

シカン仮面の空間型AR展示

Spatial AR Exhibition of Sican Mask

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Abstract: We constructed the exhibition system using the spatial augmented reality technology for the next generation museum. This system can express the atmosphere by mixing the virtual image with the real scene of the exhibition space.

Keywords: Spatial Augmented Reality, exhibition, Digital Museum, atmosphere

1. Introduction

Recently, the requests of visitors to the museum have become diversified. They tend to demand the information that they can't acquire by only watching the objects. Then, we constructed the exhibition system that utilized the spatial augmented reality technology to express the information including the atmosphere in the museum.

This exhibition system can express the atmosphere of the exhibit by mixing the virtual image with the real scene of the exhibition space. In the demonstration, this system was applied to exhibit the replica of the golden mask which is one of the typical relics in Sican culture [1].

2. Spatial AR Exhibition System

Spatial augmented reality display system named AR View was developed [2]. We attempt to apply this system to the exhibition. This system is composed of the semi-transparent mirror film, the DLP image projector, LED light projector, and the floor screen. The principle of representing the AR scene is as follows. The computer graphics image is projected from the DLP projector to the floor screen. Then, the user can see the CG image reflected with the semi-transparent mirror placed at an angle of 45 degrees to the floor. Since this semi-mirror film has highly transmissivity, the users can see the real object placed behind the semi-mirror film together with the CG image, when it is illuminated by the light projector.



Figure1: Spatial AR exhibition system

3. Exhibition of the Golden Mask

The golden mask of Sican culture was excavated from the east tomb of Huaca Loro. We express the atmosphere that represents the situation of excavation site.

In the first scene, the user sees the picture of the current Huaca Loro. And this picture changed to the CG image of the ancient times.



Figure2: Scene of Huaca Loro

In the next scene, the user sees the situation of the inside of east tomb. Finally, the virtual mask represented with the CG image disappears and the user can see the real mask.

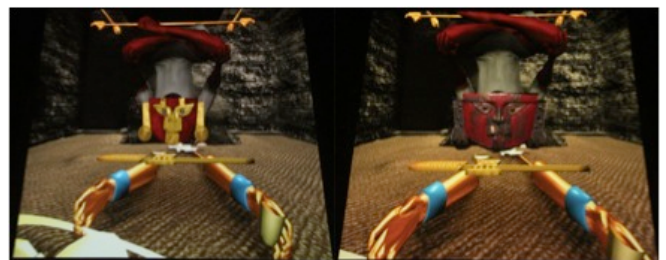


Figure3: Scene of the inside of east tomb

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