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Rochester Institute of Technology

A Thesis submitted to the Faculty of the College of Imaging Arts and Sciences, School of Design in Candidacy for the degree of Master of Fine Arts.

Title:

Chinese Glove Puppets - An Interactive Experience of Puppet History, Teaching and User Created Performance.

Submitted by: Yu-Hui Tu
Date: June 21, 2004



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Abstract

Chinese Glove Puppets demonstrate the traditional Chinese performing art. It introduces the history, creation, and primal figure types of Chinese Glove Puppetry to provide users a basic understanding. Puppet education and puppet performance demonstrate the puppet movements. Basic puppet manipulation videos demonstrate the basic movements teaching users how the puppeteers control puppets. Real puppet show clips are also available. In order to create more fun, a changeable classic background would be used to replace the original stage and enhance the delight of creating the user's own show. This project is an educational CD-ROM for English users. By combining visual and audio elements, it presents a digital experience to lead users to this fascinating and graceful performing art.

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Introduction

Problem Statement

There are many distinctive arts in the world, such as Ancient Egyptian Arts, Greek and Roman Arts, and Chinese Arts. For Chinese Arts, most people are familiar with Chinese painting, Chinese calligraphy and traditional pattern, but the understanding of the folk performing arts is quite limited. Actually, folk performing arts are more vivid and express more cultural characteristics. This thesis will introduce the significant traditional Chinese performing art – glove puppetry – via interactive multimedia to bring people deeper knowledge about Chinese performing arts.

Background

Chinese Glove Puppets played an important role in entertainment for common people in early Taiwanese society before television's prevalence. It is a kind of puppet show using figures made of tiny sacks topped with painted heads and manipulated by hands and fingers. When I was young, I liked to watch the puppetry with my grandfather and did not want to go home after the show. I was always curious about those little puppets and how the puppeteers control them to make the puppets so lifelike and animated. Later on, I discovered the backstage and found there was so much interesting information about these little puppets.My brother-in-law's family is a puppet troupe, and his brother is one of the members of Hsiao-His-Yuan troupe, a famous puppet troupe that travels abroad to perform Chinese glove puppetry in many countries. Their performances are very popular when they perform overseas and often spark feedback and questions from the audience.

I have been to many art museums in different cities and have seen many exhibitions of Chinese Arts, but they are all static historical relics and hardly related to vital performing arts. I once saw a Chinese Glove Puppet sold in the store of Philadelphia Museum of Arts and wondered why they sold the puppet without relevant exhibition. If people want to know more about that puppet, where can they find the information? There are many websites and CD-ROMs that introduce Chinese Arts, but rarely related to Chinese glove puppetry. Even though a user can find some websites, they are only brief descriptions and still images, incomplete and without organization.

Digital technology is highly developed and widely available. Information can be assembled, then transmitted in various approaches that make it more interesting and diversified. Computer graphics can also be fun. Through this project, the user shall be able to enjoy and understand the information about Chinese glove puppetry via interactive experience.

Scope

This thesis will introduce the history, creation, and primal figure types of Chinese Glove Puppetry to provide users a basic understanding. Puppet education and puppet performance will demonstrate the puppet movements. Basic puppet manipulation videos will demonstrate the basic movements teaching users how the puppeteers control puppets. Real puppet show clips will also be available. In order to create more fun, a changeable classic background will be used to replace the original stage and enhance the delight of creating the user's own show. The user can choose their desired puppet and background to make their own show.

Research

Puppetry In Ancient China

Puppetry is a type of popular folk art, and occupies an important position in the history of theater development throughout the world. Since ancient times, puppetry provided entertainment and education functions to people in different ways and different areas. It comes in two varieties in China: the marionette theater and the shadow puppet theater. These two types of puppetry have distinct developments in the history of Chinese culture, and have had significant impact on the traditional Chinese performing arts.

As early as the Sung dynasty in the tenth century A.D., when other kinds of theater had not been developed, the performance techniques of both the marionette theater and the shadow puppet theater were already highly developed. Today, the theater with puppets and theater with humans continue to influence each other and have become the two major systems of performing arts in the traditional Chinese theater. In the history of world puppetry, only Chinese puppetry sustained its own developments, and comes in diverse performing culture in different features under the different eras, geographic environments, and humanity conditions. In Chinese theater, puppetry is a performing art with visual and aural appeal rather than a casual amusement, vaudevillian show, or children's game.

According to historical documentation and relics, puppetry is the earliest theater with performing and entertaining functions in Chinese history. It was said that the first puppets were attributed to a puppet master named Yang Shih in the Chu dynasty (1100 ~ 770 B.C.). His figures were so realistic that when he performed at court, Emperor Mu-Wand thought

a puppet winked at his wives. The Emperor was angry and ordered Yang Shih executed. Immediately, the puppet master slashed his puppets to prove they were lifeless, and his life was spared.

Undoubtedly, puppetry was already an important entertainment program for the royal parties in the Han dynasty. Actually, it was marionette at the time, and was classified as a vaudevillian show, not a theater performance.

In the Sung dynasty (960~1278 A.D.), puppetry had developed prosperously. Regardless of the performing ways or contents, it was splendid and brilliant.
"Tsuan Chieh Ti's *The Investigation Into Puppet Plays* described the types as:

(1) Rod Puppets: Not only the small traveling size, but also "great platform, palace shows" which involved bigger puppets and more numerous characters.
(2) String Puppets (marionettes).
(3) Yao Far puppets: Thought to be related to smoke (probably a pyrotechnic type).
(4) Water Puppets: Unlike those of the Chu dynasty, these were moved by hand. There were three boats, two for music and one for the puppet performance. When the music started, the doors of the stage opened and the puppets appeared. The figures were two feet or more in height and were made of light wood. They had no feet but rested on a three-foot long board. The manipulators moved the puppets from behind a divider.
(5) Flesh Puppets: these were real children who stood on adult's shoulders to perform."[1]

Many famous puppeteers emerged and the professional

music for puppetry was also born. In many novels and documentary reports of the Sung dynasty, puppetry performance situations were found, and many Chinese paintings, historical relics, and poetry also related to puppetry.

The peak of popularity for the puppet theater was in the Sung dynasty, and it prevailed to all people, not only as royal entertainment. It spread throughout China with the transformations of the politics, economics, and societies, and developed into various types.

Glove Puppets

Glove (hand) puppets are named because they fit over the hand of the manipulator and are controlled by the different fingers. People said it happened in the late Ming dynasty, in Fukien Province, glove puppets had been developed more prosperous and graceful than other areas.

The puppets' heads are made of carved wood, and are carefully lacquered to represent each type of character. Sometimes real hair is used for beards and ladies' coiffeurs. Hands of scholars, maidens and officials are articulated to make elaborate gestures possible. They can hold a pen or a glass of wine. Other characters have holes drilled through clenched fists to hold weapons, fly whisks and other props. Costumes are made of embroidered silks and often embellished with sequins, bits of mirrors or jewel-like beads. The headdresses are made of gilded leather or stiffened paper covered with silk or cotton and adorned with jewel-like beads, pompons and mirrors. The index finger is placed inside the head, and the thumb and the other three fingers prop the arms.

Playing stages are elaborately carved and decorated with

gold and brilliant colors. The stage is composed of two layers. In the first layer, the puppeteer works the figures from behind a backdrop. Three entrances with cloth drapes allow the puppets to enter and exit. In the second layer, the puppets are tossed into the window when making jumping movements.

Today, glove puppetry is not available in mainland China except the limited area in Fukien Province, in the other hand, it is more popular and diversified in Taiwan.

Puppetry In Taiwan

Traditional puppetry in Taiwan comes in three types: the marionette theater, the glove puppet theater, and the shadow theater. These three puppetries were introduced to Taiwan by immigrants from the southern coast of mainland China in the early nineteenth century. Marionette theater and glove puppet theater came from southern Fukien Province where they were very popular, while the shadow theater originated in Haifeng and Lufeng in eastern Kwangtung Province.

In the beginning, the puppetry retained its original style from mainland China. But it has been transformed into a unique performing art with highly local cultural features as Taiwan gradually became populous and flourished. Particularly in glove puppetry, it recreated an unparalleled style, and also generated many outstanding puppeteers. In this small island, there were more than seven hundred glove puppet troupes -- it was an amazing amount, and it also indicated how popular the glove puppetry was.

Unlike the glove puppets that were spread throughout Taiwan, the marionette theater and shadow theater adjusted to the changes of the immigrant groups in limited areas and subsequebtly decreased in number.

Glove Puppetry In Taiwan

Taiwan's glove puppetry is derived primarily from the puppet theaters of Chuanchow in Fukien Province and supplemented by puppetry traditions from Changchow, also in Fukien Province, and Chaochow in Kwangtung Province. It was in the middle nineteenth century that glove puppetry began to emerge and grow. It showed no difference from early performances of glove puppetry in Taiwan, because the puppeteers were still learning and absorbing. Into the early twentieth century, due to the innovation of Fukien glove puppetry, Taiwan's glove puppetry began to add more native features.

In the late Qing dynasty, traditional Chinese historical novels were extensively adapted for the Fukien glove puppet shows. This type of performance was basically developed by the puppeteer's creation and comprehension. But the music, song, and narration for Fukien glove puppet shows were in slow tempo, too depressing, and not accepted by Taiwanese. Therefore, most productions adopted the dramatic style of the Pei-Kuan theater (a form of drama originating in the mainland China that is sung to the accompaniment of Pei-Kuan music) that was popular in Taiwan at the time. Pei-Kuan theater was more exciting and bustling, and its music was fast tempoed and more intense. For all these reasons, Pei-Kuan glove puppetry replaced the Fukien glove puppetry in Taiwan. Many native puppeteers created more action movements to match the intense Pei-Kuan music, such as jumping into the window, jumping onto the stage, somersaulting, and fighting. Because the glove puppetry had its own characteristics, and the puppets' facial expressions were fixed, it was hard to use the Pei-Kuan theater scripts in glove puppetry. Taiwan's glove puppetry adapted traditional Chinese historical novels into the scripts and adopted the Pei-Kuan music, and had became the most popular play.

In the late World War II, the Japanese government carried out " Huang-Ming civilization campaign", to force the puppeteers to performe "Huang-Ming puppetry", and there were only seven puppet troupes allowed to perform. The stage, lighting, music, and movements of "Huang-Ming puppetry" influenced the development of glove puppetry very much. After the end of World War II, the folk performances returned to the prosperous condition, particularly, the glove puppetry was even more popular. When the government moved to Taiwan, in order to stabilize the political and social condition, many outdoor performances were forbidden. The puppet troupes were forced to perform in the indoor theater and sold tickets to continue their performances.

The traditional stage of glove puppetry was smaller, and the puppets were also smaller. When the glove puppetry began to perform indoor, in order to appeal to a larger audience, it expanded the stage size, changed the stage form, increased three dimensional background, enhanced the puppets size and style to make the far-standing audiences still possible to see. These improvements made the puppet troupes sell more tickets. Because the glove puppetry already became a commercial performance, it was more competitive than before. The continuous drama scripts appeared. The plots were related inseparably, and there were new highlights everyday. The stories of traditional Chinese historical novels were not enough for the scripts. Therefore, puppeteers and scriptwriters began to write the scripts by themselves. It was the "Jing-Kuang glove puppetry".

In 1970, TV glove puppetry was presented by a puppet master Jyun-Syong Huang. He used chivalry repertories, added popular music, fantastic lighting, and other visual effects to create a new glove puppet style. People were fascinated by

it, and it once created the highest viewership at the time. With the new computer technology, TV glove puppetry present more visual and audio effects and has become the most popular puppetry in Taiwan today.

The Preservation Of Traditional Glove Puppetry

Because of the powerful development of TV glove puppetry, it established a new system that was completely different from the traditional glove puppetry. As the living style transformed Taiwan's society, the trend of entertainment also changed. New technology brought new entertainments, and people gradually forgot traditional puppetry.

In terms of performing, traditional glove puppetry has its own classic performing aesthetics that TV glove puppetry cannot reach. Its elaborate stage and the puppeteers' improvisation are not replaceable. In 1977, there was a debate for the native literature in Taiwan, and caused deeper thinking and review for native culture. In 1982, the Council for Culture Affairs, Executive Yean has been established, and in the same year, preservation law for culture property also was issued. Officials and civilian scholars thought the traditional culture was important national culture property, and began to introspect for traditional glove puppetry. The government developed many plans for researching and preserving traditional glove puppetry, awarding many outstanding puppeteers to recognize their achievements, and arranged the exchange of international culture. These efforts brought a new life to traditional glove puppetry.

Procedure

Preparation

Chinese glove puppets is a unique ethnic performing art. Unfortunately, except Taiwanese, people are hardly aware of it. Although the Taiwanese government had put many efforts into preservation, there is still a lack of organized information, particularly visual material. Since my project is a digital interactive multimedia, I will need lots of related images and video clips. Therefore, I decided to visit a professional puppeteer and seek his help.

Yen-Lang Shih is the leader of Chun Chiu Ko Puppet Theater (Taichung, Taiwan). He had played the glove puppets for more than twenty years. I had an informal interview with him before I started my thesis project. In my memory, Chinese glove puppetry was Jing-kuang glove puppetry that was popular in my childhood, and it was so different with traditional glove puppetry. Therefore, he taught me some basic puppet movements to help my recognition for traditional glove puppetry, and show me some professional performances to enhance my understanding. He also provided the elaborate puppets and played the puppets' movements of various characters for my shooting. With his help, I learned the basic puppet movements for one week, took 606 photos, and shot 11 video clips for my project. He is also the pupil of the puppet master Wang Hsu - the leader of the Hsiao Hsi Yuan Puppet Theater. Through him, I got the educational videos made by Hsiao Hsi Yuan Puppet Theater.

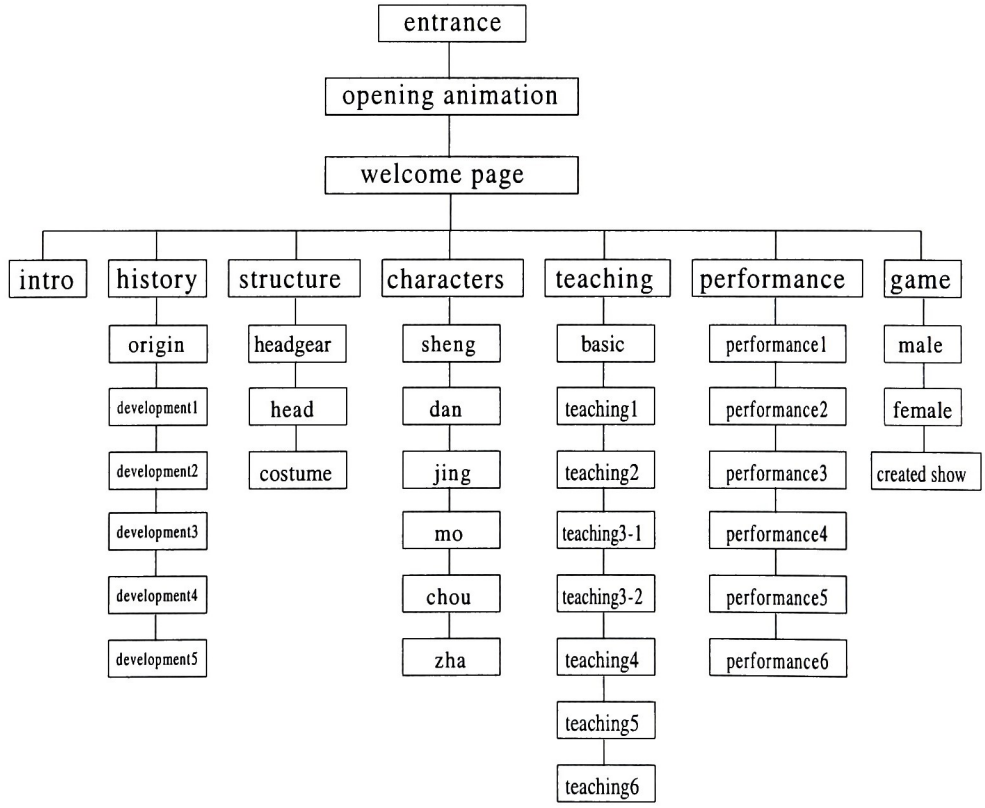
Hsiao Hsi Yuan Puppet Theater is one of Taiwan's few folk drama groups that specialize in the traditional style of puppet theater performance. In addition to undertaking performing tours in Taiwan and abroad, it also engaged in preserving and

developing traditional glove puppetry. The educational videos I obtained are made for Training of Younger Puppeteers Foudation.

Component

The title of my thesis is Chinese Glove Puppets, and the puppet is also the main element in Chinese glove puppetry. Therefore, in my project, I put the key point on "puppets", without mentioning the other performance elements, such as the stage and the backgroung music.

There are seven sections in my project: intro, history, structure, characters, teaching, performance, and game. I arranged these sections in a certain sequence, but each section is independent, the users still can browse them in their own way. Here is the flowchart of my project:



Design Concept

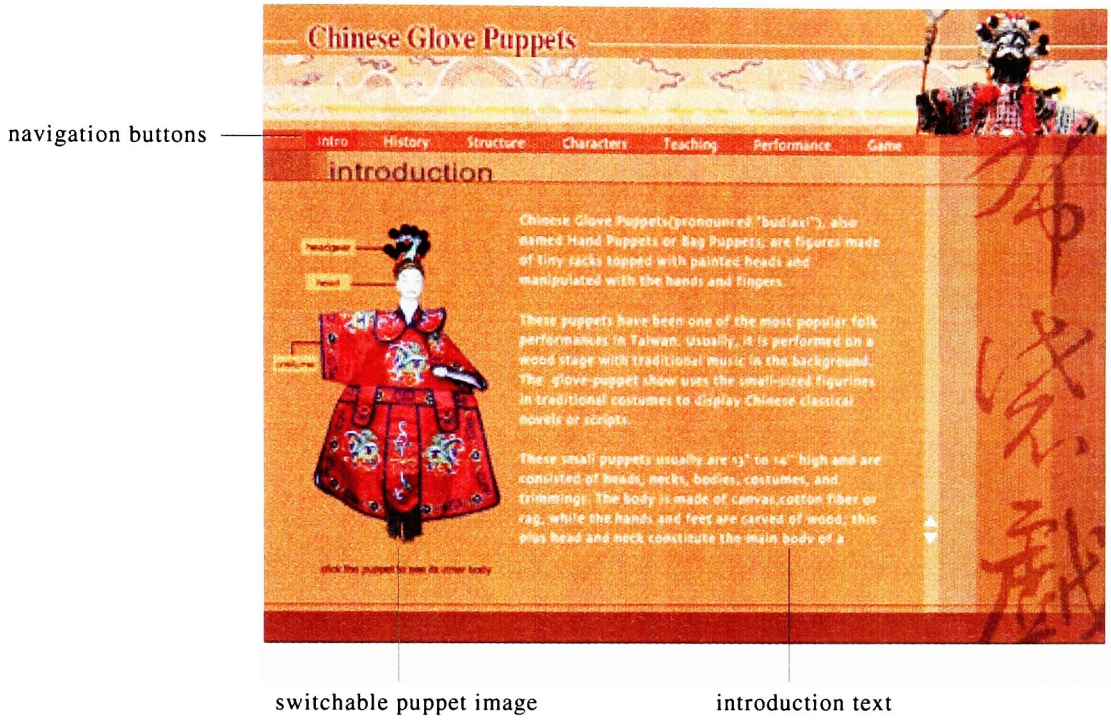
Puppetry is played on a specific stage. Therefore, the first inspiration came up in my mind was the eyecatching stage. The stage of Chinese glove puppetry is elaborately carved and decorated with gold and brilliant colors.

In the beginning, I tried to use the stage as the frame of my interface, but it was too complicated, and the color was also excessively strong. Eventually, I simplified the pillars of the stage as stripes and only retained one side of the stage to leave a bigger space for the interactive content. The color had also been changed to a warmer and darker orange tone. In addition, to emphasize Chinese style, I used the traditional Chinese pattern as the banner to divide the title and navigation. The title is placed at the top left of the interface, and the top right is a puppet image that changes in each section. Furthermore, in each section, the buttons are also in Chinese graphics to keep the consistency.



Welcome Page

Intro



This is the first section for my project. It is an overview to provide the users a concept - what they will see and learn. Because it is just an overview, it doesn't have much interacting, and I put a puppet image in whole body that is switchable to attract the user's interest.

Below is the text content for this section:

Chinese Glove Puppets (pronounced "budiaxi"), also named Hand Puppets or Bag Puppets, are figures made of tiny sacks topped with painted heads and manipulated with the hands and fingers.

These puppets have been one of the most popular folk performances in Taiwan. Usually, it is performed on a wood stage with traditional music in the background. The glove

puppet show uses the small-sized figurines in traditional costumes to display Chinese classical novels or scripts.

These small puppets usually are 13" to 14'' high and are consisted of heads, necks, bodies, costumes, and trimmings. The body is made of canvas, cotton fiber or rag, while the hands and feet are carved of wood; this plus head and neck constitute the main body of a puppet.

Today, there are 3 types of glove puppets used in Taiwan. This CD-ROM will focus on traditional glove puppets. Here the user can gather basic information about Chinese Glove Puppets from the "History", "Structure", and "Characters" sections. The users will also be able to learn how to manipulate the puppets in the "Teaching" section, appreciate professional puppet shows in the "Performance" section, and have some fun in the "Game" section.

History



Chinese glove puppetry has its long historical provenance and diverse developments. In this section, the users can understand its origin and why it transformed to various styles during the past two hundred years.

Below is the text content for this section.

Origin:
The glove puppet theatre is performed with puppets placed on the hands. The name in mainland China is similar or called "hand puppet theatre". The glove puppet theatre is similar to the French Guignol or the Italian Burattini.

It was said that more than three hundred years ago, there was the student Liang Bing-lin who lived in the city of Kuanzhou, and failed many times for the imperial exams. On his way to the magical Chiu-li mountain, the fairy lord appeared in Liang's dream and wrote in his hand: "Success lies in the palm of your hand." When later the results of the imperial exams were posted, Liang had again failed and he felt desperate.

One day he saw a marionette theatre performance and was deeply touched by its beauty. He started to make puppets himself and used his hands to perform instead of strings. He also started to create plays to perform and forget his own misery. Unexpectedly, everybody was really interested in his performance and he became popular and rich; that's why the fairy lord wrote: "Success lies in the palm of your hand." (The literal translation of glove puppet theatre is "in-the-palm-of-the-hand-theater.")

Development1:

Traditional Glove Puppets:

Chinese Glove Puppets were introduced to Taiwan by immigrants from Fukien province, where the glove puppet tradition had developed to a more sophisticated approach than other places in China. During its 200 years of development in Taiwan, it has transformed into five different types: traditional glove puppets, Huang-Ming glove puppets, resist-communist puppets, and Jing-Kuang glove puppets.

The scripts of traditional glove puppets are usually from classical novels, and most of the stories are historic. These historic stories educate people in the subjects of Chinese history and use traditional instruments such as Chinese two-stringed violin (erhu), gong (luo), cymbals (ba), drum (gu), and Chinese trumpet (suona).

Development2:

Huang-Ming Glove Puppets:

During World War II, Taiwan was occupied by Japan. In that period, Huang-Ming glove puppets were introduced and controlled by the Japanese.

The puppets were dressed in Japanese costumes. The use of traditional music was forbidden, only recorded western music was allowed. The traditional wood painting stage had been changed to a moveable cloth painting setting. The scripts were also Japanese stories.

Because of the language barrier and political reason, Huang-Ming glove puppets couldn't represent the glove puppets features, and were not accepted by the Taiwanese public. But its use of western music and the cloth painting setting influenced the later developments.

Development3:

Resist-Communist Puppets:

After the government moved to Taiwan, in order to stabilize the political and social condition, the government introduced the resist-communist puppets to the public.

Unlike traditional puppets, those puppets were dressed in modern costume. The scripts emphasized the miserable living situation that happened in communistic China, and propagated the importance of preventing the penetration from communism. This kind of puppet show was usually used as a short political propaganda before the main show.

Development4:

Jing-Kuang Glove Puppets:

Jing-Kuang glove puppets are named after the puppet characters. Most of the characters in this kind of puppet show are supernatural, and the puppet is much bigger than the traditional one. They perform incredible kung fu, and they appear on stage with color or golden strips to represent their halo. The scripts are usually fights between two parties.

Jing-Kuang puppet shows are more popular than traditional ones and have been developed for television as puppet dramas. Nowadays, it is also the main stream that most of the puppet troupes perform outdoor.

Development5:

TV Glove Puppets:

TV glove puppets are one kind of JingKuang Glove Puppets. The puppet's size is the biggest. Because of the new computer technology, TV Glove puppets show uses special effects such as animation and pyrotechnics. The puppeteers also utilize

more elaborate sets to create very realistic and intriguing backgrounds.

The biggest change, however, was in the story lines. Rather than relying on traditional stories, producers began to write new scripts that would attract a new, younger audience.

Structure



In the glove puppetry the puppet is the main focus of the audience and the soul of the whole performance. Apart from the sculpted and painted wood head of the puppet, its headgear and costume are important elements to represent the characteristics of the puppets. In this section, the users can view the structure of a puppet, including the headgear, the head, and the costume.



Below is the text description for this section.

Headgear:

Most puppets wear hat or cap. The headgear of the puppet is divided into so-called "hard hats" and "soft hats" and like the clothing the hats also give us information on the character and social position of the puppet. There are different types of caps for civil males, martial males, and also landlords, military personnel, heroes, fighters, clowns. Above characters all have their specific soft caps. The hard crowns made of paper or cardboard are for royalty. Generals wear hard hats, while ordinary officials wear caps.

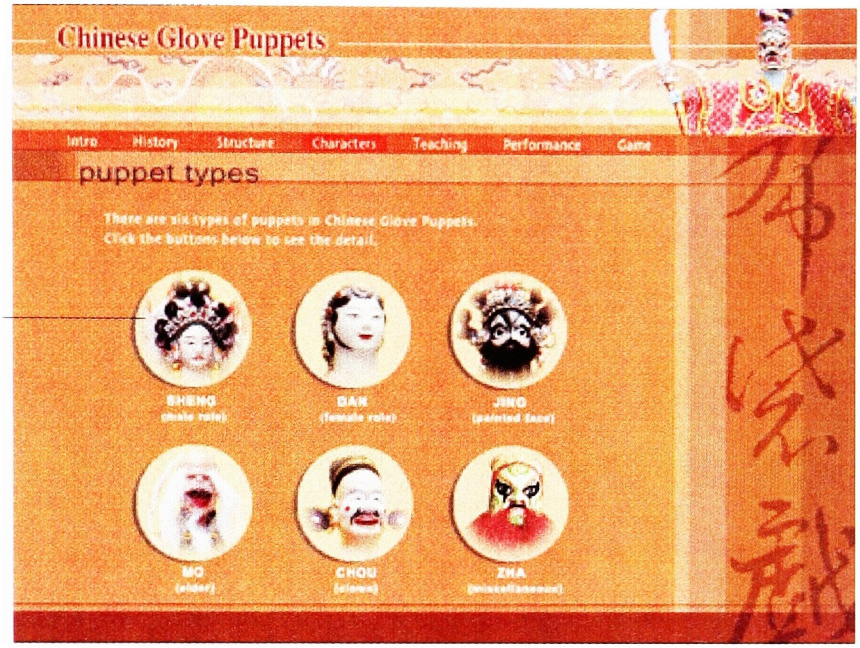
Head:

The puppet heads are made of camphor wood, which is first cut into a base as the size of a puppet head. A line is drawn across the middle of the base as the guide, the cheeks are cut sideways and the facial features are carved with a knife. When the primary base has been carved finished, it is covered with a piece of cotton paper to cover the wood texture. The base is then plastered with the filtered loess pulp and polished after it is dry. A puppet head is not finished until it is smeared with powder, painted in colours, spread with wax and fixed up hair, and beard.

Costume:

The style of the costumes is generally based on clothing that was worn during the Ming dynasty (1368-1644). Apart from being exquisite examples of embroidery art, the costumes also give information on the character of the puppet. The clothing of the puppets is divided into two layers. The inner part is a simple cloth bag that serves to connect the hands, feet and head of the puppet to the body. The outer garment is finely embroidered costume often in silk. Its main function is to emphasize the character as well as the social position of the puppet.

Characters



puppet types
and also buttons for details

There are various characters of Chinese glove puppets. Generally, they can be divided into six types: sheng (male role), dan (female role), jing (painted face), mo (elder), chow (clown), and zha (miscellaneous). Each type of puppet has its own characteristic, and also has different roles. In my project, I provide the general roles of each type to offer a basic understanding for users.

Sheng:

Sheng is ordinary male character, and can be divided deeply into different types:

1.Flower Child: child under ten years old

2.Young Man : Scholar(student)

3.Young Man: Warrior

4.Middle Age Man :man with black beard

5.Middle Age Man(older): man with motley beard, sometimes with a few gray hairs.



Dan:

Dan is female character, and can be divided deeply into different types:

1.The cornered-wreath-female: the youngest girl, divided in the single and double wreath girl.

2.Young Lady: 17, 18 years old girl

3.Gossip Woman

4.Middle Age Woman: woman with black and gray hair

5.Older Lady: older woman with white hair

Jing:

Jing is a character with painted face and specific character trait, and it can be divided deeply into different types:

1.Black painted face: the warriors with black painted face

2.Black big painted face: the warriors with black painted face and beard

3.Red painted face: the warriors with red painted face, usually, they are stable, courageous and loyal.

4.Dark painted face: the warrior with dark painted face, usually, they are evil.

5.Red painted face: the warriors with red painted face

Mo:

Mo is an older male character, and it is divided from old sheng. Mo always has white beard.

1.Old Male: an older gentleman with a closed mouth

2.Oldest Male: an older gentleman with an open mouth

Chou:

Chou is male character with specific personalities and expressed in a comical way.

1.Clown Officer: an officer with comical characteristic

2.Servant Clown: a servant with comical characteristic

Zha:

Zha are miscellaneous characters. Here are some examples from "The Journey To The West":

1.MonkeyKing: the main character in the book

2.Tang Monk: a monk who is designated to the west for seeking sutra

3.Cattle Monster: a monster with cattle head

4.Tiger Monster: a monster with a face in tiger texture

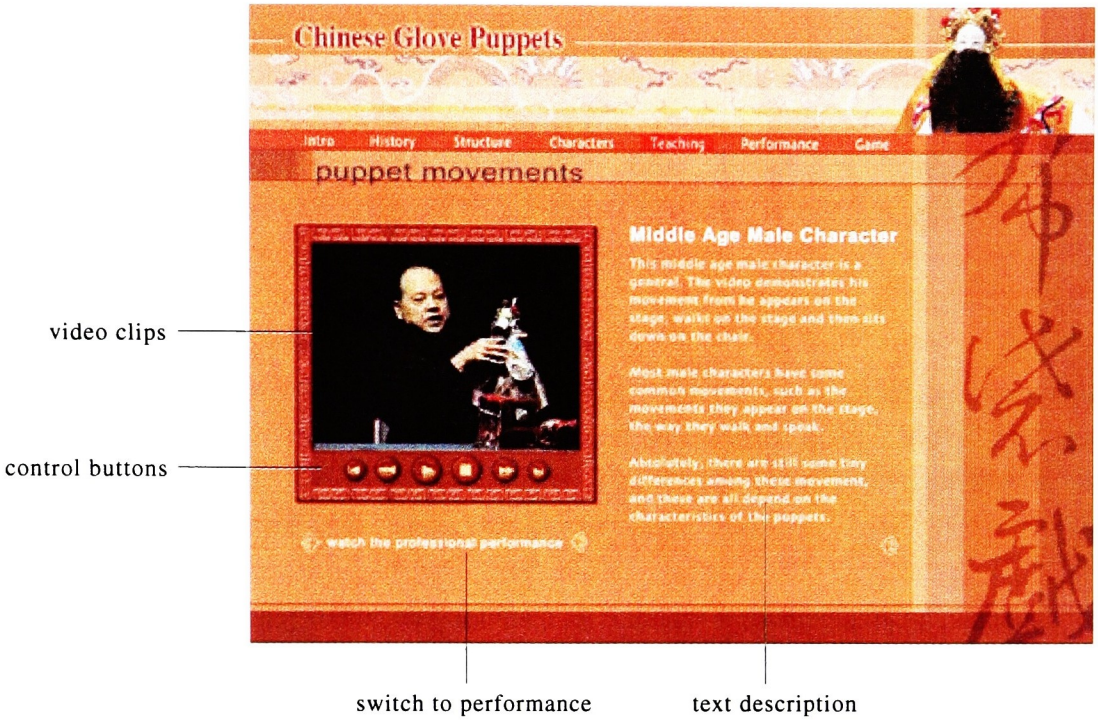
5.Red Kid: the son of the Cattle Monster

Teaching

puppet movements video clips and also buttons for watching



The movement of Chinese glove puppets is manipulated by using fingers. Because the puppet's facial expression is fixed, all the puppet's characteristics and feeling are represented by its body language. The puppet's movements can be very ingenious and lifelike. Therefore, to be a successful puppeteer, it will take many years to learn the various complicated movements. In this section, I have eight basic video clips of puppet's movements. Besides the basic position for supporting the puppet,users can also link each teaching video to the professional performance, because each teaching video clip is matched to the professional performance video clip. Users can switch between these two sections to enjoy the professional puppet show and understand how it works.



Below are the video clips in this section.

Basic:
The movement of Chinese Glove Puppets is manipulated by using fingers. Therefore, before the users study the puppet movements, they need to know how to support the puppets. Put the index finger inside the puppet's head. The thumb is inside its right hand, and the other three are inside its left hand.

Middle age male character:
The video demonstrates a middle age male character's movement. This clips shows how he appears on the stage, walk on the stage and then sit down on the chair. This puppet is a general, and he has some common movements with other male characters.

Jump onto the stage:
Generally, there are two ways that puppets appear on the stage. One is open the screen and stand, and the other one is jump onto the stage. The video shows how the puppet jumps onto the stage. The puppeteer turns his hand to make a jumping movement.

Marching:
When playing two puppets moving on the stage, we cannot use the same hand position in both hands. This video shows how the puppets march. The puppeteer has to turn his hand backward. Then the movement looks natural.

Manipulate the horse:
There are many accessories to help make the puppet show more vivid and more interesting. Horse is one of the common accessories, because it is the main transportation in ancient China. This video demonstrates how to manipulate the horse and its movements with puppets. The users need to practice a lot. Otherwise they will forget to move the horse when they are playing the puppet.

Running:
Running is also a basic movement in Chinese glove puppet show. This video uses an intelligence agent to demonstrate, due to the nature of its characteristic is to inform message as fast as possible. It is a simple movement and easy to learn. The users just need to keep the following in mind: move their hand up and down not forward and backward.

Painted face character:
Most painted face characters are warriors or soldiers. Therefore, their movements should be bigger and the puppeteer needs to put more strength to present their power.

Fighting:

Fighting movement looks unorganized, and most people think it is just moving the puppets arbitrarily. Actually, it is not easy to perform a good fighting movement. Because users need to use both of their hands and match two sides to make it looks like real fighting. There is no absolute way to perform the fighting movement. Users can play it in their own way, but it just needs to be matched.

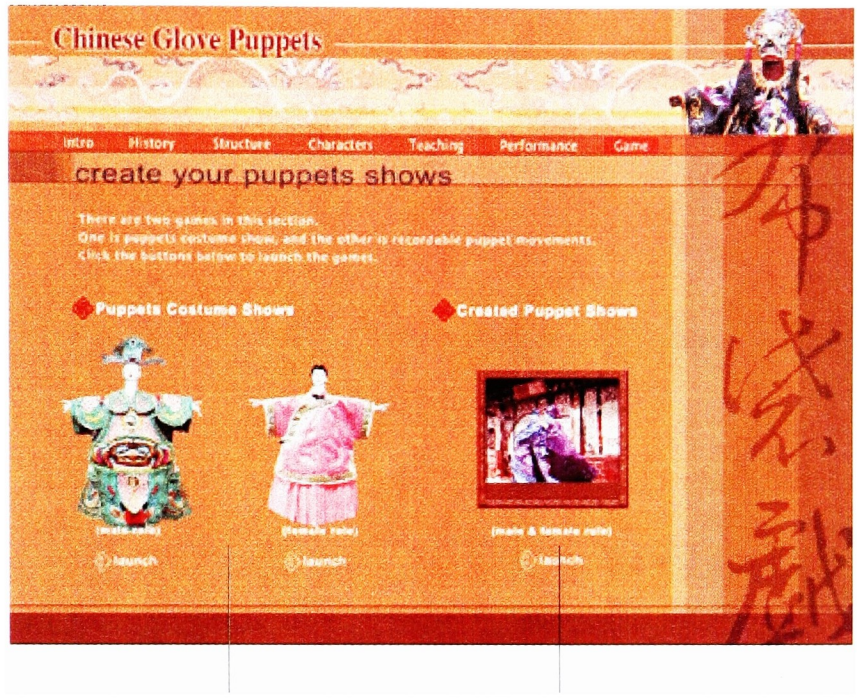
Performance



performance video clips and also buttons for watching

Professional performance video clips are matched to the teaching video clips. There are six video clips in this section. If users don't want to learn how to play the puppets, they can simply watch the professional puppet shows.

Game

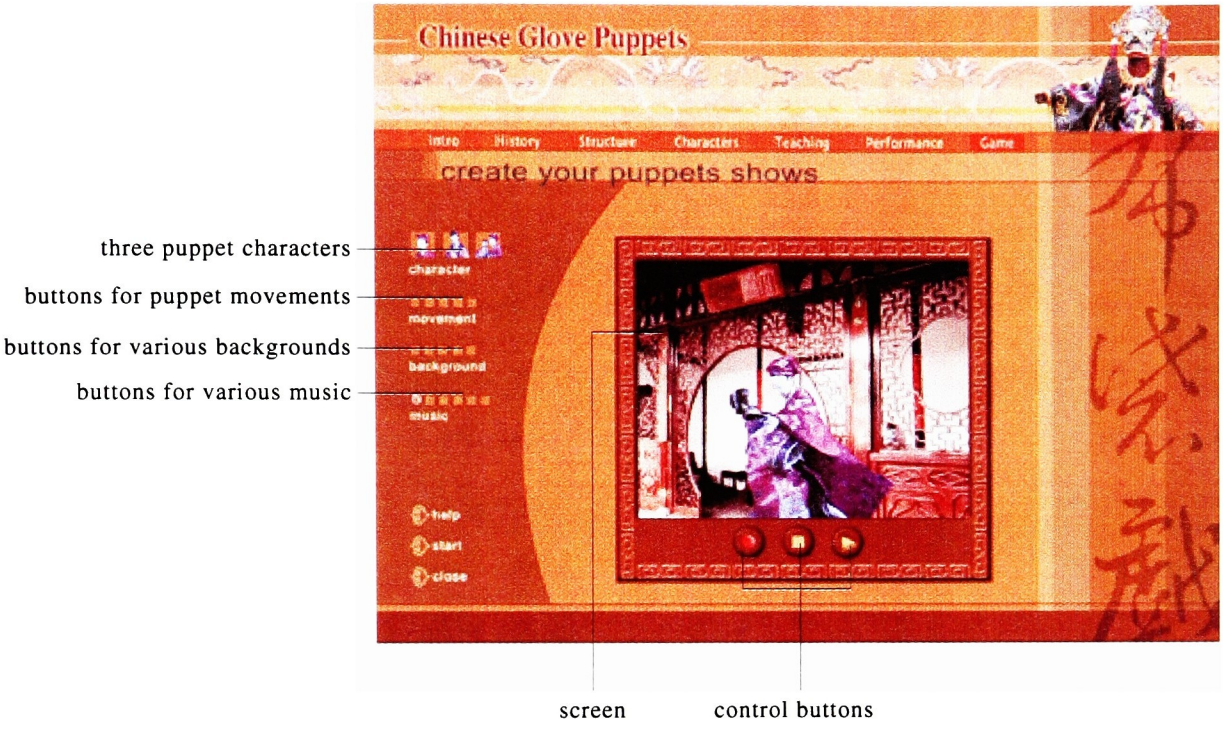


game1 game2

Game is the fun section in my project. I intended to make my project more interesting, not only informative but also entertaining. There are two kinds of games in my project: the puppets costume shows, and the created puppet shows. Through these games, users will be able to have a creative puppet show by themselves. By this way, I hope users can have pleasing experiences, and furthermore, become more interested in Chinese glove puppetry.



Above is the puppet costume show. Users can change the puppet's costume, headgear, beard or hairstyle to create various appearance of the puppet. There are two options: the male role and the female role.



Above is the created puppet show. User can choose any one of the three characters: the male role, the female role and the couple. For each character, there are various movements. The user can record multiple puppet movements in their own way, change their desired background, and match different music to create their own puppet shows.

Analysis

Chinese Glove Puppets User Feedback Survey **by Yu-Hui Tu**
(Totally 30 people)

Please select a degree between 1 to 5:
1.Strongly Disagree; 2.Disagree; 3. Neutral 4. Agree; 5.Strongly Agree

	1	2	3	4	5
Q01:I like the interface design.	0%	0%	5%	26%	**69%**
Q02:Visual style appropriate for the subject matter.	0%	0%	0%	21%	**79%**
Q03:Color is used effectively.	0%	0%	0%	32%	**68%**
Q04:Typography is used effectively.	0%	0%	5%	**63%**	32%
Q05:Content is organized in a logical manner.	0%	0%	0%	37%	**63%**
Q06:Screen layout clearly organized the content.	0%	0%	0%	37%	**63%**
Q07:Navigation is easy to use and recognize.	0%	0%	5%	37%	**58%**
Q08:Buttons are logically placed and provide feedback.	0%	0%	5%	37%	**58%**
Q09:Buttons clearly labeled or obvious for their functions.	0%	0%	0%	47%	**53%**
Q10:The project is interesting.	0%	0%	5%	21%	**74%**
Q11:The project provides plentiful information.	0%	0%	0%	16%	**84%**
Q12:The project is useful for learning Chinese culture.	0%	0%	10%	10%	**80%**
Q13:The project provides entertainment.	0%	0%	5%	37%	**58%**

Q14:Which section(s) of this project do you like the most?
A.intro B.history C. structure D.character E.teaching F.performance G.game

Result: A(0), B(1), C.(6), D(6), E(9), F(7), **G(10)**

Q15:Which section(s) of this project should be improved?
A.intro B.history C. structure D.character E.teaching F.performance G.game

Result: A(4), **B(9)**, C.(1), D(3), E(0), F(2), G(4)

User Feedback

Comments:

"Very good use of colors and great design style. It was easy to navigate and easy to get to the information.Very informative content and very interesting."

"The project is wonderful and excellent."

"In teaching section, the subtitle shall be English version if possible."

"This project is excellent for learning Chinese culture."

"Typography in intro section is weak - that much information gets boring to read - break this up by spacing differently and bolding out keywords."

"Hope can see 360 degrees for each character."

"Character turn around were great. There's a lot of information on the CD. I can't think of anything to improved."

"Very well down and pretty elaborate."

"In the character section, not all of the puppets have rotating features. There should be consistency."

In teaching and performance sections. I don't think you need so many control buttons."

"Very nice."

"I'd like to see the explanation for each garment and hat more detail."

"Good job."

"I would like to see more interactive in history section."

"Well organized content, nicely design and funny transition."

"It's very interesting."

"In history, structure, and character sections, I would like to have some background audio appropriate."

"I'd like to see more interactive instruction in game section."

"It is a great educational and entertainment project."

"I really like it. There are so much fun on it."

"I'd like to see more introduction about TV glove puppets."

"In character section, I'm kind of confused what the buttons below are for."

"It's great, so much information and fun."

User Feedback Analysis

From the statistics, I am glad most people gave me a high evaluation. For every question, almost the highest rate were graded in "strongly agree", and nobody graded "disagree" options in the survey. But there are still some things that users think need to be improved.

From question 14, many people liked the teaching and game most. I have asked some users about this question, and they said the teaching section demonstrated how to manipulate the puppets so they can understand how it worked, and the game section provided lots of fun. Most people thought it was helpful to enhance their understanding in teaching section because it had English narration, and the using of transparent puppet was great to see the puppeteer's finger movements. In game section, the created puppet show provided different puppets' movements, and these movements were recordable. Therefore, many people loved to see their "works" in various arrangements, and had much fun on it.

From question 15, some people thought there was too much text in the intro section, and that was boring. In my original concept, this section was just an overview, so I did not provide many interactive parts to users. Since the user feedback pointed it out, I thought I may decrease some of the text content. In characters section, some people mentioned that they would like to see all the puppets were rotatable. Actually, I would like to do this if possible, but it was not easy to have all puppets' images in 360 degrees. I tried to shoot as many pictures as I could, but the resource just could not be complete. Many problems happened during the process, and they are unexpected. Because most images and videos were taken from Taiwan by myself, I could not think of everything well. The history section was the one most people thought need to be improved. The same as the intro section,

they would like to have more interactive parts. And in game section, some people said they were kind of confused when playing the created puppet show. They could not remember all the steps for playing the game. Therefore, I add instructional pages for the game. Users can choose play by themselves or play by following the instruction. After this improvement, I asked some of my friends, and they said it was much better.

Conclusion

Chinese glove puppetry is an the important traditional performing art in Taiwan. It is a performance including sculpture, embroidery, literature, speaking, singing and traditional music. There are many kinds of hand puppetry in the world, but only Chinese glove puppetry can be represented so ingenious and lifelike. When it was performed overseas, it was popular by its elaborate appearance and animated movements. Therefore, I am glad to introduce it and also get much positive response from the users.

Since the computer has been introduced, it gradually changed mankind's life. Nowadays, we rely on computers so much that many people even cannot live without computers. Digital information impacted every area of our life and also expanded our view of everything. It is easy to obtain different information simply by rambling in a digital world instead of visiting the people or the place by yourself. The multimedia technique supplements the disadvantage of the motionless state of books. For users, a lively interactive program is the better way to appeal to their interest and enrich their knowledge more efficiently.

As a computer graphic designer, I try to use the advantages of multimedia in my thesis project to create an effective learning environment for users. Not only still images but the videos, object movies, and games make this project more interactive and more interesting to introduce the Chinese glove puppets. I learned much from the research and the process. In fact, even as a Taiwanese, I did not know much about traditional Chinese glove puppetry. And when I showed this project to my Taiwanese friends, they also said it was amazing

and they did not fully understand it before, because it is not as popular as Jing-Kuang glove puppetry. I feel sad and embarrassed for the situation that even we Taiwanese do not understand our traditional culture.

From the user feedback, I think the outcome of my thesis is successful. Regardless of the editing, programming, or design concept, I took myself to a higher level. I really enjoy this creative experience. Further more, perhaps someday I will use it in my country to help the preservation and the development of Chinese glove puppetry.

Appendix

Main Navigation

```
stop();

set(introB, "none");
set(historyB, "none");
set(structureB, "none");
set(characterB, "none");
set(teachingB, "none");
set(performanceB, "none");
set(gameB, "none");
set(exitB, "none");

_root.introB_mc.onRollOver = function() {
        introB_mc.gotoAndPlay("over");
        _root.introB = "over";
}
_root.introB_mc.onRelease = function() {
        introB_mc.gotoAndPlay("down");
        gotoAndPlay("intro");
        loadMovie("intro.swf", "Empty1");
        _root.introB = "down";
        _root.historyB_mc.gotoAndStop("none");
        _root.structureB_mc.gotoAndStop("none");
        _root.characterB_mc.gotoAndStop("none");
        _root.teachingB_mc.gotoAndStop("none");
        _root.performanceB_mc.gotoAndStop("none");
        _root.gameB_mc.gotoAndStop("none");
        _root.exitB_mc.gotoAndStop("none");
}
_root.historyB_mc.onRollOver = function() {
        historyB_mc.gotoAndPlay("over");
        _root.historyB = "over";
}
_root.historyB_mc.onRelease = function() {
        historyB_mc.gotoAndPlay("down");
        gotoAndPlay("history");
```

```
        loadMovie("history.swf", "Empty1");
        _root.historyB = "down";
        _root.introB_mc.gotoAndStop("none");
        _root.structure_mc.gotoAndStop("none");
        _root.characterB_mc.gotoAndStop("none");
        _root.teachingB_mc.gotoAndStop("none");
        _root.performanceB_mc.gotoAndStop("none");
        _root.gameB_mc.gotoAndStop("none");
        _root.exitB_mc.gotoAndStop("none");
}

_root.structureB_mc.onRollOver = function() {
        structureB_mc.gotoAndPlay("over");
        _root.structureB = "over";
}
_root.structureB_mc.onRelease = function() {
        structureB_mc.gotoAndPlay("down");
        gotoAndPlay("structure");
        loadMovie("structure.swf", "Empty1");
        _root.structureB = "down";
        _root.introB_mc.gotoAndStop("none");
        _root.historyB_mc.gotoAndStop("none");
        _root.characterB_mc.gotoAndStop("none");
        _root.teachingB_mc.gotoAndStop("none");
        _root.performanceB_mc.gotoAndStop("none");
        _root.gameB_mc.gotoAndStop("none");
        _root.exitB_mc.gotoAndStop("none");
}
```

```
// set the number of pieces in the menu
pieces = 10;

// calculate the width of the small and large images
smallPieceWidth = smallMenu_mc._width/pieces;
largePieceWidth = bigMenu_mc._width/pieces;

// set the start location and size of the slider
slider_mc._x = smallMenu_mc._x + smallPieceWidth/2;

// set the start location of the big and small menus
bigStartLoc = bigMenu_mc._x;
smallStartLoc = smallMenu_mc._x;

// initialize the starting target locations
bigMenuTargetLoc = bigMenu_mc._x;
sliderTargetLoc = slider_mc._x;

// function to determine new locations of the slider and the big menu
function moveTo(thePiece) {

//calculate the targetLocation of the slider
sliderTargetLoc = smallStartLoc + (thePiece * smallPieceWidth) -
(smallPieceWidth / 2);

//calculate targetLocation of the big menu
bigMenuTargetLoc = bigStartLoc - (thePiece * largePieceWidth)+
largePieceWidth;
}

smallMenu_mc.onRelease = function() {
// get the selected pieceNumber
        imageNumber =
math.ceil((_xmousesmallStartLoc)/smallPieceWidth);

// find the new target locations for the slider and big menu to move
to
moveTo(imageNumber);
}
```

```
slider_mc.onEnterFrame = function() {
        // calculate a new dx
        dx = (sliderTargetLoc - this._x)/4;

        // update the location of the slider
        this._x = this._x + dx;
}

bigMenu_mc.onEnterFrame = function() {
        // calculate a new dx
        dx = (bigMenuTargetLoc - this._x)/4;

        // update the location of the big menu
        this._x = this._x + dx;
}
```

Character Rotation

```
stop();

// left button scripts
left_btn.onPress = function() {
        Move = "Left";
}
left_btn.onRelease = function() {
        Move = "None";
}
left_btn.onReleaseOutside = function() {
        Move = "None";
}

// right button scripts
right_btn.onPress = function() {
        Move = "Right";
}
right_btn.onRelease = function() {
        Move = "None";
}
```

```
right_btn.onReleaseOutside = function() {
        Move = "None";
}

// main timeline
this.onEnterFrame = function() {
        // check the turn option
        if (Move == "Right") {
                whatFrame = this.dan1_mc._currentframe;
                whatFrame = whatFrame-1;
                if (whatFrame == 0) {
                        whatFrame = 24;
                }
                this.dan1_mc.gotoandstop(whatFrame);
        } else if (Move == "Left") {
                whatFrame = dan1_mc._currentframe;
                whatFrame = whatFrame+1;
                if (whatFrame == 25) {
                        whatFrame = 1;
                }
                dan1_mc.gotoandstop(whatFrame);
        }
};
```

Video Control Buttons

```
stop();

play_btn.onPress = function() {
        basic_mc.play();
}

stop_btn.onPress = function() {
        basic_mc.stop();
}

first_btn.onPress = function() {
        basic_mc.gotoAndStop(1);
}
```

```
last_btn.onPress = function() {
        basic_mc.gotoAndStop(basic_mc._totalframes);
}

rewind_btn.onPress = function() {
        basic_mc.onEnterFrame = function() {
        basic_mc.gotoAndStop(basic_mc._currentframe - 4);
        }
}

rewind_btn.onRelease = function() {
        basic_mc.onEnterFrame = null ;
        basic_mc.play();
}

forward_btn.onPress = function() {
        basic_mc.onEnterFrame = function() {
        basic_mc.gotoAndStop(basic_mc._currentframe + 4);
        }
}

forward_btn.onRelease = function() {
        basic_mc.onEnterFrame = null ;
        basic_mc.play();
}

// switch to performance section
watch_btn.onRelease = function() {
        _root.gotoAndPlay("performance");
}
```

Created Puppet Show

```
stop();

dan_btn.onRelease = function() {
        gotoAndStop("dan");
}
love_btn.onRelease = function() {
        gotoAndStop("love");
}

start_btn.onRelease = function() {
        gotoAndStop("intro");
}

help_btn.onRelease = function() {
        gotoAndStop("help");
}
close_btn.onRelease = function() {
        unloadMovie("_parent.Empty");
        loadMovie("game.swf", "_root.Empty1");
        _root.gameB_mc.gotoAndStop("down");
        _root.gotoAndPlay("game");
}

// a tester for getTimer command; only works while the rec btn pressed
pRecPressed = false;
// for deleting all items in name and time array whenever users press rec btn
pRecMovieTimes = 0;
// loop function
pLoop = false;
loop_btn.onPress = function() {
        if (pLoop == false) {
                pLoop = true;
        } else {
                pLoop = false;
                }
};
```

```
// to store the time for a movie clip shows on the screen from rec pressed
pClipTimeArray = new Array();
// to store the names of movie clip played
pClipNameArray = new Array();
// pRecStartTime = the recording starting time
record_btn.onPress = function() {
        pRecStartTime = getTimer();
        if (pRecMovieTimes == 0) {
                //pRecStartTime = getTimer();
                //trace("pRecStartTime:" + pRecStartTime);
                pRecPressed = true;
                pRecMovieTimes++;
        } else {
                // delete all items in arrays from the 2nd time rec btn pressed
                pClipTimeArray.splice(0, pClipTimeArray.length);
                pClipNameArray.splice(0, pClipNameArray.length);
                //pRecStartTime = getTimer();
                pRecPressed = true;
        }
};

move1_btn.onPress = function() {
        mAddValue(sheng1_mc);
};
move2_btn.onPress = function() {
        mAddValue(sheng2_mc);
};
move3_btn.onPress = function() {
        mAddValue(sheng3_mc);
};
move4_btn.onPress = function() {
        mAddValue(sheng4_mc);
};
move5_btn.onPress = function() {
        mAddValue(sheng5_mc);
};
```

```
function mAddValue(aClipName) {
        if (pRecPressed) {
                pClipTime = getTimer()-pRecStartTime;
                pClipName = aClipName;
                pClipTimeArray.push(pClipTime);
                pClipNameArray.push(pClipName);
                aClipName.play();
                } else {
                aClipName.play();
        }
}
// if pRecPressed, stop pushing values into name and time arrays
stop_btn.onPress = function() {
        pRedEndTime = getTimer()-pRecStartTime;
        if (pRecPressed) {
                pClipName = "StopPlay";
                pRecPressed = false;
                pStopRecTime = getTimer-pRecStartTime;
                pClipTimeArray.push(pStopRecTime);
                pClipNameArray.push(pClipName);
                }
};
play_btn.onPress = function() {
        gotoAndStop(7);
};
bg0_btn.onRelease = function() {
        background_mc.gotoAndStop("bg0");
}
bg1_btn.onRelease = function() {
        background_mc.gotoAndStop("bg1");
}
bg2_btn.onRelease = function() {
        background_mc.gotoAndStop("bg2");
}
bg3_btn.onRelease = function() {
        background_mc.gotoAndStop("bg3");
}
bg4_btn.onRelease = function() {
```

```
        background_mc.gotoAndStop("bg4");
}
bg5_btn.onRelease = function() {
        background_mc.gotoAndStop("bg5");
}
music0_btn.onRelease = function(){
        stopAllSounds();
}

music1_btn.onRelease = function(){
        stopAllSounds();
        music1_mc.play();
}

music2_btn.onRelease = function(){
        stopAllSounds();
        music2_mc.play();
}

music3_btn.onRelease = function(){
        stopAllSounds();
        music3_mc.play();
}

music4_btn.onRelease = function(){
        stopAllSounds();
        music4_mc.play();
}

music5_btn.onRelease = function(){
        stopAllSounds();
        music5_mc.play();
}
```

Resource

Video

Ching Lung Guan. Wang Hsu
Hsiao Hsi Yuan Puppet Theater, 1998.

Music

The Great Music Of China. "Fighting with Typhoon."
Taipei, Lan-Bau Records Company, 1991

The Great Music Of China. "Mountain Valley Love Song."
Taipei,Lan-Bau Records Company, 1991

The Great Music Of China. "The Pleasure fo Water Town Harvest." Taipei, Lan-Bau Records Company, 1991

The Great Music Of China. "Step and Step Higher."
Taipei,Lan-Bau Records Company, 1991

Web Sites

1st Puppet Store
https://secure.network.com.tw/Puppet/Source.asp

Holo Classic Hand Puppet
http://home.kimo.com.tw/holoart2003/

Chang Yi Fang
http://www.bodehi.com.tw/

Traditional Chinese Culture in Taiwan
http://www.houstoncul.org/culdir/pupp/pupp.htm

EPILI Networks
http://culture.pili.com.tw/trend/trend_006_p1.php

Reference

Footnote

1.Jo Humphrey.(1980) *Monkey King: A Celestial Heritage.(pp.33)* New York: St. John's University.

Books

Bill Baird.(1965) *The Art Of The Puppet.* New York: The Macmillan Company.

Ming-De Lin(2003) *Playing Puppetry Is My Destiny* Taipei,Taiwan: ReadingTimes Publishers

Chih-Cheng Chen(1991) The Fame In The Palm Taichung,Taiwan: Taiwanese Government Publishers

Derek Franklin, Jobe Makar(2002) *Macromedia Flash MX ActionScripting: Advanced Training From the Source* New York: Macromedia Press