

Application and Significance of Virtual Tourism

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Keywords: Virtual Reality Technology; Virtual Tourism; Application and Significance

Abstract: Virtual tourism creates more unlimited possibilities for tourism. Virtual tourism reduces environmental damage and provides people with unlimited convenience. At present, virtual tourism has become another form of traditional tourism, and the combination of the two will certainly make tourism more vigorous. This paper mainly explores the application and significance of virtual simulation reality technology in tourism, and takes digital Dunhuang as an example to explore the existing problems and improvement measures of virtual simulation reality technology.

1. Overview of Virtual Reality Technology

Virtual Reality (VR), Virtual simulation Reality integrates use of computer image system, multimedia system, control system and other facilities to generate interactive three-dimensional environment to provide a sense of immersion interactive technology. A computer-generated interactive three-dimensional environment becomes a virtual environment. Virtual simulation technology is a kind of computer simulation technology that can create and experience virtual world. It uses computer generated simulation environment, in the use of a variety of devices, users really immersed in the environment.

Virtual reality can be used to track your head, and when your head moves at an Angle, the screen changes as your head moves. The body can be perceived, you can look down at your hands and feet, and you can accurately perceive when someone is approaching you. It's very interactive, like having a table in front of you, and you can put whatever you want on it, and when you turn around or let go, it's still there. It can also communicate with multiple people in the virtual world.

Virtual reality can be used in many ways, not just for helmets or 3D glasses, but also for input devices. Such as body tracking, camera image, gesture detection and other applications. Virtual simulation reality technology is a virtual environment of vision, hearing and touch generated by computer, enabling users to be immersed in it with a strong sense of immersion and interaction.

2. Overview of Virtual Tourism

Virtual tourism refers to the use of virtual simulation reality technology on the basis of real scenes, and the construction of simulation scenes through multimedia technology, so that users can visit the scenery around the world without leaving their homes. The image of virtual simulation reality technology is vivid, meticulous and vivid, so that people have a sense of immersion and experience.

Virtual tourism is not to replace the traditional tourism, but a supplement to the traditional tourism. It can be said that it is a powerful means to expand the market, increase profits and personalities, which can add a little market to the tourism industry and fill the tourism market. Through the advantages of their own technology, and the combination of traditional tourism, to assist the traditional tourism. To develop tourism better. The emergence of virtual tourism will not affect the pattern of traditional tourism, but will supplement the missing part of traditional tourism, forming a more effective and personalized tourism market structure. Virtual tourism has a unique and novel way to retain the traditional Chinese art and culture, and to use virtual simulation technology to permanently preserve China's artistic treasures. It can also better promote the traditional tourism, make the development of tourism more hierarchical and more reasonable, so as

to promote the better development of tourism.

Internet users have tried virtual tourism, most of whom are young and middle-aged, and users feel that virtual tourism can not replace tourism, but can only provide objective virtual scenes for people to watch and enjoy the scenery. It does not provide a strong sense of interaction and immersion. The realization of virtual tourism is a supplement to traditional tourism and has little influence on traditional tourism. The combination of virtual tourism and traditional tourism can create more personalized tourism. A netizen tried virtual travel. He often goes to the website to see the virtual scenic spots, in order to better realize the traditional tourism, which scenic spots look good to go to the field. Virtual tourism can provide scenery photos and tourism information for users' reference, but traditional tourism makes people more experienced, the mood during the journey, virtual tourism is not possible.

Experts predict that virtual tourism will soon become an important supplement to traditional tourism. Tourists can inquire the tourist information at home through the virtual tour in advance, such as the design of the tour route, local customs, culture and history, etc., so as to strengthen the understanding of the scenic spots, which is of great help to the field tour. For today's young people, this kind of travel may be more refreshing than traditional tourism, and virtual tourism will become a new trend.

3. Significance of Virtual Tourism

3.1 Better Protection of Tourism Cultural Heritage

It has become a feasible and effective method to realize the digital display and protection of cultural heritage through virtual simulation technology. Virtual tourism can not only build a tourist attraction for tourists to enjoy, but also do no damage to the tourist attraction. It can also restore the real cultural heritage and deepen the impression of tourists on the historical culture of the tourist attraction. On the other hand, virtual tourism can balance the contradiction between resource development and ecological environment and realize the sustainable development of tourism cultural heritage. Such as the number Dunhuang, through. Virtual simulation of reality technology, restoration of cave murals, permanent preservation of intangible cultural heritage, creating opportunities for storage and online preservation of other endangered ancient sites.

3.2 Reasonable Planning and Development of Tourist Attractions

With the rapid development of tourism, the major scenic spots have increased efforts to develop and plan tourist attractions. However, the planning of the scenic spot is not only related to various interests, but also related to the local residents and the natural environment. The development of tourist attractions not only needs a large amount of investment, but also relates to the utilization of environmental resources. It is very important to develop tourist scenic spots rationally and scientifically. If planning goes wrong in the early stages of development, it will not only cost a lot of money, but also damage the natural environment. Tourism management departments can use virtual tourism to carry out reasonable planning of tourist attractions. Through the use of virtual simulation reality technology to simulate the planning of flow scenic spot, after continuous modification, can greatly reduce the loss of scenic spot, to avoid the passage of funds.

3.3 Provide Convenience for Tourists

Virtual tourism can help tourists choose tourist destinations. Users can visit the beautiful scenery around the world without leaving home, and choose their favorite scenic spots to visit. This saves tourists a lot of time and energy. And can use the technology of virtual simulation reality to simulate their travel routes, travel plans.

Virtual tourism can satisfy any visitor to spend time at will, without leaving home, can experience the beautiful scenery of virtual simulation reality anytime and anywhere. Virtual tourism is not subject to tourists' time, income or the time available for entering scenic spots. Any user can participate in it, whether you are an old person, a child, or a disabled person. Virtual tourism really

gets rid of the world's oppression and constraints on people, and realizes a fully free experience mode.

3.4 Reduce Travel Costs

Tourism cost consists of the consumption cost of tourists and the operating cost of tourism enterprises. Traditional tourism is the act of traveling from one place to another. The most important thing to get from one place to another is transportation. And also for food, housing, travel, travel, shopping, entertainment and other activities. The displacement of traditional tourism requires a great deal of cost, in the process of food and accommodation, so that the cost of tourism greatly increased. In virtual tourism, tourists only need to spend a little time and part of money to enjoy the beauty of the world, compared with the traditional reasons to greatly reduce the cost of tourism, so that everyone can experience virtual tourism.

Tourism enterprises to develop virtual tourism can also greatly reduce the cost of enterprises. Tourism enterprises can use virtual simulation technology and multimedia to market tourism activities and products. This can not only reduce the cost of publicity, but also to establish a special publicity channel, and other attractions to greatly draw the line, personalized. The use of virtual simulation technology to create a travel route or travel product before the development of the scene can be changed in advance to avoid the waste of funds, greatly reducing the cost and risk of operation.

3.5 Intuitive Marketing Interaction

In real tourism, tourists need to arrive at the destination in person, to visit the tourist attractions. However, virtual tourism can provide intuitive and vivid sightseeing without leaving home. The long-distance and intransferable nature of traditional tourism is unpredictable. Tourists cannot predict whether emergencies will occur. On the other hand, some tourist attractions have very rich resources, but due to the low popularity, without the support of investors, the tourist attractions in the development stage cannot be well developed, so that they cannot attract the attention of tourists, and the tourist attractions cannot be developed. Traditional tourism marketing methods generally use brochures or image sets, but because these publicity materials are boring, generally can not attract any tourists, marketing effect is poor. Virtual tourism through virtual simulation technology to restore the tourist attractions, to bring tourists immersive experience, so that tourists immersive experience of tourism, stimulate the needs of tourists to travel, but also can make the popularity of the tourist attractions increased.

4. Application of Virtual Reality Technology in Virtual Tourism

4.1 Virtual Landscape Tour

Virtual tourism can simulate the tourist landscape, and the scene of the scenic spot can be simulated in the network, which is the core part of virtual tourism. With the help of navigation mode and guide system, tourists can follow the original route of the system to roam, or can choose their own route to visit. You can not only see the beautiful scenery, but also participate in the game through the gestures of the virtual characters. You can learn about the information of scenic spots, cultural environment, dining and shopping, so that tourists can have a sense of experience in the field. Create 3d panorama of multimedia tourism, record and archive the geographical environment of scenery and tourism facilities, facilitate the planning of tourists, and facilitate the protection and management of the environment by the government.

4.2 Tourism Information Planning

Virtual tourism can assist traditional tourism, and there is an inevitable connection between them. Before carrying out the example tour, we can simulate the reality tour and experience the tour in advance. The traffic routes, hotels and landmark buildings of tourist attractions are displayed with virtual simulation and reality technology, so that tourists can know relevant information of tourism and set up scenes in advance to attract potential tourists. Therefore, virtual tourism has become an

intelligent tool for traditional tourism and a channel for obtaining various tourism information. Virtual travel can be fully simulated. Tourists' food, accommodation, travel, shopping and entertainment provide users with a tourism plan, which greatly shortens the time and energy of tourists and enables them to better experience tourism.

4.3 Tourism E-Commerce

Virtual tour system of landscape and virtual tourism community can provide local specialty, for user for tourists to understand and buy local related products and services, can use 3 d panorama technology to promote tourism products, local specialty products, tourism, attract the tourists to visit selling souvenirs, can promote awareness of the scenic spot. Virtual e-commerce has become an important platform to generate income and reduce burdens for local residents.

4.4 Virtual Tourism Community Services

Tourism is not only about viewing the landscape, but also about emotional sustenance, emotional conversion and interpersonal communication, which are all indispensable parts of both real and virtual tourism. The virtual daughter community enables users to communicate effectively through the virtual platform, and they can have extensive communication around the topic of tourism through text, audio and video. On the one hand, I can pass the information about the scenic spots I know to everyone, and on the other hand, I can harvest the travel experience of others, from which I can obtain a variety of travel knowledge and prepare for the field trip.

5. Application of Virtual Analog Reality Technology -- Take Digital Dunhuang as an Example

5.1 The Significance of Dunhuang

"Digital Dunhuang" not only USES the means of modern digital technology shooting, but also USES advanced multimedia display technology to realize the permanent preservation of Dunhuang culture and art. Users can log on to "digital Dunhuang" through the network to browse high-resolution super-high-resolution images, and conduct intelligent correlation of video, image, audio, 3d data and document data.

Digital Dunhuang adopts high-precision digital camera to shoot large-format frescoes separately, and then USES computer technology to spline and restore, so as to achieve the goal of high-precision digitalization of large-format frescoes. Digital Dunhuang produces 3D images and USES multimedia technology to restore frescoes and caves in high resolution, allowing visitors to experience high-tech digital services. Digital Dunhuang technology allows the cave images to be stored in the corresponding database, allowing users to freely explore the mysteries of Dunhuang. This is an interactive tour experience that not only allows people to freely and intuitively experience the magnificent landscape of Dunhuang, but also effectively protects and relieves the environment and utilization rate of Dunhuang.

In recent years, digital Dunhuang has made a series of achievements. Once again, virtual simulation technology has restored precious art and culture in the restoration and protection of grottoes. After the opening of digital Dunhuang, great changes have taken place in the opening of Mogao Grottoes and the mode of tourism. Visitors need to make an online reservation to visit the Mogao grottoes in Dunhuang, and they need to watch two 20-minute movies in advance to learn about the art culture and background knowledge of the Mogao Grottoes in Dunhuang.

Understand the culture and art of the Mogao Grottoes in advance, greatly shorten the time of the tourists stranded Mogao Grottoes, reduces the visitors bring precious artistic potential threats, and through the virtual simulation technology brings different experience, effectively improve the Mogao Grottoes tourist reception number, and slows down the Mogao Grottoes of cultural relics of the contradiction between the protection and tourism development.

Digital Dunhuang saved the precious cultural relics of the Dunhuang grottoes and preserved the culture of Dunhuang forever. And established the Dunhuang database. These databases are used to make virtual caves for tourists to enjoy, which greatly reduces the pressure of tourists on caves and

protects China's precious art and culture.

5.2 Problems Existing in Dunhuang

5.2.1. It is difficult to Confirm Infringement

The download and preservation of network information resources is the most important means and means of digital works, and the same is true for the dissemination of digital Dunhuang. Digital Dunhuang works are the carrier of network, which USES digital technology to spread Dunhuang works and present the original information through computer multimedia. We cannot determine whether copying and pasting Dunhuang art represents infringement. In the United States, you can copy and paste copyrighted works on the Internet. Would constitute a tort. In European countries, however, it is judged on the basis of permanence. Copying is only temporary. as long as there is no permanent copy, downloading does not constitute infringement. As an intangible cultural heritage, digital Dunhuang is permanently preserved by virtual simulation technology for visitors to visit. If it is copied and pasted down, it is difficult to judge whether it is infringing.

5.2.2. It Is Difficult to Protect the Right of Information Dissemination and Reproduction on the Internet

Digital Dunhuang mainly provides services to disseminate the artistic treasures of digital Dunhuang through Internet Tours. Digital Dunhuang to the public is the first digital Dunhuang works with digital technology into digital works, or directly use the computer to create digital works, and then upload the works to the Internet. Dunhuang document transmission is actually a kind of reproduction, which realizes the infinite transmission of works. The purpose of digital Dunhuang copyright research is to encourage the creation of digital Dunhuang to promote social development and the needs of the majority of Dunhuang enthusiasts. The rapid development of information technology has brought great convenience to human civilization. In this environment, how to ensure the legitimate rights and interests of knowledge creators in the dissemination of digital Dunhuang, to solve the copyright problems encountered in the construction and service of digital Dunhuang, has become an urgent problem for us to solve.

5.2.3. Long-Term Protection Difficulty

Digital Dunhuang is a digital work completed by computer multimedia and other facilities. The reproduction of digital Dunhuang works requires tool support, software and hardware operation platform. Digital Dunhuang covers a wide range of images, text, video and other physical caves. They exist both singly and collectively. Digital Dunhuang works information has a certain risk, it is easy to be infringement, but also to face computer virus invasion, information loss, destruction and other problems. Digital Dunhuang works. The development and protection of digital Dunhuang still lacks practical experience, and there are many places to be explored together continuously. There are not many relevant protection measures to be taken in time, making it difficult to ensure the sustainable development and long-term protection of digital resources in Dunhuang.

5.3 Digital Dunhuang Measures Taken

5.3.1. Improvement of New Technology for Copyright of Digital Dunhuang Works

To ensure the information of digital Dunhuang, digital Dunhuang should be protected by technical convenience. Necessary technical measures are an important condition for the legal supplement to the legal rights and interests of digital Dunhuang information. The following technical methods can be used as conditions for rights protection.

Digital watermarking is the identification of a product by adding text, serial Numbers and images to the image. Digital watermarking can be applied to Dunhuang works to protect copyright.

Digital encryption is like setting an account password for people who want to download the authentication, the verification can be downloaded, failure can not download, equivalent to the Dunhuang works have an encryption effect, want to download the "key" to open.

Digital signature is to use computer technology to sign special symbols or fonts on Dunhuang

works, which can be very good identification and preservation of Dunhuang works, even through the computer to save Dunhuang works, there are still special signs of Dunhuang works, in order to protect their rights.

5.3.2. Establish the Copyright Management System for Digital Education Works

In today's society, no matter music, image, text or video can be easily copied and saved under Internet technology. Digital works have no limitations and can be transmitted quickly. This brings challenges and threats to the copyright of Dunhuang works, so it is necessary to establish the copyright management system of digital Dunhuang works. Digital rights management technology can prevent and control the function of arbitrary use of the behavior, thus has the behavior of monitoring. We should actively use digital rights management to maintain the copyright of digital Dunhuang.

5.3.3. Use the Copyright Management System of Digital Education Works

The application of digital rights management to the construction of digital Dunhuang project will certainly bring positive impact to the digital Dunhuang copyright issue. First of all, the digital Dunhuang information base should be established to organize the information collection of digital Dunhuang works.

When organizing, it is necessary to distribute the works reasonably, separate the works of some specific objects, make clear the purpose of the construction of digital Dunhuang works, conduct organized and planned collective management, and constantly improve the management system.

Acknowledgements

This work was supported by National College Students Innovation and Entrepreneurship Training Program Project

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