Traditional Shadow Puppet Play – The Virtual Way

Abdullah Zawawi Talib[1], Mohd Azam Osman[1], Kian Lam Tan[1], and Sirot Piman[1,2]

[1] School of Computer Sciences, Universiti Sains Malaysia,
11800 USM Pulau Pinang, Malaysia
[2] Department of Business Computing, Faculty of Management Sciences,
Surat Thani Rajabhat University, Surat Thani Province 84100, Thailand
azht@cs.usm.my, azam@cs.usm.my, andrewtankianlam@gmail.com,
sirot.cod07@student.usm.my

Abstract. In this paper, we present a virtual shadow puppet play application that allows real-time play of the puppet and gives the user the impression of being a storyteller or a shadow play puppeteer. Through this tool, everybody can be a puppeteer digitally regardless of the ability to perform the traditional art.

Keywords: Shadow puppet play, virtual puppet, virtual storytelling.

1   Introduction

Creating virtual storytelling application has been greatly simplified with the help of computing and virtual environment technologies, and this has lead to a greater interest among researchers and developers to work in this area. The great traditional shadow puppet play called "wayang kulit" in Malaysia and Indonesia [1], is one of the traditional storytelling arts which has given great impacts on the society. The success of each show depends on the storyteller's or the puppeteer's ability to attract the audience to watch and enjoy the show until the end of the performance. However, the traditional shadow puppet play is no longer a popular show due to the proliferation of the new media and art, and the lack of interest and the difficulty in mastering the art among the younger generation. Therefore, a virtual tool for shadow puppet play is very much needed to transform the traditional storytelling art into an interactive virtual storytelling environment. Some recent efforts in this area include Lam et al. [2] which introduced a method of modeling that models shadow puppet play using sophisticated computer graphics techniques available in OpenGL and allows interactive play in real-time environment as well as producing realistic animation, and Lam and Talib [3] which proposed a method to improve the interaction of shadow puppet play by applying both the texture mapping and blending techniques.

In this paper, we present a virtual shadow puppet play application based on our previous work (Lam et al. [2], Lam and Talib [3]) that allows real-time play of the puppet and gives the user the impression of being a storyteller or a shadow play puppeteer. Through this tool, everybody can be a puppeteer digitally regardless of their ability to perform the traditional art.

A. Camurri, C. Costa, and G. Volpe (Eds.): INTETAIN 2011, LNICST 78, pp. 246–248, 2012.
© Institute for Computer Sciences, Social Informatics and Telecommunications Engineering 2012

2   Overview of the Virtual Shadow Puppet Play

The main purpose of the Virtual Shadow Puppet Play is to facilitate digital preservation of the traditional art using leading edge technologies. The application enables user to choose the puppet, environment and music. Fig. 1 shows the architecture of the Virtual Shadow Puppet Play which consists of *Puppet*s (Puppets and the animation), *Recording* (Recording of the play) and *GUI* (user interface, layout for the music and puppets).
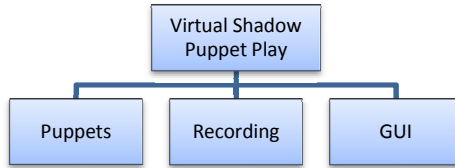

Fig. 1. Architecture of the Virtual Shadow Puppet Play

The Virtual Shadow Puppet Play application provides three different levels of users namely novice, intermediate and expert users. The mode for the novice users is based on a virtual joystick that is used to control the puppets as shown in Fig. 2(a). Four directions of movement are provided namely up, down, left and right. A music button is also provided for the novice users. The mode for intermediate users provides the flexibility in choosing the puppets, and the music, and in controlling the level of brightness of the lighting as shown in Fig. 2(b). The user needs to use the mouse and keyboard to control the puppets instead of the virtual joystick. Besides, this mode also provides several more animations. Expert users can perform with more puppets (with 10 predefined puppets), music (with 7 predefined music) and levels of brightness of the lighting. Expert users can only use the keyboard to control the puppets. Furthermore, in this mode the application also provides a recording function for the show being played. Fig. 3 shows a snapshot of the virtual shadow puppet play.
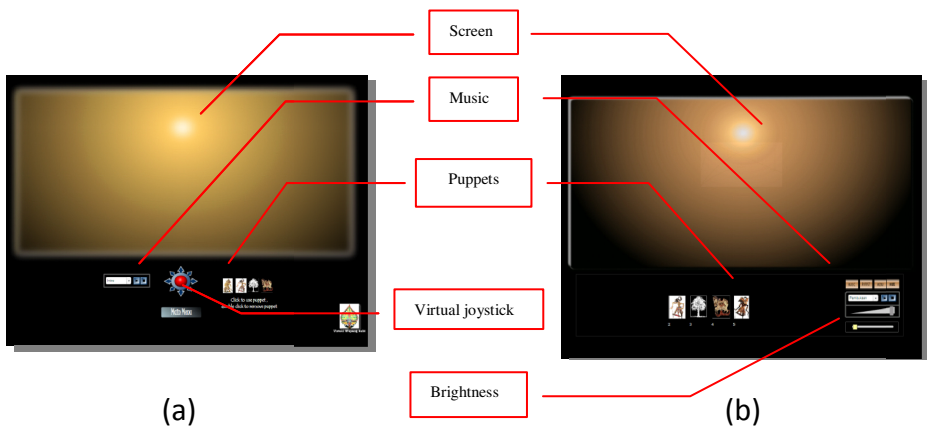

Fig. 2. Interface for (a) Novice Users, (b) Intermediate Users

Fig. 3. The Virtual Shadow Play

3   Conclusion

In our approach to virtual shadow puppet play, the puppets are created as close as possible to the traditional puppets. Our approach has been implemented in a general framework called the Virtual Shadow Puppet Play which allows the users to play the shadow play interactively in real-time anywhere and anytime.

References

1. Matusky, P.: Malaysian Shadow Play and Music: Continuity of an Oral Tradition. Oxford University Press (1993)
2. Tan, K.L., Talib, A.Z., Osman, M.A.: Real-Time Simulation and Interactive Animation of Shadow Play Puppets Using OpenGL. International Journal of IJCIE 4, 1–8 (2010)
3. Tan, K.L., Talib, A.Z.: Shadow Image and Special Effects Implementation Techniques for Virtual Shadow Puppet Play. In: 3rd WSEAS International Conference on Visualization, Imaging and Simulation (VIS 2010), pp. 80–85 (2010)