

Playing the Soul

Designing Interactive Holographic Orgel (Music Box)

Abstract: In this proposed interactive work, 'Playing the Soul', it will deal with the relationship between platform as reality and the digital image as digital soul that can be projected by audience. Digital technology, we are closed with, is precisely changing our perception of real. 'Playing the Soul' will let users have an experience that how we have been floating within digitized reality. We were inspired and influenced by some of Jin Yo Mok's physical involvement interactive work that integrates an installation with interaction through touching LEDs. 'Music Box' is basically consists of an antique orgel (music box) with its handle, which is able to trigger to be interacted with sound. Through the implementation of these interactions, simply users are able to face the digital aesthetics by the analogue operating system.

Key words: *Interaction, Interface Design, Human Behaviors, Perception, Emotion and Physical Interaction .*

1. Introduction: Objective

'Music Box', interactive installation reminded us that where we are at this present time in our society. What we felt at the first impression was reflected to present value of our past (analog mechanism) in this reality, we are being sublimated into digital form. Through our proposed physical interactive installation, we believe that we are able to implement the self-examination about our true value of past within the present or reality which is being digitized.

The level of interest in this work may has the potential to be a good indicator of how much those of living in a culture where software more and more pervades common experience still value the use of analog mechanisms. Through developing this interactive work based on technical aspect of Jin Yo Mok's physical interactive installation, we may be able to provide that such an interactive work could provide an exemplification for industrial artists about further knowledge of how to incorporate analog mechanisms into a variety of user interfaces.

2. Artist Statement

2.1 Motivation and Analytical Philosophy



Fig. 1. Example of Jin Yo Mok's interactive installation

We were inspired and influenced by some of Jin Yo Mok's physical involvement interactive work that integrates

an installation with interaction through touching LEDs. 'Music Box', sound interactive installation, basically consists of an antique organ (music box) with its handle, which is able to trigger to be interacted with sound. They are also constructed and designed as a simple design (interaction) in which LEDs light up through touching and are turning the handle as controller which is placed on cylinder. Namely, for user interaction, "Music Box (organ)" is composed of LED and light-responsive sensors and is built by the duplicate music box where the pins and metal keyboard are exchanged, as well as a computer screen used as an input apparatus. Maybe its structure might be complex, but the method of using it is rather simple. However through the implementation of these interactions, simply users are able to face the digital aesthetics by the analogue operating system.

2.2 Purpose of Development



Fig. 2. 3 Dimensional Detailed Image of 'Playing the Soul'

Through this work as <Figure 3> shows, we do not intend to describe that our proposed work exists as the illusion of space of the digital technology. As we only approaches to the media with its substantiality, for this study, media technology is an interaction in which is able to be embodied in the real life we belong. Thus it is about the study of that digital virtual reality in which the reality was assumed as the interface in this interactive work.

Expressing the present time we live on now, and the past we used to imagine before is a simple and clear story. It never was a complicated story. Through <Holographic Music Box>, it will trigger to excite the analogue nostalgia in our contemporary society as it became a digital technology society. And <Music Box> itself also can be described as a toy which will remind us a value of our past and accelerate us to imagine ourselves.

In terms of works as it is often used as a digital media, a forced metaphor and a manipulation of object we are able to see often, can be transformed into the object that led us to act as memorize an object which is sympathized with an object (subject) even if the object is the sound or the visual. And this may be the reason why this work itself described as discovering analogue nostalgia in our contemporary society.

At this point, what we are intended to create through this proposal 'Holographic Music Box' project will attempt to create the quality fusion of the audiences and interactive work. And through this research, it will also study further about an attribute of interactive fusion between visual image as 3-dimensional image and the sound. Through this proposed study, participation in which it was embodied through a sense of touch and the interaction of auditory reaction will provide as the replaceable amusements for the user (audience) in reality.

3.1 Methodology I (Relation to 'SoniColumn')

Through touching LEDs in which they have been placed on installation, as drawing a pattern on the screen, user able to play the sound by turning the handle on orgel (music box). Simply this interactive installation can be described as a combination of the feel of a simple analog operation system and a digital aesthetic.

Users can draw a shape and pattern on the screen with their mouse and the same pattern of LEDs will light up on the physical music box. Turning the crank handle on the LED cylinder, any sensors that detect the light from the LEDs will make sounds. Data submitted by users is stored in a database and shared by both the online and offline music box. Through the electronic augmentation, users can compose, save, select, share and play their own music.

3.2 Methodology II (Relation to ‘Hologram’): Recreation of Visualization



Fig. 3. 3 Dimensional concept image of ‘Playing the Soul’

However in this work, so called physical interactive art may have a problem that user may felt a lack of visual while user interacting with its platform. In fact, it is true that ‘SoniColumn’ or ‘Music Box’ provides the user to have an interactive experience like after operating its platform, the user able to listen to the sound which is generated, through touching LEDs.

Certainly the existing hologram technology can not be able to provide the computer generated image based hologram we are used to see on film of science fiction genre. We are however initiated to research how we are able to achieve movie-like holographical 3D visualization based on the method of ‘Peppers Ghost Illusion’. Following exemplification of hologram is about implementation of 3 dimensional holographical moving images by using holographic screen. Its method is in fact based on ‘Peppers Ghost Illusion’ which is invented in 1890’s. By considering ‘Peppers Ghost Illusion’, we were initiated to implement 3 dimensional image based holographical illusion to express the visualization of human beings who have been floating in digitized reality within our proposed work.

3.2.1 Exemplification of Hologram Practice



Fig. 4. Hologram Performance in Alexander McQueen Fashion Show

Musion Eyeliner System is a whole new way of projecting video to create the illusion of life-size, full colour, 3D moving images. All of the images used on a Musion Eyeliner System are 3-dimensional images, but projected as two-dimensional images (2D/3D) in to a 3D stage set. The mind of the audience creates the 3D illusion. This means that production costs are minimal, needing only single camera lens for filming and single projector for the playback.

3.2.2 Technical Description (Relation to previous hologram technology)



Fig. 5. Elaborate stage trick using Pepper's Ghost Illusion

Following figures are indicated to explain how we applied 'Pepper's Ghost Illusion' to be expressed holographical illusion for our proposed work. Generally so called "Hologram Screen" which is currently developed by 'Musion Eyeliner System', is based on an optical illusion, 'Pepper's Ghost Illusion'. In 1862, its first appearance of an optical illusion was presented (exhibited) to trick the eyes of audiences on the stage. As above figure illustrates, the "ghost" is an actor located forward of and below the stage floor. The glass pane illustrates the reflection of the off stage "ghost" while the leftmost "ghost" simulates what the audiences actually see.

4. Conclusions

Although digital media work still may be strange or incomprehensible for audiences. And it may also difficult to understand its concept for audiences as the general public. However through this proposed interactive installation, it will approach to delivery them in a rather familiar way. As we described about the interactive installation

'Playing the Soul', we can assure that audiences would not hesitate to being participated through a simple and an immediate interaction. When we intend to convey the message to the audiences, we simply emphasize that prompt delivery of the message is important in terms of conveyance of concept.

Through our proposed work, we do not intend to describe about the illusionary space of digital technology. Instead, we are approached the digital media based on the interaction and actuality within our daily life. In this work, it naturally induces the audience participation towards unfamiliar art.

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6. References

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