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1 Introduction
Wayang is one of Indonesia’s oldest heritage. Wayang is executed as an art performance and comes in many forms, one of them is wayang beber. Wayang beber was found in Indonesia about 1361 [1]. Unlike the other forms of wayang, wayang beber is not a puppet, but it is made as series of painting in scrolls. Wayang beber uses a unique visual language. According to Tabrani [1], if we talk about visual language, common people will think about western visual language that spreads around the world by colonialism and domination and accelerated process of globalization. That makes people think that western visual language is universal visual language. But actually, traditional visual art in Indonesia is never using western visual language or also known NPM (naturalistic-perspective-moment opname) system of drawing. Traditional visual art in Indonesia like wayang beber is using STP (space-time-plane) system of drawing that has multiple angle/distance/moment so the picture can tell story to the audience. Wayang beber visual language isn’t just a fossil that can be forgotten, we can learn much from it. This paper discusses about making an experimental animation using visual style based on wayang beber visual language.

In 2003, wayang was recognized by the UNESCO as...
Masterpiece of Oral and Intangible Cultural Heritage of Humanity. By this recognition, wayang need to be safeguarded. According to UNESCO [2] the importance of intangible cultural heritage is on the wealth of knowledge and skills that is transmitted through it. But today, popularity of wayang is decreasing. The youth seems more interested in the modern culture such film, animation or video game. To gain this youth interest in wayang, we develop an experimental animation adapting visual language that is used in wayang beber.

Figure 1: wayang beber [3]

Story that we use in the animation is the story of Ramayana. We choose Ramayana story because it is one of the most popular story performed in wayang performance.

We came up with idea to do experiment with multiple screen display because wayang beber visual language is using STP system of drawing that is flexible where the pictures are not trapped in a single squared frame.

2 Wayang Beber Visual Language

According to Primadi Tabrani theory about visual language, there are 2 system of visual language in the world. NPM system of drawing developed in the western and STP system of drawing that is developed in the eastern. Indonesian visual art such wayang beber is using STP system of drawing.

In visual language there are several term called isi wimba, cara wimba, tata ungkap dalam and tata ungkap luar.

1. *Isi wimba* is the object drawn in the picture. *Wimba* in wayang beber are flexible depend on the story that is performed.

2. *Cara wimba* is way to depict the object. To analyze wayang beber depiction, we referrred to Banung Grahita’s journal about character figures visual style in wayang beber [4]. There are four ways apllied to draw wayang beber.

- **Outline drawing**
  Outline used in wayang beber are expressive lines. They are clear, continuous, wiggly, and has variation of thickness.

- **Polychromatic colors**
  Color used in wayang beber consist two or more different color with different hue. There are three type coloring, single color, layered color and multiple layered color (see fig 2).

Figure 2: color feature in wayang beber [4]

- **Distorted Proportion**
  Wayang beber have a distinct shape. It has big head that placed forward, long neck, and wide shoulder. The arms are longer than the legs.

- **Stylized depiction**
  Wayang beber depiction is using unrealistic form. There are some format used in stylized depiction of wayang beber include angle of depiction, size of depiction and symbolic depiction.

  Wayang beber is drawn in full size from head to toe. Basically, wayang beber is depicted from the side view. But actually there are various views used in depiction of wayang beber (see fig 4).

Figure 3: multiple views in wayang beber [4]

3. *Tata ungkapan dalam* is used to express message from a single picture. Wayang beber is depicted from side view, the figures with good personalities or with higher class are commonly drawn on the left side and facing right side. Otherwise, figures with bad personalities are commonly drawn on the right side facing left side.

4. *Tata ungkapan luar* is to express message from correlation between series of pictures.

3 Story of Ramayana

Ramayana is one of the most popular story performed in wayang performance. Because of that reason, we chose this story to be told in the animation. We learn about story of Ramayana from a novel called “Anak Bajang Menggiring Angin” by Sindhunata [5], which then rearranged based on hero’s journey theory of Joseph Campbell [6] to determine plot of the story. Hero’s journey is a several basic stages discovered by Joseph Campbell from many common pattern running through hero myths and stories around the world. According to this this theory, there are 12 steps in the story that run in cycle (see fig 4).
4 Designing the multiscreen animation

Adapting the STP system of drawing from wayang beber visual language, we discover that picture from this system of drawing is flexible drawing where pictures are not just trapped in a single squared frame. Because of this, we came up with idea to do experiment in multiple display.

4.1 Exploration about multiscreen media

Before the designing process, we did some observations about multiscreen videos from several videos from youtube site to understand what experience we can get from this kind of media. We did the observation from video called “Video Puzzle – F.U.N We Are Young” and “Extreme Video Puzzle” by youtuber named Joe Penna. And also from video called “Samsung: Holiday Dreams”, a promotional advertisement from Samsung.

From the observations, we found out several things which are interesting in multiscreen video
- Integration between one screen and another with a good timing can make a great impression.
- Screens that turn on alternately can give a dynamic effect so the audiences aren’t just focus to one point.
- Screens that turn on simultaneously can give a surprising effect to the audience.
- Using bright and colorful colors can give more festive look.
- Variant size of the screens can make more interesting layout.
- The screen layout installed to minimalist rigging, so it can make an illusion as if the screens are floated.
- This multiscreen video is better displayed in the dark room to give more dramatic effect while watching the video.
4.2 Screen concept and layout

We arranged the screens based on things we discover from our observations and experiments before. We used multiple display to impress the audience with dynamic display where they don’t have to focus to one point so they can feel immersed with the animation. The screens also arranged in curve so the audience can enjoy the animation to be more immersive. By using multi-display we can give an illusion of space and time to the audience because each screen have a gap between them like the gap between panels in comic book. For example, if there are two animation played on the different screen at the same time, it looks like they are on the different places or different time or even different dimension. Or if the animation moved from one screen to another screen, it feels like it is moving to another place. This is the difference of using multi-display compare to using single display only, even by using a very big single screen.

The layout of the screens we made are based on wayang philosophy where there are two kinds of relationship in this world, vertical and horizontal. In vertical relationship, the world are divided to three parts. They are upper world, where the gods as human’s creator live. Middle world where we humans live. And the underworld where the nature support human life. Horizontal relationship is the relation among humans that happen in the middle world, so we arranged the screens horizontally parallel to the middle screen.

4.3 Screen Synchronization

We have total 11 screens to be used on this project, four of the screens are 50 inch led TVs and the remaining are 21 inch monitors. The screens we use was synchronized one and other to be able to play videos simultaneously so ach screens are integrated and the animation can move from one screen to the other screen. To synchronize the animation, we used an application called auto hotkeys that using script to make several videos can be played simultaneously just by pressing one button and the videos will play in loop. To make it possible, the screens are supposed to be connected to one computer. But, we can only connect three to four screens to one computer because we have limited tool. So finally we decided to use three computers that each connected with three to four screens. To play all the screen simultaneously we have to press the play button on each computers at the same time.

4.4 Visual concept

The visual style of the animation is adapted from visual language in wayang beber. The visual style is little bit modern but the visual are still using STP system of drawing as well as wayang beber is using it. The character design are based on wayang beber figures visual style that is depicted in full size and use distorted proportion with big heads placing forward, long neck, wide shoulder and hands are longer than legs. It is also drawn in two dimensional look with multiple view depiction.
The environment design are drawn on two dimensional look with multiple view as well and the coloring are using polychromatic color. Type of coloring also adapted from wayang beber coloring such single color, layered color and multiple layered color.

4.5 Animation concept
The animation we develop is an experimental animation where animation responds the screens. The animation can move to the other screen. The animation in one screen can connected to the screen next to it and moving around between the screens or the screens can turn on alternately one and other according to the animation.

Having multi-display setting to play the animation that using STP visual language is convenient because this setting can support the STP visual language theory where the pictures are flexible and not trapped in a single frame. By using multi-display setting, we can make the frame to be more flexible by turning on the screens according to the picture and the movement of animation. So it’s not the animation that trapped in the frame but the frame that confront the animation. Multi-display setting can also enhance the illusion of space and time of the STP visual language by the gap between the screens.

5. Conclusion
The final goal of our project is to increase popularity of wayang, especially wayang beber to the youth who seems more interested in modern culture. Traditional art such wayang beber isn’t just a fossil that can be forgotten, we can learn much from it. On the other hand modern technology gives opportunities to develop traditional culture like wayang to a new form which is more interesting.

To increase youth interest to wayang we tried to make an experimental animation based on wayang. We chose to make animation about Ramayana story because it was one of the most popular story performed in wayang performance. We studied the visual language in wayang beber to be applied to the animation. Wayang beber is using STP system of drawing that is flexible and not trapped in a single frame so we came up with idea to make animation with multiple display. We also did some observations and experiments about multiscreen to determine the experience we can get by using this media. After some researches, observations and experiments we finally finish this multiscreen animation project. By performing wayang in the new and modern form like this we wish to be able to increase youth interest to wayang.
References