Hoaks” which raises issues related to the importance of digital literacy to prevent the spread of false news or hoaxes by implementing Duik Bassel's rig technique in 2D animation “Terjebak Hoaks”.
2. The use of the Duik Bassel rig by giving bones to the characters helps in accommodating the suitability of motion poses because in making the 2D animation “Terjebak Hoaks”, the process of drawing frame by frame is not carried out but still gets the same number of frame images in the motion and poses of the characters and reduces complexity when creating animations using a frame by frame drawing technique.

3. The use of the open source Duik Bassel plugin with Auto rig & Ik, Connector, Add Bones, Controller tools helps in the animation process by adjusting the location of the rigging controller and determining the keyframe position so that the desired pose or character motion is obtained.

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