

Dream of Mee-Luck: Aspiration for a New Dawn*

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Abstract. Many countries in the world are putting much effort for the preservation of cultural assets of their own countries using digital. However, most of the attempts are based on the aspect of preservation science which aims to exquisitely restore cultural assets through historical investigation. Therefore in most cases they are successful in the restoration of shape without incorporating the spirit and meaning of the respective cultural asset. In this regard, we suggest an approach using Responsive Multimedia System which can present legend of Unju Temple as a sequence of events in VE. Users can experience virtual story by manipulating interactive StoryMap displayed on ARTable. In the suggested artwork, we express the uncompleted beauty, which we cannot find out from Unju Temple today.

1 Introduction

Many countries in the world are putting much effort for the preservation of cultural assets of their own countries. The development of a system for permanent preservation of cultural assets using digital restoration technology is one of them. Cultural assets carry their important values not only from the aspect of tangible shape as an object but also from the aspect of the spirit and legend related to the cultural asset. However, existing system has focused on the restoration of their shape. The suggested artwork, Dream of Mee-luck: Aspiration for a New Dawn, will re-illuminate true meaning of the cultural assets as it dealt with the restoration of cultural assets not only from physical aspect but also from spiritual aspect which did not exist so far in the restoration effort.

2 Artistic Motivation

Unju Temple is a temple located in Daecho-ri, Hwasun-gun, Jeonnam Province in Republic of Korea. In this area, a lot of stone pagodas and Buddhist statues are scattered in a group throughout the mountain and valley [1].

The legend has that around the end of Unified Shilla Dynasty Reverend Priest Doseon erected a thousand Buddhist statues and thousand stone pagodas only in one

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night. But there are no records of history about the constructions and ruins of those relics. People can just imagine as to when the thousand Buddhist statues and thousand stone pagodas were constructed, who constructed them and the reason why. However, there is no clear answer at all. Based on the relics found and excavated from the temple site, it is estimated that the age of the creation of Unju Temple would be around the ending of Silla in 11th or 12th century and the erections of statues and stone pagodas would have been done not in a day but over a long period of time.

Currently there are only 17 stone pagodas and 80 Buddhist statues left but we can find the vestiges of the thousand Buddhist statues and thousand stone pagodas in many places around the area. We call the Buddhist statues in Unju Temple as 'Mee-luck' (Maitreya: future buddha), Buddha who is to come to this world in the future and are our hope and wish toward the future. However, in Unju Temple now, Buddhist statues and stone pagodas exist but 'Mee-Luck' does not exist any more. Unju Temple has experienced the creations and extinctions through several reconstructions over a long period of a thousand years and overcome the pains of existence as well as non-existence against the flow of history. The shape of Unju Temple is now deformed and is in the pain of non-existence due to human greed.

Consequently, we are left with vacant heart since it only exists in our heart. As Reverend Priest Doseon who dreamed to erect the thousand Buddhist statues and thousand stone pagodas, we are going to stand up the thousand Buddhist statues and thousand stone pagodas as well as lying-down Buddha in a new space called 'U-VR' (Ubiquitous Computing and Virtual Reality) aiming at building up the relationships of all global people where the hopes and wishes can be realized.

3 System Installation and Scenario

What we want to show in the suggested artwork are the wishes of ancient people which are incorporated in the thousand Buddhist statues and thousand stone pagodas as well as the unfinished beauty. To incorporate such meaning in the Artwork, we have materialized the following scenario: *Users watch animation or listen a legend of Unju Temple. They move to in front of ARTable and large display screen. They start to navigate virtual Unju temple. There are seven events to unfold the story as user's position in VE changes. In addition, users can experience Unju Temple repeatedly through 3D web site.*

We integrated ARTable, 3D Sound system, VRManager, and vr-UCAM into the RMS [2]. There were stereoscopic display system, a workstation for vision-based tracking system and one workstation for sound and database server. In addition to workstation, we installed two cameras and 5.1 channel sound system. When trigger signal is delivered to the sound server from client, it selects proper sound file to play through 5.1 channel speaker installed in the room. We built Database and Sound server to save 3D Model and to play 5.1 channel sound.

We implemented object and interactive StoryMap of Multi-modal Tangible User Interface to guide virtual story. We made dolls of a small priest, a tiger, and a dragon related to the story and participants can select one of them as his preference. For building stone pagodas, we made shovel-shape object. So, participants can move

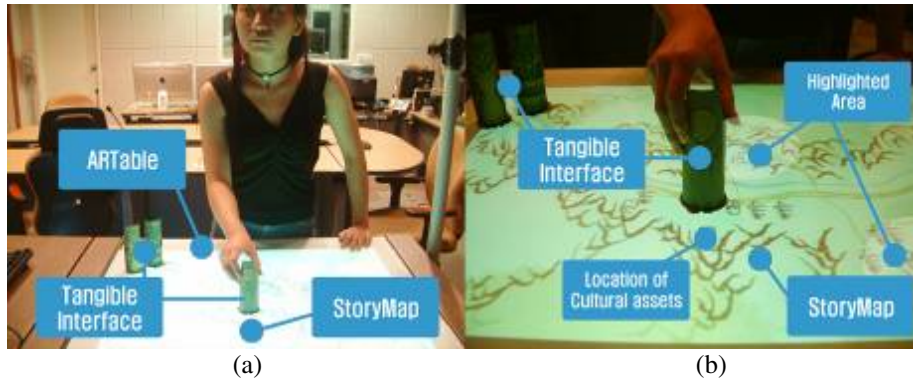


Fig. 1. (a) A user manipulate Tangible Interface, (b) Dolls (Tiger, Dragon, and Small Priest)

stone with shovel-shape object. Furthermore, we connected watch and computer to acquire current time. We used this watch to allow participants to change position of sun in VE

Interactive StoryMap which was displayed on ARTable of RMS is shown in Fig. 1. It was designed for guiding or causing user's interaction. The StoryMap showed geometric information of 'Unju Temple'. When participants invoked interaction, specific position lighted up to guide next position to go. We designed several StoryMap to select according to user's context. We also implemented Virtual Plant, Priest Doseon, and ruining Maeyeoraee in virtual environment. We created key frames of virtual object and combined them as a sequence by using pfSequence. A pfSequence is a pfGroup that sequences through a range of its children, drawing each child for a specified duration. Each child in a sequence was thought of as a frame in an animation. We controlled whether an entire sequence repeats from start to end, repeats from end to start, or terminates.



Fig. 2. Implemented Storytelling System. Left figure shows stonecutter on sunny day and right figure shows them on foggy day.

The user can interact with virtual environment through ARTable. As shown in Fig. 2, a user was able to navigate virtual environment manipulating objects on the ART-

able. For example, the user was able to move a doll which was connected to virtual avatar in virtual environment. The user also tried to give special effect in virtual environment by moving object on the ARTable. The intelligent response of virtual plant was shown in large display screen. According to user's context such as gesture, preference, the virtual plant displayed various responses. The user can watch the changes of virtual surrounding according to change of real surrounding. Since it was difficult for us to acquire changes of weather or temperature, we simulated those changes by programming. We made watch which is connected to time of day in VE, so that when the user changed the watch, the time of virtual environment was changed. This demonstration showed us that when real and virtual environment are connected by context, it could improve immersion of user.

4 Conclusion

Unju Temple from the physical aspect which we can visit and see with our eyes clearly exists in reality. However, it is no longer possible to experience the spirit which was incorporated in the cultural asset now, unless we really try to find out, because of damage and new arrangement works on the cultural assets. Artwork 'Dream of Mee-luck' could be a starting point which will make us think about the restoration of cultural assets in true sense once again by providing the opportunity to experience various interactions and events on not only the physical aspect but also the spiritual aspect which has not existed so far.

References

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