Research on Intangible Cultural Heritage Protection Based on Augmented Reality Technology

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Abstract. With the development and progress of human beings, many forms of civilization are constantly innovating and evolving in their development. The people of our country should pay attention, use augmented reality technology, network computer equipment and scientific technology to simulate the physical objects and through superposition, the corresponding data information content generated in the virtual world to Show it in a way close to reality, so that people can perceive things in virtual reality and get a sensory experience that transcends reality.

Keywords: Augmented Reality, Intangible Cultural Heritage, Protection, network computer equipment and scientific technology

1. Introduction

From ancient times to the present, with the gradual deepening of human cultural heritage, the continuous innovation and improvement of human pursuit of material and artistic exploration, only through the spread of the fire of human civilization has the innovation and expansion of human culture. So at this stage, we can easily see from the historical events that human activities and social development and the improvement of civilization are mutually reinforcing. Since China's cultural history is relatively long, with 5000 years of civilization inheritance, it has numerous intangible cultural heritages in development. This is also the pursuit and practice of the ancient Chinese people for beauty.

2. Augmented reality technology overview

Augmented reality technology, also known as augmented reality technology, or AR for short. The use of this technology connects the information content, it is possible to connect things in the real world that are difficult to obtain actual experience with entities. After the real world and the virtual world
overlap, the virtual and real things can exist in the same In space. When applying augmented reality technology, not only can the real world content be displayed effectively, but also the content of the virtual world can be displayed. After the two different content are superimposed, they can complement each other and have the original lack. The content is effectively supplemented[1].

Using augmented reality technology to simulate things in reality and transforming things in reality can change people's perception of the objective world. First, the use of augmented reality technology simplifies people's cognition and understanding of the objective world. Through virtual creation, not only the liberation of people's imagination is realized, but also people's imagination can be better played and abstraction can be content of the image is specific, breaking through the limitations of time, space and perspective and achieving the autonomy of the viewing angle. In addition, using augmented reality technology, you can abandon the traditional keyboard, mouse and touch and other traditional input methods, through human-computer interaction, to achieve a natural way of interaction. Second, the use of augmented reality technology has realized the extension of human subjective initiative. When using this technology, human perception is used as the main basis to rationally reform the formed "things", but it does not Carrying out the transformation is only to transform people's subjective consciousness into virtual reality transformation. Applying it in actual production can improve people's work level. Third, in the process of using this technology, it brings not only the way of showing things and the visual experience brought to people, but also the content and ways of entertainment. Through the application of network and computer technology, it breaks the time and The restriction of space on things in the real world establishes a virtual world that can be changed at will and is parallel to the real world of humans, so that the dimensions of the real world are no longer limited to the established space.

3. Current status of intangible cultural heritage protection

3.1. Social soil is not conducive to the protection of intangible cultural heritage

In the current social development, culture must be attached to a certain social foundation. Therefore, in the process of development, culture must progress and improve together with society in order to evolve a higher culture. For example, in traditional culture, cultures such as wedding culture, quyi culture, festival culture, archway culture, etc. gradually innovate and evolve with the development of society. With the gradual improvement of productive forces, changes and innovations in social structure are promoted, thus effectively To improve the diversity of culture, the difference in lifestyle in today's society will directly affect the diversity of current society. Due to the influence of industrialization on the traditional small peasant economy and the local society, it has gradually improved and innovated. For example, the traditional torii culture has lost the basis of clothes and gradually went to extinction. Since the Opium War of 1861, the export of science and technology by Western powers has had a serious impact on traditional Chinese culture. Part of the traditional culture was gradually abandoned and evolved in the face of new science and technology, which caused some of our traditional culture to be wiped out[2].

3.2. Intangible cultural heritage lacks a scientific marketing strategy

Intangible cultural heritage also needs to be recognized and valued by the public, because culture is inherited. If people don't ask about culture, then culture will lose its meaning. At present, its
profitability is declining, as shown in the following table 1[3].

| Year | 2012   | 2013   | 2014   | 2015   | 2016   |
|------|--------|--------|--------|--------|--------|
| ROE  | 13.83% | 18.19% | 16.90% | 13.06% | -2.1%  |
| ROA  | 6.69%  | 5.07%  | 1.46%  | 1.27%  | -1.27% |

### 4. Intangible cultural heritage protection based on augmented reality technology

#### 4.1. Augmented reality protection of intangible cultural heritage

The times are constantly changing and intangible cultural heritage is currently being over-developed, disappearing too quickly and changing too much. The surviving environment and inheritance chain are facing an endangered situation. Maintenance personnel need to apply augmented reality protection methods in all aspects of collection, storage, application and dissemination of non-legacy heritage[4]. The business logic of augmented reality technology is shown in the figure 1.

![Figure 1. Business logic of augmented reality technology](image)

#### 4.2. Focus on improving the skills of grassroots staff

The augmented reality protection of intangible cultural heritage has strong technical characteristics and the requirements for talents in information technology are increasing day by day. Therefore, to do a good job in protecting intangible cultural heritage, its staff must have certain technical expertise to create augmented reality technology means from the source. In the training of staff, it is necessary to combine the knowledge reserves of colleges, disciplines, social organizations and scientific research institutions, from the aspects of engineering technology and information technology and combine their own professional technology and basic knowledge to protect cultural heritage and conduct a rigorous assessment. And practice to form an elite team. Whether it is the manager of cultural work or the
actual operation staff, all need to have the ability of information operation and cultural protection.

4.3. Establishment of augmented reality technology intangible cultural heritage training center

For the protection of intangible cultural heritage, the cultivation of inheritors or groups of intangible cultural heritage is the core content. The way of inheriting the intangible cultural heritage is mainly the preaching of the inheritors by the predecessors, while using text and images as auxiliary[5]. The augmented reality intangible cultural heritage transmission method now constructed can not only use words and images, but also use three-dimensional animation and virtual image augmented reality technology to carry out non-legacy words and examples. If you want to complete the knowledge visualization and virtual reproduction of intangible cultural heritage, you need to use cash augmented reality technology to make the inheritance content more vivid and three-dimensional, which is helpful for learners to easily master and greatly improve the work efficiency of intangible cultural heritage protection[6].

5. Conclusion

In the long course of history, mankind's pursuit of culture and constant innovation in faith. With China's economic and social development and progress, the government should pay attention to the protection and guidance of intangible cultural heritage, combine intangible cultural heritage with modern marketing strategies and increase people's attention. The integration of modern life and intangible cultural heritage enhances the cultural atmosphere of modern life and enables culture to be inherited and developed at present.

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