

Research on the development of VR technology in the field of Film and Television Animation

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Abstract: VR technology, with its distinctive features and convenient service, is more and more in-depth, and has entered into our work and life more and more widely. At present, VR technology has been widely used in all aspects of design, simulation and development. Video animation is the most widely used area of VR technology. This paper briefly introduces the features of VR technology, and analyzes the development trend of VR technology in the field of film and Television animation.

VR technology is short for virtual reality technology. VR Technology has many characteristics such as multi-perception, interactivity, immersion and so on. VR is a comprehensive technology that encompasses computer graphics, simulation, multimedia, and more. VR technology can let people in smell, hearing, touch and other aspects of the experience of human sensory functions by simulating the reality.

At present, VR technology has been widely used in many fields of our life and work. For example, we are often exposed to immersive 3D games, interior design, panoramic images and so on. Sure, a lot of people get their first taste of VR primarily through games and other channels, but there's a lot more to VR than that.

The application of VR technology is earlier in the field of film and Television animation. However, on the whole, there are still some deficiencies in the application of VR technology in China's film and Television Animation Industry.

1. The current situation of VR technology in the field of film and Television animation

Since its birth, VR technology has formed an indissoluble bond with film and Television animation. The earliest VR technology was applied in the field of film and Television animation. VR Technology came into China relatively late, but it has made considerable progress in many aspects through the development of these years. VR is gradually becoming systematized in both the application field and the system construction, etc. But on the whole, compared with foreign counterparts, there is still a big gap in our VR Technology.

VR is a systematic technology, which needs computer graphics technology, communication technology, sensor technology, simulation technology and other technologies as the basic support. China still has some problems in the construction of these basic disciplines, which results in our level of VR technology being still at a relatively low level. Some of the more complex details of VR have to rely on foreign technology development teams.

On the whole, our VR technology has been widely used in the field of film and television animation, but the overall level is not high. In particular, the domestic film and television animation industry has not yet had a clear understanding of the development of VR Technology. Many in the industry are still looking at VR applications from the old point of view and old-fashioned thinking, and some believe that VR technology is only a supplementary development technology, playing a very limited role in the creation of animation. This view is very wrong. In recent years, the foreign film and television animation works continue to encroach on the domestic market in an irresistible trend. Objectively speaking, these film and television animation works well, rich in content, and can meet the cultural needs of different groups. From the market feedback, the audience for these works is very recognized. The reason why foreign movie and TV animation works can achieve such an effect is largely related to their emphasis on the development and application of technology. At present, foreign countries have been vigorously promoting the holographic theater system based on VR technology, and the popularization of this system is only a matter of time. Once this system is used on a large scale, the audience's viewing experience will be improved. It is a pity that the development of VR application in the field of film and TV animation is slow in China, which is caused by the reasons of ideology and cognition, and also by the fact that the present situation of our technological development is not enough to support our development plan.

2. VR technology features

VR has distinct technical characteristics. Generally speaking, VR technology has the characteristics of interactivity, immersion, polymorphic perception, etc. Immersion is the most laudable feature of VR technology. This feature can place people in a real environment, make users become part of the surrounding environment, and be able to observe the details around them from the perspective of the first person. Interactivity means that the user can interact with the surrounding environment. When the user immerses in the environment created by VR, not only the user can perceive the environment, but also the environment can perceive people. The user can interact fully in the VR scene. Polymorphic perception is also a bright spot in VR technology. The reason why it is called polymorphic is that people can not only get rich visual experience, but also get all-round information such as touch, motion and hearing to give the audience an immersive sense of reality.

As far as technical features are concerned, VR should be at the top level of the whole technology, under which technologies such as communication, electronics and so on should be supported. At present, with the development of network technology and information technology, VR technology has been gradually moving towards the goal of networking.

3. Analysis on the Development Trend of VR Technology in Film and Television Animation

The application of VR technology in the field of film and Television animation is more and more extensive. The development trend of VR technology in the field of film and Television animation can be summarized as follows:

3.1 Big Data

Film and Television animation is the typical representative of graphic image processing technology. One of the characteristics of image processing is the huge amount of information, especially for high-definition video, it can not be described too much by massive data. At present, VR technology is only presented to the audience as a display and interactive technology, but with the gradual development and improvement of VR technology, big data has become the inevitable trend of future development. Driven by big data, VR can deliver more and more immersive

experiences for the viewer.

3.2 Networking

Networking technology is the mainstream trend of VR technology development. At present, the application of VR technology in the field of film and Television animation is generally limited to single-point devices, such as multi-D seats in cinemas. The realization of the interaction between different experiences has become the commanding point of the development of VR technology. Under the condition of network technology, VR network will connect the point to point, and build a different virtual, realistic environment. The experience is like being in a complete virtual world, driven by Network Technology. The viewer can even become a character in the movie animation, the development of the plot is completely dominated by the participants throughout.

3.3 Living

At present, the VR technology in the field of film and Television animation mainly uses the proprietary equipment as the platform. How will the device miniaturization, facilitation, VR technology into real life, close to life has become each VR equipment manufacturers battle field. VR glasses are just one example. Now, some TV and game manufacturers have put in a special team to develop the relevant equipment. In the near future, we have every reason to believe that living, convenient VR devices will enable us to more efficiently and quickly join the VR world.

3.4 Standardization

The application of VR technology in the field of film and Television animation is basically based on each manufacturer's own standards. With the wide application of VR, the standards of VR technology in the field of film and Television animation are going to be standardized. A direct reason for the slow development of the application of VR technology in the field of film and Television Animation in China is that we did not have detailed guidelines for the entire industry before, and there were no standard constraints on the technology. At present, some experts and scholars have put forward their own ideas and plans on this issue, and standardization will become the criterion for the future development of VR Technology Industry.

3.5 Scale

As mentioned earlier, the development and application of VR technology in the field of film and Television animation in China are mainly led by different companies. The advantage of this is that each manufacturer can develop the corresponding application according to its own technical strength and actual demand, but the disadvantage is also very obvious. There is no way to integrate the strengths of the industry to focus on overcoming major problems and bottlenecks. On the contrary, the development of VR technology in the field of film and Television animation is mainly concentrated in the hands of a few big companies, who have enough technology reserves and financial resources to expand the development of VR technology. China's enterprises have been unable to adapt to the development of the market and the need for technological breakthroughs. This is not only a problem that the film and Television Animation Industry itself can solve. It needs the joint efforts and cooperation between the relevant competent units and enterprises, so as to put forward the corresponding technical joint plan as soon as possible, and solve the rope that is restricting the development of the industry as a whole.

4. Conclusion

Film and Television animation is the main line of development in the field of social culture. The development of China's film and Television animation is more and more widely concerned by the society. VR has its own unique technical characteristics, and the combination of film animation and VR Technology has become the inevitable trend of the future development of film animation industry. In the foreseeable future, VR technology has great potential to combine with the application of movie and TV animation. We need to view this work with a high sense of responsibility and urgency, as much as possible, as soon as possible, and as well as possible to promote the healthy and orderly development of both.

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