

# 인터랙티브 멀티미디어 CD 디자인 프로세스에 관한 연구

## A Study on Design Process of Interactive Multimedia CD for an Indonesian Folktales

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### 1. Introduction

Historian Eric Hobsbawm said that human beings enter the ages that are lost their memory.<sup>1)</sup> It was caused by the dissolution of the past life and routine cultural and emotional information because of the rapid social changes and development of technology. Apparently myths and legend through verbal information is not enough for younger generation. To determine the history and memory of beings, and to give vision the richness of culture, various storytelling tools are restored. One of them is Interactive Multimedia.

### 2. Theoretical Background

#### 2-1. The Concept of Interactive Multimedia

Interactive multimedia goes by several different names. Among them are Multimedia and Hypermedia. The technology links together multiple collections of information under the hierarchy of a single application or program. The collections of information can be computer data, stereo audio, full motion video, animation, or graphics, such as called rich media. Interactive multimedia applications allow the combination of all of these elements into a single program or application. Interactivity is the amount of control the user has over the presentation of information. "Interactive multimedia" refers to multimedia that allows for user control.<sup>2)</sup>

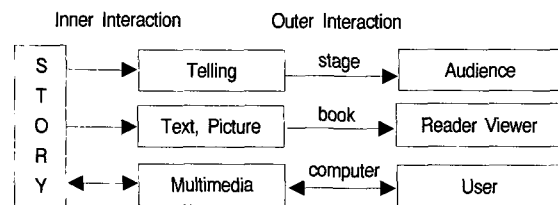
#### 2-2. Interactive Multimedia Design

Usability and feedback are the important factor in designing interactive multimedia. Usability is a fundamental concern in multimedia applications design. Generally, usability characterizes an application as being usable by the intended users, with reference to intended functions and use.<sup>3)</sup> Visual feedback is one of the most powerful effects when learning with simulation.<sup>4)</sup>

### 2-3. Interactive Multimedia as a Storytelling

Multimedia ultimately aims to attain maximum efficiency by satisfying the emotions of consumers.<sup>5)</sup>

Table 1. Interaction in Story Telling



### 3. Storytelling Elements

#### 3-1. Graphic Elements

The design image takes the Indonesian original image character combined with Indonesian famous pattern, named Batik. Certain pattern is put into graphic design then some modifications are made. The design shows the Indonesian culture, so the user can recognize the Indonesian original image character.

#### 3-2. Multimedia Elements

Common media selection is based on the specific characteristics of the different representation (text, voice, audio, picture and moving picture). Text has authority reflected in a long tradition of trust and confidence in printed words. For people who can hear, voice is the most natural common mode.<sup>6)</sup> Sound can make a graphical interface more realistic, giving it an audio texture. Pictures can represent complex information at a glance. Movement makes it possible to demonstrate complex conditions and relationships between actions and events. A good combination of multimedia elements, make interactive storybook a good tool for the learning process and giving the feeling impact to the user. For children, they can be captivated by the engaging music, large and colorful graphics and lively animation.

1) Eric Hobsbawm, *Age of Extremes The Short Twentieth Century 1914-1991*, The Penguin Press, 1994.

2) Richard E. Mayer: *Multimedia Learning*, New York, Cambridge University Press, 2001.

3) Alberto Del Bimbo: *Multimedia Computing and System*, University of Florence, Italy, IEEE MultiMedia, p.19, January-March 2000.

4) Sissel G. Schär and Helmut Krueger: *Using New Learning*

*Technology with Multimedia*, IEEE MultiMedia, July-September 2000.

5) Ji Hong Jung and Hyun Shin Jo: *A Study on Interaction Design in Storytelling*, Journal of Technology and Design, 2002.

6) S. Guttormsen Schar et al., "Multimedia: The Effect of Picture, Voice, and Text for the Learning of Concept and Principles," Proc. HCI International 99, H.-J. Ballinger and J. Ziegler, eds., Lawrence Erlbaum, Mahwah, N.J., 1999.

## 4. Indonesian Folktale

### 4-1. Aspects of Indonesian Folktale

The Indonesian folktales are made based on the culture, society and social life of each area. Basically, the author wants to give positive education to children.<sup>7)</sup> The story in the folktale, help children understand about good attitudes and morals.

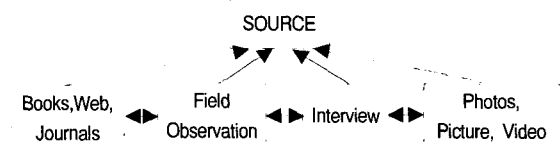
### 4-2. The Origin of Indonesian Ceremony Kasada

This project takes one of the famous folktales in Indonesia, The Origins of Kasada. This folktale is from East Java. The folktale itself is not popular as Kasada ceremony, but it is contained the rich culture of Tengger society. Every year the people of Tengger have an offering ceremony below mount Bromo. The event takes place on the 14th of Kasada (10th month), at Mount Bromo. This project tries to tell the story behind the ceremony. By making this story into an interactive story, user, especially children can easily understand the folktale, know the place of Mount Bromo and the culture of Tengger society.

## 5. Process of Folktale CD Making

### 5.1. Collecting Resources

Table 2. Resources Collecting



### 5-2. Reviewing and Gathering Related Sources

After collecting resources, analysis must be done to know what are the sources needed to be applied in the folktale.

Table 3. Analysis the Resources



### 5-3. Making Concept and Work Flow

Before making a concept, analysis of must be made in order to make an effective interactive story for children.

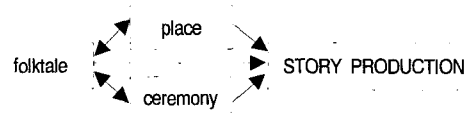
Table 4. Analysis Interactive Story

Interactive story	Effective	Not effective
Interactive	Clear option	Many option
Usage	Easy to use	Difficult
Story	Simple	Complicated
Design	Interesting	Boring, Repeat design

Through the clear concept, a user can get the message of the story, have different feelings about the place where the story come from and also experience the variety of culture.

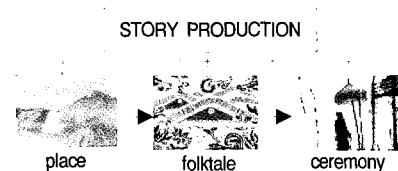
7) Veronika Sudiati and Sujati, *Ulasan Cerita Rakyat Jawa Timur*, Yayasan Pustaka Nusatama, Yogyakarta, 1994.

Table 5. Work Flow



## 5-4. Producing Interactive Multimedia

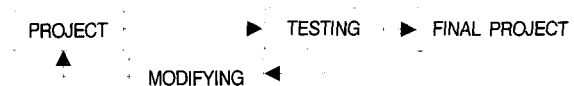
Table 6. Flow Map



## 5-5. Testing and Modifying

Testing will be done through survey to know the usability and the feedback.

Table 7. Testing Modifying



## 6. Conclusions and Suggestion

To make a good interactive multimedia CD for folktale, designer should understand who the users are and what they need. A good interactive storybook must have clear option of interactivity. It should be designed simple and interesting, so the user can use it easily. The interactive storybooks should allow users with a variety of ability to use computer successfully, from their first experience. I strongly suggest that this kind of project should be continuously made, because through a good interactive multimedia design, many folktales and its culture can become more effective and valuable especially for children..

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