

Under the New Media Environment 3D Holographic Image Analysis of Artistic Language

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Abstract: *Under the new media environment, different art categories use artistic language is becoming more and more science and technology of which 3D hologram became the representative of the high-tech, this paper introduces the new media environment 3D holographic image connotation of artistic language and the specific application and the problems put forward opinions and Suggestions so as to provide reference for the general 3D enthusiasts.*

Keywords: The new media environment, 3D hologram artistic language, The stage art, The museum

1. Introduction

The popularity of the Internet has changed people's life, the traditional media forms have become in today's wireless technology and mobile technology is given priority to the new media environment. In new media environment, a new artistic language "3D holographic images" are introducing media era, at the same time, this new technology which based on network and large data is also a subtle impact on ordinary people's life.

Under the new media environment of 3D holographic image art language

1.1 The New Media Environment

New media is compared with the traditional media, traditional media in general can be divided into four radio, television, newspapers, outdoor, new media is to point to in emerging technology system under the support of media forms, such as the Internet, digital film, television, radio, newspapers, magazines; Mobile TV, desktop Windows, touch media and so on. New media is also known as "the fifth media".

1.2 The Connotation of Artistic Language

Art language is also called "vocabulary", refers to the different forms of art to convey aesthetic taste, shaping tools used in the artistic image, material and so on. Artistic language is constitute the basic elements of art, works of art must be able to show with the help of artistic language, to be appreciated. There is no art without artistic language.

Different art categories in the process of its historical development formed with their respective characteristics of artistic language, such as the art of film language images and montage; The art of painting language is a line, color, shape; Construction of artistic language is the space composition, texture, shape, decoration and so on. Therefore, the so-called "3D hologram under the new media environment art language" means the digital film, television, radio, newspapers, magazines; Mobile TV, desktop Windows, touch media and other non-traditional media used to convey

aesthetic, artistic image from 3D holographic imaging techniques.

1.3 3D hologram

The person's eye is stereo vision rather than the plane, the reason is that people's eyes are used to depending on the horizontally, and the Angle of the two eyes see things is not completely consistent, but slightly different. The human eye vision, there are about five centimeters of distance between two eyes, vision of image projection to the optic nerve center, side by side through the fusion of the optic nerve reflex and visual psychological reaction creates a three-dimensional visual perception.

3D hologram technology briefly speaking is record again after the stereoscopic image process. Recording process is mainly on the principle of "interference" waves recorded information about objects. In the traditional sense of the stereo image in the two-dimensional plane mainly through the implementation of the composition and color changes in the human eyes illusion and stereo images. But the 3D object hologram technology will record all information (shape, dimensions, brightness, contrast, etc.) are included, the purpose is to make repeat after objects no matter from which Angle to observe all the watch real effect can be achieved, as if really object in general. With the development of technology, the current record is not limited to the specific physical, but including physical and virtual three-dimensional digital images can be implemented. Record after the completion of the need to repeat, repeat basis is "diffraction" principle, namely the object light information. Until 2001 the technology breakthrough, its completely rely on technology innovation of holographic film, with the transparent thin film to stereo images. At this stage of the new holographic film with very fine lines, these filaments can realize the interaction between human fingers and hologram.

3D hologram technology is the most efficiency in holographic projection, is saying about the phantom imaging, can be regarded as a artificial mirage, that is, at present the most popular glasses-free 3D. Its producing method is through a number of projection equipment will be made of real images or prior effect of 3D digital graphics is symmetrical and uniform projection on the holographic film,

again through the light refraction and diffraction again for stereo image, make the suspended in the air in the real three-dimensional images presented in front of the Viewer.

2. Application

2.1 The 3D Holographic Image Art Stage

Since 2010, the CCTV Spring Festival gala began using 3D hologram innovation stage art effect, stage art used in 3D hologram can make the content of the stage art more rich, the theme is more widely, not subject to the limitations of venue decoration materials or stage can foil stage atmosphere more efficiently, more novel and kind of stage art to the audience. With the development of 3D technology, to the 2015 Spring Festival gala, the mascot "Yang Yang", let the art of high-tech special language gives the audience more surprises.

As first in the calendar year Spring Festival gala cartoon host Yang Yang is not only lovely mascots, and undertake the task of the virtual host. Yang Yang in the virtual digital "studio" alternative presided over a reality show, make the traditional Spring Festival gala and adds a more modern form of floor show. This hologram pattern can be divided into "virtual scene and the virtual host" and "real scene and the virtual host" two kinds, the virtual host in both the virtual and real the studio can move freely, just like real appear in front of an audience.

With virtual characters as the host of creative first appeared in the UK, is the new media companies PA annanova, followed by Japan's Yuki, Vivian in the United States, South Korea's Lusua, etc. In 2004 the first Chinese virtual host appeared on the television and weekly, named "dragon", then the singer Alana.

Many virtual host, including Yang Yang, condensed the large number of high-tech elements, of which 3D virtual engine, motion capture system, high-performance computer, camera tracking is the most commonly used: 3D virtual engines at present more popular species including Unity 3D, Unigine, CryENGINE, UDK and Vizrt, the latter is often used in radio and television production. The role of the motion capture system lies in the acquisition of the target object real-time action, in order to achieve a virtual character natural body movement. In recent years, the commonly used motion-capture including optical capture technology and inertia capture technology. Optical technology, for the moment, the real-time motion capture is not very perfect. While inertia motion capture using sensor technology image data transmission through wireless transmission means, the requirements and no distance limit of the space, in the current application performance and the studio stage more widely. High performance computer is mainly used for image rendering, in order to make the virtual characters action more fluent and coherent, the real action more similar. Camera tracking technology is mainly to "dig like" overlap, so that the "virtual scene and the virtual host" or "real scene and the virtual host" mode. The current common camera tracking include tracking, image recognition, machine tracks, marked points location without orbit tracking four ways to choose from.

2.2 Micro Animation

Is the world's first 3D animation "LuxoJr" in 1987, pixar, which became pixar symbol "lights" to jump. Along with the network technology and the rise of big data, increasingly lower the threshold of the 3D animation, with production softwares 3Dmax, MAYA techniques for a typical 3D animation technology become popular general technology. Traditional "animation short film after entering the new media era is trend to redefine and gives a new name - micro animation, this is the new media environment 3D hologram new forces of art language, is also a social and economic development to a new stage of the inevitable, no matter China and foreign countries.

In 2002 South Korea EBS TV and RG the creation of 3D animation company animation short "unlucky bear" was an instant hit, quickly catch on around the world. The success of the journal unlucky bear fo, on the one hand, due to its content and ordinary people living very close, and there is no lack of among them the most education significance, in the audience laugh at the same time also can get enlightenment and memorable. This sketch will, on the other hand, 3D imaging techniques play properly, fully shows the 3D hologram in animation production advantages, the background is very real, role image creation is exquisite, colour and brightness suitable soft. The sketch on the premise of keeping the overall realism and embodies the fairy tale elements, to bring the audience to very friendly and extremely interesting audio-visual enjoyment. Not only that, the unlucky bear huge success, winning one of the key lies in its short hard working, not more than five minutes per episode, this type of animation production mode production cost is greatly reduced, at the same time also let dimension compression effectively, each set of data control under 7 m. Therefore, the unlucky bear in the spread of basic medium without limit, in the new media environment is all bad, just with the present people tend to use spare time for entertainment habits. To a certain extent, the unlucky bear 3D hologram can be regarded as the new media environment art language in business case one of the most successful model.

Said to the spread of micro animation must be mentioned is the "micro age", as the wireless network, mobile network in this era of expansion, with the popularity of the device, smart phones and other new media, digital mobile communications equipment has become the mainstream of the new media environment medium, the medium of update contributed to change the way of communication, new transmission content arises at the historic moment, micro era thus born. Micro era originated in weibo, its popularization is the content of the cultural transmission, popular and widely, and cultural information, which is closely linked with the everyday life to short and hard working as the main characteristics of a large number of major elements in the contemporary social environment, full of era characteristics, to promote the rapid changes in the concept of mass culture, micro animation and micro movie is something new in the new media environment. And micro animation than the micro film has more convenient and popular features, the main reason lies in the animation production way is more convenient, spread more flexible, the data quantity is

smaller, and the choice of media is wider and better compatibility. Is given priority to with production softwares 3Dmax the popularity of animation techniques for many animators and lover's creation provides convenient conditions, at the same time, the animation is one of the advantages of micro movies is the only use the computer as a production tool, do not need real actors, don't have to travel to the scene view, and micro animated production and propagation are extremely flexible and wide range of advantages.

Support micro animation rapid rise of numerous factors, sum up basically has the following several aspects: first is the national policy support, in recent years, countries for promoting cultural undertakings to make the whole society to the industry's attention and investment more eagerly than ever before. Followed by the rapid development of Internet technology and their ancillary products engender new media environment, and grow up together with the new generation of production and consumer groups gradually become the backbone of society, the survival of these people are used to the new media environment and the new media is ready to accept. The third is the virtual world of unbridled features make personalized expression trend trend, people are more eager to reveal personal will, in this environment reflect personal value. The fourth is the animation features and development trend of the new media environment in conjunction with consistency, under the new media environment of micro animation production and spread more optional, unlimited Freedom.

2.3 Museum in 3D hologram

In 2015, shenyang museum has introduced the new 3D holographic imaging techniques, the stereo image of centre, part of the collection as new exhibition content presented in front of the visitor. The current exhibition has a courtyard sculpture exhibition of hidden in the qing dynasty palace, mainly for qing dynasty palace office created high-quality goods production, not only is the concentrated reflection of the qing dynasty technology, is also a true portraiture of the qing dynasty court life. Among a total of 99 pieces of cultural relics exhibition, exhibition hall is conical vitreous, middle the picture of the present cultural relic is 360 degrees, this is the museum introduces the holographic projection technology, with the interference and diffraction technology to record and reproduce cultural relics of the three-dimensional graphics, produce three-dimensional air visions of cultural relics.

And using 3D holographic image at the museum of cultural relics in shenyang nai MeiHengHai was similar and the Netherlands. Walker hoff museum, the museum with "zero" creative technology fusion xyZ three-dimensional hologram to Catherine. Cliff duchess "time" the book of some of the content of books in the form of conversion to 3D. Catherine duchess of cliff of the book of time is the very famous prayer books, including the north of 15 th-century Dutch mini books, now can see 100 pages of the book collection.

3. Conclusion

3D hologram in the application of the museum can not only make a large number of precious cultural relics and more visitors to the long distance contact, displaying physical and avoids the risk of damage or loss that may occur, at the same time, with the development of 3D holographic image constantly improve, and exhibits the visitors in the near future can achieve three-dimensional image of interaction, which will make people for these precious relics contains historical value has a more in-depth understanding and value.

3D hologram in the new media environment art language will lead to various forms of art in the field of new, combination of traditional art forms and high-tech can make more close the benefit of the influence of the art in the general population, and to a certain extent, increased people's engagement and re-creation of desire, for active traditional art has a very active role in life.

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