

# Analysis And Development Film Legend Of The Galela Using Three Dimensional Animation

M. Kasyif Gufran Umar

**Abstract**— The animated movie is a growing industry in Indonesia. Animated film serves as a medium not only entertain, but also educate because it contains a moral message and didactic. Currently, the making of animated films in addition to having an interesting story line, also has a specific purpose. There is an important message to be conveyed, such as presenting a legend or cultural heritage that became extinct from the public gaze. In fact, there are many people even younger generation, have minimal knowledge about the legend their own areas. Society tends to like to enjoy other entertainment than on listening to the legend that is considered old-fashioned. The number of alternative technologies utilized by the loss of consciousness to be a factor for preserving cultural heritage. Animated film may be one solution that is used to promote and preserve the story of the legend. Legend is no longer monotonous and archaic, since the film is packed with animations where appropriate real that seem different from other movie legends. This animated film applications utilize a blender to make a design, asset or 3D object and the animation and video editing using Adobe Premiere. The purpose of making this film is to produce animated film Legend of the People Galela to introduce and preserve the local legends Galela to Indonesian society and local communities. In this study, the authors undertake analytical studies related to the production of 3D animated film about Galela Folk legend that tells of 'origins presence of a lake in Galela. Analysis of this 3D animation film making using SWOT analysis methods with the aim of predicting and analyzing some of the factors that must be considered influential in making the animated film so it can be maximized and in accordance with the ultimate goal being achieved. Hopefully, the animated film Legend Galela People can be useful and accepted by the public at large.

**Key words :** 3D animation , video, galela legend

## 1. Introduction

Film or video is used as a medium or tool to meet human needs, namely to communicate an idea, a message, or the reality of an event [1]. Due to the dimensions and nature of its entertainment, film and video has been accepted as one of the audio-visual media the most popular and loved by the

people [2]. Video or movie is known as one of the most effective media to convey the message or information directly to humans [2]. The development of film in Indonesia has many versions, ranging from action movies, adventure, documentary, comedy and animated films [3]. Currently, animated films began to dominate the film market in Indonesia. Besides more the theme of education, created the animated film is able to attract people to watch it [4].

Developing an animated film also has many types and versions such as: 2D animation; 3D animation; Stop motion animation; and the Japanese Animation (Anime) [3]. In addition, the animated film was developed by considering the election theme of the story that raised the local legend of both the animated film commercial and indie animated movies. Selection of a local legend story themes into its own reasons in an effort to preserve the cultural values of an area. The theme of the story has meaning as prose stories of the people who are considered as something that really happened and has the function to induce a feeling of national identity area [3]. Moreover, with the selection of themes in the animated film, can serve as a means of delivering a moral message and the education of the older generation to the younger generation.

Nowadays the existence of the film in Indonesia is dominated by foreign films. Quite often people tend to prefer the film. This is quite alarming for young people to become less familiar folklore which became one of the nation's cultural assets. The limited development of animated films that raised the issue of the culture, so that people's knowledge fairly minimal. However, some research has worked to introduce the culture through animated films such as researcher Windarto [5], animated film titled "The Legend of Toba Lake" is not only entertainment but also can give a positive value to the moral values contained in the film , In another study entitled "Folklore Minahasa: Implementation of 3D Animation Short Film" [2]. The study also contains the value of local wisdom, culture, public education and the delivery of moral messages contained through audio and visual media contained therein.

Based on this background, the authors intend to develop an animated film titled "Galela Folk legend" in order to introduce and preserve the cultural value is forgotten by the present generation, but often times people do not know the story of the legend. Goal of this movie and the whole society Galela Indonesian society in general. This film was developed with 3D animation which is packed with pictures,

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M. Kasyif Gufran Umar  
Program Studi Magister Teknik Informatika, STMIK Amikom Yogyakarta  
Jl. Ring Road Utara, Condong Catur, Depok, Kec. Sleman, D.I Yogyakarta –  
Indonesia, Telp: (0274) 884201, Fax : (0274) 884208

sound and other effects that give a feel like a real story. In addition, the authors conducted an analysis of the 3D animated film that was developed to determine the factors that must be considered during the process of making the film for maximum achievement. The method used for the analysis is the SWOT analysis. By doing the analysis, the process of making animated films can know and determine the subject matter should be added and removed so as to get maximum results, the information presented can meet the needs of the people of Indonesia and the moral of a story can be delivered to the public. In addition, the animated film titled *The legend of the future* can contribute to efforts to preserve the culture of Indonesia.

## 2. Review of related literature

### 2.1 Animation

Animation comes from the animation or to animate which means it is alive or animate all kinds of objects or inanimate objects that exist on Earth [6]. The definition of animation is turned all kinds of objects or inanimate objects so as if seen alive and can be enjoyed with the help of technology [6]. Animation is the illusion of a life that has elements of motion. Animation is a film that comes from the hands of image processing so that it becomes a moving image [6]. The oldest form of animation estimated as *wayang kulit* puppets meet all animated elements such as layers, moving images, dialogue and music illustration. Animation began to develop around the 18th century in the United States [6].

### 2.2 Multimedia

Reviewed from the language, consists of two words, namely *multi* and *media*. *Multi* means many or more than one [7]. While the *media* is the plural of *medium*, is also interpreted as a suggestion, container, or tools. The term *multimedia* itself can be interpreted as data transmission and manipulation of all forms of information, both in the form of words, pictures, video, music, numbers, or handwriting where in the computer world, forms the information is processed on and in the form of digital data [7]. *Multimedia* is a combination of computer and video, or *multimedia* in general is a combination of three elements: sounds, images, and text [7]. On the other hand, *multimedia* is a combination of at least two media input or output of data, where the media can be either an audio (voice, music), animations, video, text, graphics, and images [8], or *multimedia* is a tool that creates dynamic and interactive presentation that combines text, graphics, animation, audio, and images, video [7].

### 2.3 3D Film Production

Business process detail of animated films made with the study of literature, benchmark with the usual animated film and the 3D animated films such as Pixar and with in-depth interviews with the three-dimensional animation studio. So that the stages are specified in accordance with the conditions, people / actors involved in the process, interviews with the animation studio and production of animated films literature. The following stages of production 3D animation film as follows [9].

- Stage of development: the stage of collecting ideas manifested in a storyline. Production of the film began

on the stage of development with a developing story. Most of the time used by the job, in this case the production house or individual producing the film. Once the idea is sold, process development and possible *penyempurnaan* story before the movie is actually produced. This process means the refinement of the raw idea into a story that can actually filmed. Many production houses are spending time to develop a story almost as much as the time spent for the actual animation production.

- Pre-production stage: the stage was done to addressing and preparation of the technical challenges required for production.
- The production stage: the stage of making animated films which include, motion animated characters, *lipsync* animation and expression, setting or background animations, animated special visual effects, animation and animation camera lighting (lighting).
- post-production stage: the stage of editing, polishing and rendering animations that have been made so as to produce a master film ready to be packed at a later stage. After the film was animated and rendered still need to do some post-production process to add sound effects and dialog synchronization. Creating a great sound effects is an art in itself. Lots of sound effects that can be purchased in the market with a variety of sounds both realistic and cartoon. If the effect needed is not exist yet, it is necessary to make your own. Making sound effects involve a lot of microphones and sound recording necessary

### 2.4 Legend

Legend (Latin: *Legere*) is a prose story of the people who are considered by having a story as something that really happened. Therefore, the legend is often regarded as the "history" of collective (folk history). However, because it is not written, then the story has been distortion so that it often far different from the original story [10]. Folk legend that the author adopted in this study is a legend about the story of the formation of a lake that was in Galela, North Halmahera, North Maluku province. There is some understanding of the meaning of the word of legend expressed by several experts including the following [10].

- a. KBBI (Indonesian Dictionary) in 2005, the legend is folklore in ancient times that has to do with historical events.
- b. According Pudentia, the legend is a story that is believed by some locals actually occurred, but are not considered holy or sacred which also distinguishes it from myth.
- c. According Emeis, the legend is an ancient story that is half based on the history and the other half is based on wishful thinking.
- d. According Hooykaas, the legend is a tale of things based on the history that contains something magical or supernatural events that signify.
- e. According to William R. Bascom, the legend is a story that has characteristics similar to the myth, which is

considered really happened, but it is not considered to be sacred.

### 2.5 SWOT Analysis

SWOT analysis is a basic method for analyzing and positioning the organization's resources and environment in four areas: strengths, weaknesses, opportunities and threats [11]. The strengths and weaknesses internal (controllable) factors that either favor or hinder organizations to achieve their missions. Meanwhile, opportunities and threats are external (uncontrollable) factors that enable and disable organizations from completing their mission respectively [11]. By identifying these factors in four areas of the organization can identify core competencies for decision-making, planning and strategy development.

SWOT Analysis discovered by Humphrey as part of his research at Stanford Research Institute in the 1960s-1970s, and was conducted using data from Fortune 500 companies [12]. Since then, the SWOT analysis has been widely used in both commercial and academic communities [13] The purpose of the main SWOT analysis is to gain a competitive advantage and have the products in accordance with the wishes of consumers and optimal support from existing resources [12]. Chart of the SWOT analysis can be seen in Figure 1 below.



Figure 1. SWOT Analysis [13].

### 3. Methodology

The research methodology aims is to design a program begin from starting phase to the last phase. Starting phase of the research are planning and collecting about human object, animasitentang materials, manufacture setting areas or regions where the story so with the settings of the audience can feel like in place of the original. As for some of the methods used are:

- Methods of data collection in the form of literature, interviews and questionnaires.
- The data analysis method has several stages,such as arranging research proposals from the collected data, processing the data to process the results of interviews and collecting information in the field of the study sites, checking the validity of data from interviews with several sources were used as informants research, data processing is considered optimal if the data obtained is feasible deemed complete and analysis of data in order to answer the question as to research conducted by triangulation analysis approach.

- The flow of research are translated from system requirements analysis until the test that was completed at the stage of conclusion. The process or research stages Folk Legend story Galela shown in Figure 1 below.

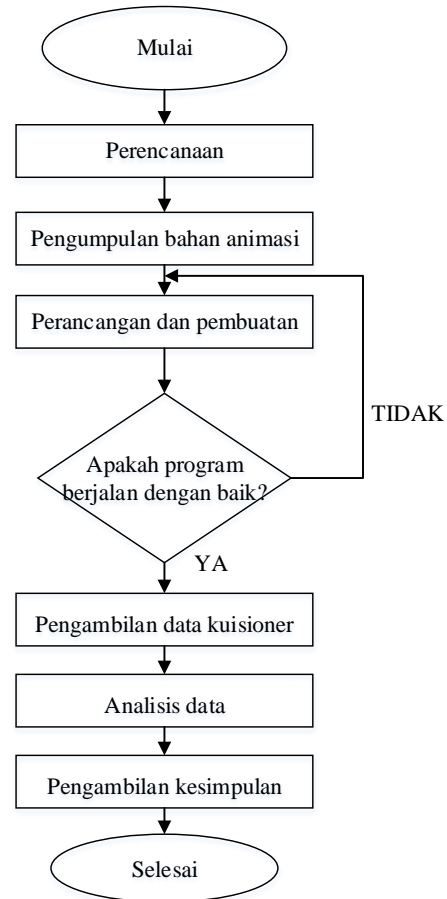


Figure 2. lines of inquiry Diagrams.

### 4. Analysis and Result

#### 4.1 Analysis need system

The aim of this system needs to know the needs of hardware and software that will be used to create 3D animated film that can be seen in Table 1 below. Based specification required hardware software used, so that the software runs with good and comfortable. While the software is used to support the creation of 3D animation film.

Tabel 1. Analisis need system

Hardware	Software
<ul style="list-style-type: none"> <li>•Prosesor AMD Bulldozer FX(tm)-6100 Six Core.</li> <li>•Motherboard ASUS M5A97.</li> <li>•RAM 8 GB DDR III.</li> <li>•Harddisk WDC 1 TERA.</li> <li>•VGA Card AMD RADEON HD 6700 Series.</li> <li>•Monitor CRT, Philips 191 EL 19inc.</li> </ul>	<ul style="list-style-type: none"> <li>•Sistem Operasi Windows 7 Ultimate 64bit</li> <li>•Blender 64bit</li> <li>•Adobe After Effect CS6</li> <li>•Adobe Photoshop CS6</li> <li>•Adobe Premiere</li> </ul>

Tabel 2. Analysis of Human Resources.

Nama Pekerjaan	Nama
Modeling	M. Kasyif Gufran Umar
Texturing	M. Kasyif Gufran Umar
Rigging	M. Kasyif Gufran Umar
Animator	M. Kasyif Gufran Umar
Lighting	M. Kasyif Gufran Umar
Rendering	M. Kasyif Gufran Umar

#### 4.2 An Overview of Research Object : Stories Legend Galela

In the old days there was a family that lived in a mountain. They are Baongolo wife Nurgalela, they live in peace and prosperity, then at some point in the area around them suffer from drought and the wife of Baongolo went keselatan to go and fetch water, after he finished taking the water he was soon back in the middle of the trip bucket water was suddenly leaked and spilled water all over so be a large lake located around Galela. Dan Nurgalela return Baongolo told that water brought on the trip spill and spread, they berduapun soon see the lake, it turns out the water that had been turned into a large lake. They were both very happy and grateful to God for the grace that has been given now the lake was called Lake Galela.

Then a few months later they endowed a child, one day Baongolo and his wife was gardening in front of their house arrived - arrived came a large bird and went to the children who were in the swing and took the boy, but at the same time Baongolo else saw it happen , Baongolopun quickly deter birds with a hoe, the bird tried to escape, but with persistence Baongolo, hoe he was holding the feet of the bird. Kids they too detached from the grip of the bird and fell to the ground, however, the bird remains melawan. karena annoyed with the bird, the bird viewing Baongolo saying "watu ee ..." and out came the magic Raso Malukai, Duko Tugulie, Momole Iron and Steel Momole then Baongolo directing hoe head of the bird so big bird fell to the ground and died. It turned out that the arrival of these birds want revenge on Baongolo. Because before, Baongolo have taken the bird out of the nest egg. Unfortunately the fate of the children of this Baongolo because at the time his son had taken the bird fell to the ground and also died . The place were Baongolo and birds fights called Mangalili, which still exists today in Galela.

#### 4.3 Feasibility Analysis System

The main purpose of the analysis of the proper of the system is to test a new system that will be applied whether it is proper to use or not. In this case careful consideration of how the benefits and costs involved. On the proper analysis systems for the manufacture of animated films, there are two analyzes that are used are:

##### 1. Eligibility Technology

Eligibility of the technology used to determine whether this technology will be applied in an animated or not. The use of computer technology can be applied in new animation because animation old still unsatisfactory. Animation film is

expected to produce a satisfactory result from the old animation.

##### 2. Eligibility Law

Eligibility of law is the feasibility of existing legislation and should be anticipated. In terms of the applicable law in Indonesia design of the proposed system has no legally flawed because it does not prohibitions on legislation from the government.

##### 4.4 SWOT Analysis

To determine the subject matter, the impacts on the environmental factors that affect the process of making the 3D animated film, which is a factor of strengths, weaknesses, opportunities, and obstacles and often called as SWOT analysis (Strength, Weakness, oportunities, and Threat) Analysis of SWOT needed to know te problems in order maximization in film productions of Folk Legend Galela. There are several factors that influence in making animated film. Here is a description of each of the factors that may affect the process of making 3D animated film Legend of Folk Galela namely:

1. Power Analysis System (Strength): analyzing several advantages animation film to be developed. As consumer interest oportunities that will watch the 3D animated film, the usefulness and benefits of the animated film designed and advantages of the technology used to obtain maximum results according to customer needs.
2. Analysis System Weaknesses (Weakness): analyzing the risks that may occur during the process of making animated films in 3D. Such as, limited facilities and equipment available, requiring special skills and ability to complete a 3D animated character and the constraints of a long time and costs required to complete the film.
3. Opportunity Analysis System (oportunities): analyzing the oportunities that can be used as the purpose of making 3D animation film. For example, the existence of many open source software that can be used to create 3D animated film, 3D animation film becomes a learning medium to convey moral messages in the children more interested in the community.
4. Threat Analysis System (Threat): to analyze threats that may occur in the process of making animated films in 3D. Like for example, time constraints dragging behind schedule, and the threat of cost overruns can occur after the production process, namely the existence of piracy on the animated film.

##### 4.5 Process Animation Film "Legend Story Galela"

- a. Pre-Production: in making the film Legend of the People Galela needed an idea and concept of the story. Ideas and concepts are included in this initial pre-production to create the animation. Step-step to be followed in the pre-production process of making animated films like, a story idea, scenario, story concept art, storyboards, sound effects, atmosphere and music illustration.
- b. Production: in the filming of folk legend Galela production process is a definite key to produce the animated film itself. Step-step to be followed in the production process of making animated films are:

- **Modeling Character:** in the process of making the object model, created with detail and according to the size and scale of the design sketches predetermined so that objects will seem ideal models and proportional to behold.

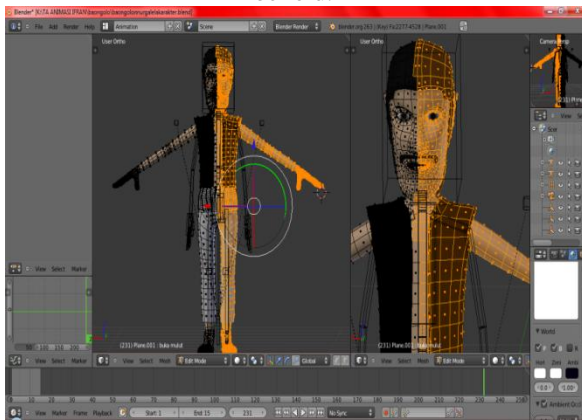


Figure 3. Modeling Character process  
Source : Doc

- **Mapping,** the manufacturing process, giving color and material (texture) on the object, so it has a real impression.

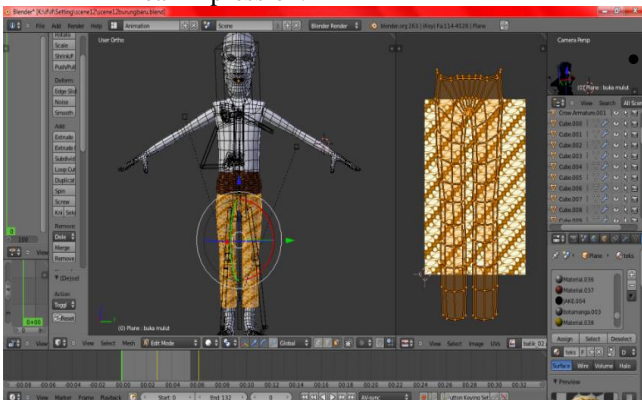


Figure 4. Mapping process  
Source : Doc

**Animating,** animated 3D character in accordance with the desired movement.

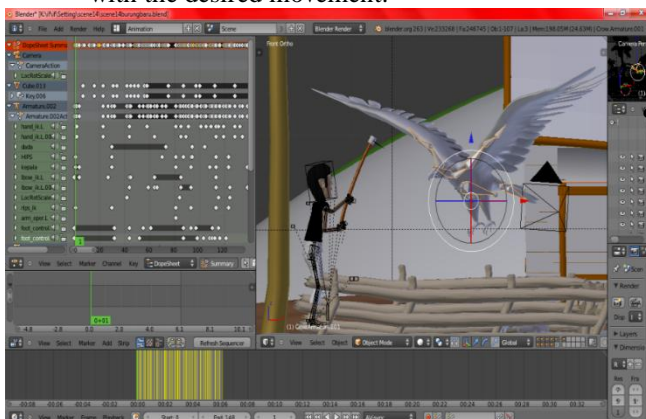


Figure 5. Animating process  
Source : Doc

**Rendering,** process to produce the output of process modeling, mapping, animation, background and lighting in the form of still images or video.

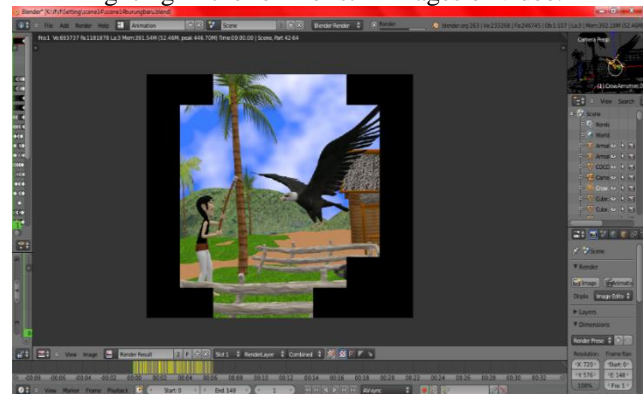


Figure 6. Rendering process  
Source : Doc

### c. Post Production

After the process of animation film production over the next step is post-production. In post production, animation is polished such that it can be a film that is complete and can be shown to viewers. The steps that must be passed in the post-production process in the making of animated films are as follows:

**Editing,** video unification process that has been in-compose by cutting the picture that are not needed and were given transition. Then give the desired voices also provide sound effects and

- music illustration

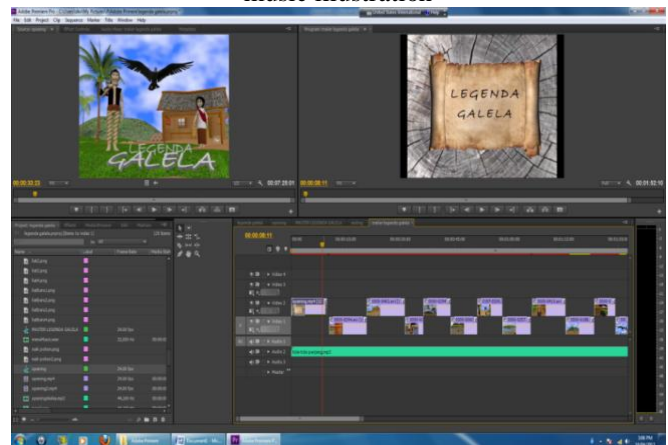


Figure 7. Editing process  
Source : Doc

**Final / Mastering and Duplication,** the final process of the making of animated films, namely master digital format films will be made in the form of files that are stored and packed in pieces of VCD / DVD.

### 4.6 Data Processing

After collecting data in the form of questionnaires and interviews to get some response as well as information related to the story of the People Legend Galela, the data processing is done by summarizing the results of

questionnaires and displays the results in a table shown in Table 3 below.

Tabel 3. The result of questionnaire and interview

NO	Questions	Yes	No
1	Do you know the legend Galela before you watch the movie?	0	10
2	Do you understand the moral value of the movie?	8	2
3	Is animation movie of legend Galela has represent Galela region?	9	1
4	Is the making of this movie help people to introduce the legend of Galela?	8	2
5	Is the story given by legend of Galela interesting ?	8	2
6	Do you interested by the character in animated film legend of Galela?	9	1
7	Have you ever watched three dimension movie?	6	4

Internal Factor	Strength	Weakness
Eksternal Factor	<ul style="list-style-type: none"> <li>✓ Animation using 3D technique</li> </ul>	<ul style="list-style-type: none"> <li>✓ Short duration</li> <li>✓ Graphic visualization not maximal</li> </ul>
<b>Opportunity</b> <ul style="list-style-type: none"> <li>✓ The interest of 3D animation film is high</li> <li>✓ A minimum of animation which is using 3D animation</li> <li>✓ No story about legend in 3D animation yet</li> </ul>	<b>SO STRATEGI</b> <ul style="list-style-type: none"> <li>✓ Maximize facility of 3D animation software</li> <li>✓ The setting of place is appropriate with the place it self</li> <li>✓ Using traditional music</li> </ul>	<b>WO STRATEGI</b> <ul style="list-style-type: none"> <li>✓ Using 3D animation</li> <li>✓ Maximize graphic design</li> </ul>
<b>Threat</b> <ul style="list-style-type: none"> <li>✓ Competitor and other animator lain</li> <li>✓ A lot of animation movie better</li> </ul>	<b>ST STRATEGI</b> <ul style="list-style-type: none"> <li>✓ Maximize animator potential</li> <li>✓ Add more film duration</li> </ul>	<b>WT STRATEGI</b> <ul style="list-style-type: none"> <li>✓ Study about making animation with 3D technique</li> </ul>

#### 4.7 Result Analysis

In this section, the author will show the results of the analysis that has been carried out using the method of SWOT analysis. The results of the analysis of the 3D animated film Legend of the People Galela can be seen in Table 1 below.

Tabel 1. Result analysis using SWOT analysis

## 5. CONCLUSIONS

### AND RECOMMENDATIONS

#### 5.1 Conclusion

After a thorough SWOT analysis to produce an animated film Legend of the fact that the People's Galela, it can be concluded as follows:

- The movie can present Galela legend for youth in the form of 3D animation with a duration of ± 7 minutes.
- The film can introduce indigenous cultural heritage that is the distinctive culture of Galela Galela to youth through staining, narrative and music from Galela.

#### 5.2 Recommendation

Based on the conclusion that there was, for further development is expected to:

- Can present the other legends that come from Galela, Halmahera, North Maluku Utara or by using other animation techniques.
- to introduce other cultures through the medium of animation that is.

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