

In-Depth Exploration of the Role Scheduling in VR Panoramic Animation of Scenario Narrative

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ABSTRACT. *The advancement and development of VR technology is the focus of attention at present, and the creation of VR panoramic animation has been moving forward, and has never stopped. The article uses VR panoramas to show the beauty of the space and meet the requirements of the audience's interactive experience. According to the different audiovisual languages and VR panorama presentation standards in the past, it deeply analyzes the character scheduling principles and guidance methods in the animation, optimizes the VR technical features and advantages, and creates the best audience interaction. The experience program provides an important basis for the later three-dimensional space and animation scenarios.*

KEYWORDS: *Scenario narrative, VR panoramic animation, Character scheduling*

1. Introduction

VR animation is a new type of animation launched in recent years. It is based on VR technology and expressions. Using methods and ideas that can distinguish traditional animation creation, based on the characteristics and advantages of VR technology, fully display VR panoramic space, introduce suitable interactive response guidance, highlight the immersive movie viewing effect of cartoons, and extend a new Animation theory system and creative skills.

2. VR Panoramic Animation Features

2.1 Multi-Angle Display of Video Content

Based on the analysis of the image presentation method, the animation can fully reflect the image content. Compared with traditional film and television animation, VR animation is more distinctive and its expression is most prominent. On the one hand, the “de-border” feature. For traditional video works, the creation and display are determined by the frame with the specified length and width ratio, or through the window. However, when viewing VR, no frame is found, and the video content is no longer bound by the border, extends the viewing angle [1]. On the other hand, “decentralized”. The center refers to the physical orientation of the video painting. From the perspective of physical space, there is a one-way opposite relationship between the traditional video screen and the audience. The fixation is strong, like the fixed relationship between the audience and the stage entrance. The central picture facing the tail is relatively fixed. The content of the screen will not change with the audience's thinking. The relationship between the VR image screen and the audience is surrounded and surrounded. The audience can choose the viewpoint to watch, completely breaking the fixed center screen. Based on the VR panoramic view, the plot setting, character adjustment, and lens switching are no longer restricted by the four borders, which maximizes the image expression space and the content of the image. The audience is in a spherical range similar to the real world. The audience is regarded as a referee, and they can watch things by themselves, the angle is not restricted, and the viewing space is further extended, and the viewpoint and angle are selected by themselves to obtain the required video news.

2.2 Enhance the Sense of Participation and Experience

VR interaction can be roughly divided into two categories: plot influence and non-plot influence. The former refers to the use of ingenious creative planning to provide different interactive functions for the audience to meet the changing and development needs of the storyline; the latter refers to the exclusion of story development,

which is limited to visual, auditory, tactile and other perceptual interactive functions. On the one hand, random and autonomous interaction. The realism and immersion in the panoramic view is very similar to the actual environment. Based on this, the audience will unconsciously make movie-watching actions, such as turning their heads and adjusting the line of sight, so as to find the best viewing angle. On the other hand, passive guided interaction. With the help of the trajectory of the characters and video elements on the screen, and sound reminders to guide the audience to make corresponding interactive behaviors, the interaction can further enhance the audience's sense of participation and experience, thus creating the best VR image immersion feeling. For VR panoramic animation, highlighting the creative characteristics of VR is an important factor for publishing excellent works.

2.3 Present a Mirror to the End

The experience that VR images bring to people is based on human instincts to watch things in real life, as is VR animation. When humans watch real-world things, there is no problem of switching lenses in traditional images, so for VR animations, one lens in the lens refers to a long lens. It should be paid special attention to the fact that a mirror and a mirror in the traditional image have similarities and differences at the same time. The most obvious difference is that the VR panoramic animation is implemented at a spherical angle from the beginning to the end, the feelings in the reality are very similar. In the end, the traditional way of showing a mirror image is done through delicate transition design. However, for VR panoramic animation, it cannot meet the visual points, making it difficult to reflect the transition effect. It is necessary to use scene scheduling to complete the design, especially induced by role scheduling The environment changes and the transition is finally completed [2].

3. Character Scheduling Requirements in VR Narrative Animation

3.1 Role Scheduling

Role scheduling generally refers to role movement and action arrangement. For traditional film and television creation, there are two common forms of role scheduling: plane scheduling and depth scheduling. The former is that the character and the camera's visual axis expand horizontally and vertically at a vertical angle, thereby presenting a two-dimensional plane; the latter is that the character follows the camera's visual axis to carry out longitudinal activities, and these two scheduling methods are generally merged during the shooting, and then generated Horizontal and vertical movement and vertical conversion. In general, role scheduling meets the requirements of lens and scene scheduling, achieves the purpose of accurate narrative and elaborating facts, and meets basic conditions.

3.2 Character Scheduling in VR Panoramic Animation

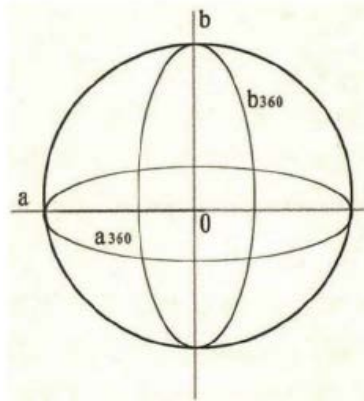
Regarding the creation of VR animations, character scheduling should not only satisfy the relevant conditions for character scheduling in the unified film and television language, but also attach great importance to the visual display of images in the horizontal and vertical range. Due to the constraints of the shooting angle, the traditional film and television role scheduling requirements are relatively simple, as long as it meets the performance objectives in the shooting range, the character can draw or stand still. However, based on the VR panoramic view, even if the character's performance is completed, the picture will not be drawn. Like a long shot, the actor will always perform and schedule. Excluding character scheduling, the relevant background elements in the picture always appear in the panoramic animation, thus highlighting the benefits of VR animation and technology compatibility.

Most VR animation works have a panoramic feature in the way of expression, but some of them do not pay attention to the relevant conditions, so that the work screen does not display content. At this angle, the content of the image that can be watched has not been displayed, so that empty mirrors are generated, causing visual empty windows [3]. Once this problem occurs, the audience will be disengaged from the script and bring a bad viewing experience. In order to fully show the characteristics of VR animation, create a panoramic perspective, and increase audience interaction, always follow the principle of VR animation character scheduling.

4. The Principle of Character Scheduling in VR Panoramic Animation Creation

4.1 Open the Panorama in Both Horizontal and Vertical Directions

Horizontal panoramic role scheduling generally refers to the horizontal direction, viewing the audience as the center point, the effective line of sight of the screen as a radius, and finally derived from the panoramic role scheduling, showing a horizontal ring-like performance space, as shown in Figure 1.



Point O represents the audience, a360 represents the horizontal 360-degree scheduling category. What needs to be remembered about horizontal scheduling is that the characters can be presented in multiple orientations without exceeding the scope of the three-dimensional space. The ultimate goal is to meet the visual landing point of the audience when they turn their heads and turn around, and can see the main body of the image. Vertical panoramic role scheduling is usually based on the vertical direction. The audience is regarded as the core. The effective visual distance of the screen is regarded as a radius. Eventually, the role scheduling does not exceed the scope of space. It is a performance category with a vertical orientation close to the ring. The purpose of vertical scheduling is to allow characters to be presented in multiple directions without exceeding the scope of the three-dimensional space. The ultimate goal is to meet the visual landing point of the audience when they raise their heads and lower their heads, and can see the main body of the image. In general, horizontal and vertical role scheduling can be applied together, and the front-to-back scheduling transition of the camera occurs.

4.2 Reasonable Movement in the Depth Direction, Creating a Difference in VR “Scene”

Strictly speaking, the concept of VR panoramic animation influenced by borders and scenes belongs to nothing. However, according to the long lens characteristics of VR in the end, you can use traditional film and television language forms and use role scheduling strategies to highlight the changes of scenes. Therefore, it is necessary to use the character's trajectory in the depth direction to feel the distance between the character and the audience, and then to produce a “scene” difference, fully highlighting the image appreciation and literary sense. In order to meet the interactive needs of VR animation in panoramic mode, a comprehensive analysis of direction changes should also be carried out when implementing deep scheduling. On the other hand, combined with the lens scheduling problem, we can explore from the following points [4].

On the one hand, the role scheduling when the camera is at rest. The role scheduling of the still camera can be roughly divided into two categories. First, the role of the scene is relatively monotonous, and the scene changes can be completed according to the scene scheduling. The animation presentation method is based on the panoramic mode. In order to ensure the coordination of the position of the scene, the front and back occlusion relationships at various angles need to be adjusted to make the composition full of emotions. In addition, pay attention to the visual conversion of the audience. Close-range, medium-range, and other “scene” changes and connections, to prevent the single rhythm situation. Secondly, when there are many characters in the scene, the effect will be more obvious. At this time, not only can the scene be attached to the contrast, but also the movement changes and position associations of other characters can be used to further plan the “scene” changes. No matter what kind of situation you should be cautious: in VR animation, the transition of the character's depth part in different visual fields shows a “scene” change in the opposite state.

On the other hand, the role scheduling of the lens in motion. Regarding the motion lens, we must not only analyze the problem of the still lens, but also consider that the scene changes of the lens at different angles show the opposite state, so the role scheduling of the motion lens takes the lead in thinking about the coordination

between the lens and the role.

No matter which of the above cases does not involve special types of conditions, we should pay attention to the role conversion in different fields of view to prevent the viewer from viewing the image scene too monotonously when changing angles, which affects the viewing effect. In general, character scheduling tries to allow viewers to experience the image conversion in the depth direction at any time, without any impact on the effect of the film. It not only effectively controls the rhythm of the film, but also anticipates the interactive experience of the audience.

4.3 Guiding the Audience to Breed Hidden Interactions

The most obvious feature of VR animation is interactive viewing, which is the original embodiment of VR. Particular attention is paid to the interaction of the content of the article with the panoramic angle conversion of the audience as the interactive object, and the audience turning their heads and adjusting their sights to watch themselves. From the perspective of the audience, the viewing experience exists to choose from the perspective of viewing. However, from the perspective of the creator, I hope that the audience can love the narrative plot and feel the effects of the work in depth. Take the storytelling VR animation works as an example, and interaction Based on smooth narrative. Therefore, it is necessary to guide the audience during the creative process. The guidance here is not just a hint, otherwise it will reduce the audience's sense of experience and fail to show the artistic characteristics of the work. In this regard, the audience should be instructed to breed hidden interactions, use the plots prepared in advance to adjust the angle, so that the audience can unconsciously engage in interactions and reap the best viewing experience. Not only meets the demand for viewing quality, but also improves the artistic level of the work and achieves the purpose of implicit interactive guidance [5].

5. Conclusion

In summary, the advantages of VR animation are relatively obvious, and it also constrains the progress of VR animation creation. In order to ensure the full display of animation realism and immersion, panorama should be used as a premise, with clever implicit guidance and the best text as foundation and support. In the practice process, combined with the situation requirements, according to the lens scheduling, scene element scheduling, and sound processing, it is used flexibly to reduce the scene error rate and create a high-quality experience for the audience.

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