

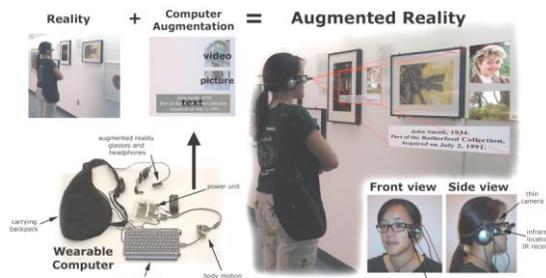
An AR Exhibition of Late Joseon Dynasty Painting

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1. Introduction

Cultural paradigm changed as the Neo-Confucianism had been compiled in the late Joseon Dynasty. The movement is expressed well in the Joseon paintings. The representative example is a real landscape painting by Jeong Seon. In the early days of the Joseon Dynasty, Chinese style Imaginary landscape painting was the mainstream. On the other hand, a real landscape painting is the representative one for the time that was described the real view painting by Jeong Seon in the late Joseon dynasty. There is not many audiences who does understand this context. The Joseon picture exhibition gives explanation about the context, but this text lowers audiences' absorption effectiveness. Subsequently, if the augmented reality technique such as wearable computer technique is used with contexts, the late Joseon pictures can be delivered the context information lively and also can be carried comparable information between the real view painting of real landscape painting, and audiences' attention can be increased. Then, examples that can attract peoples' attention toward Joseon paintings are provided using next generation interaction technique; wearable computer in this paper.

2. Wearable computing augmented reality technique in museum exhibition



Museum wearable: explanation of concept and application

Wearable computer like watch, glasses, band, and shoes means that are worn by the bearer under, with or on top of clothing. Wearable computer is new electronic device that smart phone and contents in ones hands are converged together as the meaning itself. The wearable computer was aimed to be developed firstly, it has been improved to apply to current real life and to be used for museum exhibition. Museum Wearable which was developed by Flavia Sparacino from MIT Media Lab is a representative technique in ahead of current museum and exhibitions.

Designed the technique in 2002, the wearable device which is equipped with infrared rays reception device; IR Receiver receive the information from IR Tag in museum and is realized with Private Eye Display[1]. The technique gives advantages for users to moderate freer than existing mobile interaction device and recognize autonomously.

3. Suggestion for wearable computer augmented reality technique in the late Joseon painting exhibition

3.1. Comparison between the early Joseon paintings and the late Joseon paintings

The early Joseon paintings and the late Joseon paintings are in the context following to the cultural paradigm change; compilation of Joseon Neo-Confucianism. This context with wearable computing augmented reality such as image and voice can be more helpful to attract peoples' attention than just delivering audiences this context as text.



Mongyudowondo by An Gyeon

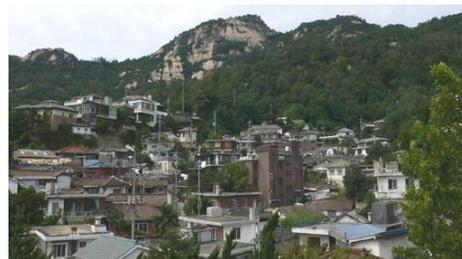
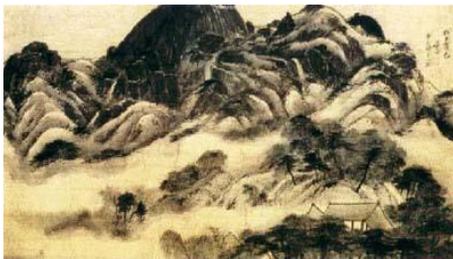


Geumgangnaesan by Jeong Seon

For example, Geumgangnaesan by Jeong Seon is displayed as a late Joseon real landscape painting. Using Museum Wearable through wearable device, Mongyudowondo by An Gyeon is provided as an early Imaginary landscape painting by Joseon. At the same time, different information between two paintings can be delivered.

3.2. Comparison between real landscape painting and actual view

The real landscape painting is different from Imaginary landscape painting in the early Joseon and the painting was described and was drawn with the actual view. Therefore, the old paintings and the current existing paintings can be comparable.



Inwangjesaekdo by Jeongseon (left) The actual view (right)

When compared with the real landscape painting and the actual view, the real landscape painting is not painted as the actual view itself, and is reflected artists thoughts. Thus, there would be a little difference between the painting and the actual view. This kind of information can also be delivered with wearable computing of augmented reality.

4. Conclusion

Mentioned above, the real landscape painting exhibition cases that can be currently applied in museums and used wearable computing augmented reality; Museum Wearable are suggested. As a result of the suggestion, with wearable computer of augmented reality technology, users can use wearable computers through the interface whenever and wherever, while operating other works free, and device's merit itself which function is to recognize other changing environment depending on users need itself[2] and the real landscape painting's features can be combined, and another type of contents can be produced possibly and can attract to audiences' attention.

As referred to earlier, new paintings can be made by using wearable computer of augmented reality and comparing another works and paintings and also adding the actual view to room in the paintings as an Oriental paintings character or imagining the time. In this way, wearable computing technology can be applied to diverse type contents depending on exhibition objects. Eventually, if this wearable augmented reality technology is continually studied, audiences' attention can be increased and the opportunities to enjoy cultural life can also be increased.

- [1] Ho-San Kim, BoA Lee "A study on the Convergence Exhibition Technology in Museum Environment for Improving Visitor Service", The First Museum Art Museum Associated Papers Contest Prizewinning Papers, 2011
- [2] Jin-Mook Lim., Kwang-Yun Wahn "Wearable Computer Model and Implementation: Wearable Guide System", Korean Institute of Information Scientists and Engineers, Correlation between Human and Computer Research Group Conference Presentation Papers (HCI), vol. 2, 2003