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Research Article

The Use of Digital Media Art Using UI and Visual Sensing Image Technology

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Visual sensing image technology has narrowed the distance between people and art with the rapid development of digital media, but new art forms continue to appear. Therefore, this exploration is aimed at studying the application of visual image technology based on user interface (UI) and virtual reality (VR) technology in art. This exploration is to explore the development path of digital media art. The concept of UI is briefly discussed. Based on the current means of visual sensing technology, UI, visual sensing image technology, and digital media art are successfully combined after the close relationship between digital media and art is realized. The results show that VR technology, which combines UI and visual sensing technology, has good compatibility with digital media art and can further shorten the distance between digital media art and the public. Moreover, the promotion of this application can greatly increase users' experience of VR. In addition, most people hold a more positive attitude towards this combination. It reveals that it is essential to apply UI and visual sensing image technology to digital media art.

1. Introduction

The advent of the digital age has brought a revolutionary impact on many ideas and technologies, and the development of multimedia has amplified this impact. Before the 20th century, the synonym of the field of art was "above the top", which, like the field of philosophy, became an exclusive, expensive, and useless discipline field for the upper class. Only a few ordinary artists broke through this limitation and became the flame shining in their respective times. At the beginning of the 20th century, this situation was broken for the first time, and people had a new understanding of art. However, limited to the technological development of the times, art was still high in people's eyes and had not changed much [1]. Until the arrival of the 21st century, the popularization and development of computers and the Internet have enabled people to really talk face to face with art. The threshold of art is no longer so high. All computer users and people connected to the Internet can get close to the concept of art, and art really enters the streets. From the shape of ice cream to the layout of a city, the figure of art has never been so close to everyone's life. The powerful function of the computer makes multiple "new ideas" have a place to live. People talk freely about the art that has become grounded and recreate some traditional famous artworks at will, making themselves become one artist after another [2]. The barrier between art and the public no longer exists. The artistic ability that used to spend a lot of money and energy to learn and improve has become closer to the people with the intervention of computers. However, digital media art still has a distance from people that cannot be ignored. How to make people really contact and even place themselves between works of art is a problem that people need to consider [3].

Lemmens et al. believed that virtual reality (VR) has a stronger on-site feeling than the traditional media art displayed on the screen. The stimulating feelings of VR games and ordinary screen games on players were studied. The results show that VR's strong on-site feeling and more subjective game experience make players fully participate in the game, resulting in the same strong emotion as similar scenes in the real world [4]. Patrick used VR technology in geography courses of higher education and found that students' views on the combination of VR and geography courses are generally positive, which will lead to more investment in VR technology in subsequent geography courses [5]. Daniela et al. used VR technology as a bridge to contact people with mental disorders and found that the impact of patients with mental disorders on normal people depends on the ideas of the normal people involved. The anxiety level of normal people who contact patients with mental disorders through VR is significantly lower than that of normal people who do not contact patients with mental disorders through VR [6].

Kojic et al. studied the combination of dynamometer and VR rowing environment as a VR game, explored the possibility of user interface (UI) in VR, and visualized different indicators (such as speed and distance) used to quantify rowing behavior. The visualizations created have different locations (closer or farther from the player) and different degrees of complexity (more or less indicators are only displayed as numbers or game design) [7]. Safikhani et al. proposed a conceptual framework for innovative UI design in VR, focusing on the real interaction with the environment. Several successful VR games were investigated, focusing on their user interaction and UI systems. The first part of this framework was implemented in a tutorial room, and some common UI elements were designed, such as menu, inventory system, and task manager [8]. Luo and Dong discussed the application of digital media technology in environmental art design and pointed out that environmental art design is a more delicate and perceptual art than other design arts. In short, it is a combination of rationality and sensibility. Besides, it also needs a good sense of space. Digital media technology will make all this clearer and impressive. As an open platform, it can provide better postprocessing and better expression and realization of multiple ideas for environmental art design [9]. Based on the above research, UI and VR technologies can be effectively combined to give full play to their respective advantages. However, the current research is more about the application of visual optimization such as games. The application of UI and VR in digital media art also has broad prospects. Based on this, the research innovation is to study the application of UI-based visual sensing technology in digital media art. By discussing the projection transformation, the application principle of UI design in VR technology is analyzed and studied, and the corresponding digital media visual sensing simulation algorithm is established.

This exploration focuses on VR technology which combines UI (user interface) and visual sensing technology and studies the application of digital media art based on UI and visual sensing image technology, in order to better develop and expand the media art in the digital age. Moreover, UI technology and visual sensing technology are combined with digital media art, so that people can have zero distance contact with artistic works and realize the communication with the author's spiritual level, which brings people a better artistic experience.

2. Materials and Methods

2.1. Conceptual Analysis. The word UI appears with the development of the digital interface. It represents the layout of the media interface and the communication channel between man and machine. Visual processing is particularly crucial for such a functional UI. The visual experience is particularly crucial for most UI users and designers. Grasping the link of vision is to grasp the core part of the UI. UI is the combination of vision and digital media. Nowadays, the main systems of smartphones and the Internet attach great importance to the design of UI, so as to attract the target customer group and improve the user experience. For example, the design of the UI is particularly important for the current popular mobile games and online games. A good game should not only have rich game content and enough playing methods to attract players, but also have a good human-computer interaction interface, namely, UI. Many excellent games have their own unique UI, and this interface will be continuously optimized and adjusted with the development of the game. The traditional UI design mainly refers to the graphical UI, which optimizes the visual effect of the content displayed on the screen and ensures its excellent human-computer interaction process. This design combines various theoretical knowledge to pursue the harmonious unity of user, UI, and use environment [10]. Some successful digital media enterprises try their best to complete excellent UI design and improve the user experience based on ensuring their excellent hardware facilities. It is precisely because of the success of these enterprises that many similar enterprises are competing to imitate. In this case, the design of the UI has developed rapidly. Many excellent UI design departments have sprung up and become the compass for various digital media enterprises to succeed.

The design of UI is particularly crucial in the Internet age. For example, the establishment of a website depends on the design of the UI. First, a preliminary design of the website needs to be made based on art theory knowledge. A specific UI should be designed according to the target group of the website to meet the needs of users. For example, the target groups of some game websites are mainly young people or teenagers. The UI design should focus on the popular factors of the current era, and targeted design should be made according to the aesthetic characteristics of the times. In addition, it is essential to combine the user's possible environment as much as possible, such as the depressed office environment. At this time, pages with dynamic characteristics should be designed and some bright colors should be used to have a certain degree of visual impact on users, so as to reduce the pressure of their work. The UI design should select some stabler colors, such as gray and black, on dignified and heavy occasions. Besides, some functions used should be collected and integrated to meet the needs of the target group. Excellent UI design can leave a deep impression on users. This impression is particularly obvious when users see similar UI, and they will unconsciously compare the two, so that excellent UI can be favored by users. In addition, the harmony and consistency of the design process should also be paid attention to. For example, the main color matching of human clothes should not exceed three. Otherwise, it will cause visual fatigue and cannot attract customers. Of course, the color matching of web UI should be more flexible and changeable and is no longer limited to the matching of several colors. Furthermore, the cleanliness and beauty of the UI is also a key consideration in UI design. If the interface is messy and lacks of beauty, the user's image score will be sharply reduced. Thus, no matter how practical its function is, it is difficult to form a large-scale use phenomenon. Ensuring these contents, UI designers should constantly breakthrough themselves to carry out innovative design, so as to ensure their competitiveness [11, 12]. Figures 1 and 2 show the VR design based on UI.

People's exploration in the field of vision has been very advanced with the development of science and technology. Various visual sensing devices are widely used in environments that human beings cannot reach or are difficult to stay for a long time [13]. Figure 3 is the mainstream visual sensing technology at present.

The first is laser imaging, the laser beam is emitted by a mature laser generator, and then, the sensor senses the time when it reaches the target and returns to measure the distance. Hence, laser imaging technology can perceive the real three-dimensional world. Unlike digital photography, which can only perceive the two-dimensional world, laser imaging can obtain the data information set of the three-dimensional world, so as to accurately express the real contour of the object in the three-dimensional world. This method of obtaining three-dimensional point datasets has played a crucial role in various fields, such as historical archaeology and the three-dimensional design of architecture. At present, the processing methods of point datasets mainly include filtering, semantic extraction, and matching data. The second is dynamic visual sensing, which has a flexible dynamic imaging mode and extremely short response time. This makes the dynamic vision sensor better than other types of vision sensing technology in monitoring high-speed moving objects. Furthermore, the dynamic vision sensor has the characteristics of an output event stream, which makes it possible to filter the background, greatly reduce the consumption of transmission and processing, and make the original extremely complex processing process relatively simple and easy. Unlike the traditional camera, the dynamic vision sensor also has very high object capture accuracy. At present, dynamic vision sensing is widely used in 3D reconstruction, target recognition, and other fields [14]. Underwater acoustic imaging technology, also known as ocean acoustic detection imaging, can continuously and carefully observe a wide range of water areas. It is one of the main means of human exploration of ocean space. It mainly carries out corresponding imaging by observing the three-dimensional and two-dimensional data information of ocean space. At present, the more advanced method of underwater acoustic imaging is three-dimensional sonar imaging. This imaging method breaks through the limitation of traditional sonar imaging on space scale and can provide users with extremely detailed and rich image information [15, 16].

A series of technological changes caused by the changes of the times have always been the hotbed of a new art system, and digital media is no exception. In the digital age, all things that exist or do not exist can be displayed in front of people through corresponding data processing. The emergence of digital technology has caused great changes to the original forms of life and entertainment. Among them, the development of computer image art really allows people to see the whole universe without leaving home.

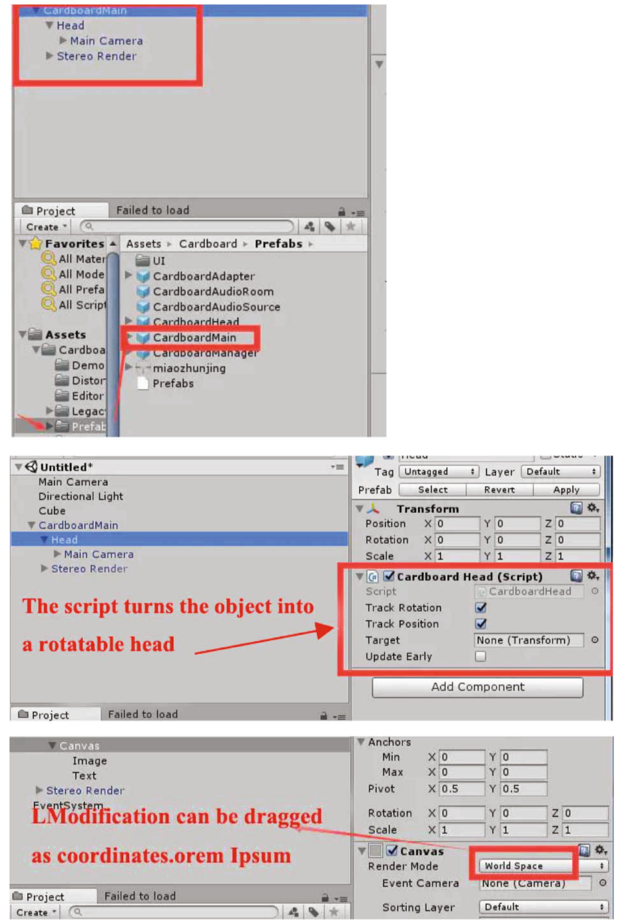

Figure 1: UI software interface.

The change of the art system brought by this technology is immeasurable. The new art system borrows the communication of multimedia, brings the high art into the extremely grounded field of mass entertainment and culture, and becomes a part of people's gossip after dinner. After some art isolated works that are originally shelved are processed by these technologies, an unknown number of "replicas" of the art will appear for people to play and enjoy. The difference between these copies and the original products only lies in the age of creation and the author of creation. Some replicas even surpass their original products in terms of their appearance or artistic expression, but they are still not recognized by people because of their identity. The flexibility and creativity of computer image art bring infinite possibilities to art. Countless amazing artworks appear through the combination of unrestrained imagination and creativity breaking the fixed thinking [17–19].

The high status of traditional art was really broken in the early 20th century. People began to recreate traditional

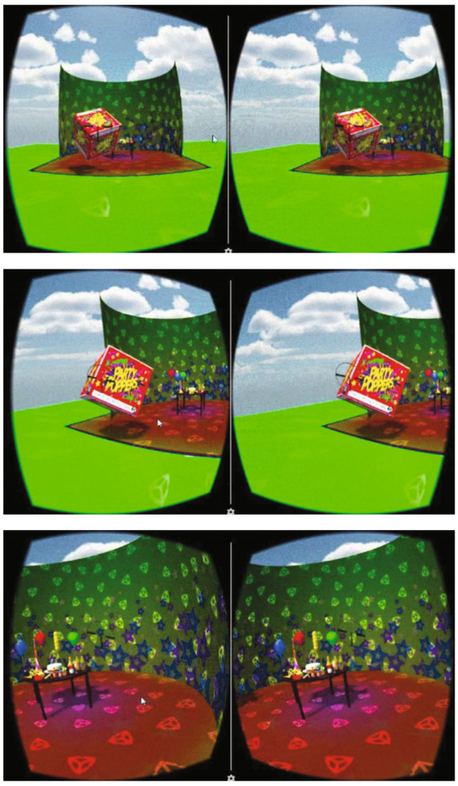

Figure 2: VR renderings.

works of art and then change the shape of art and its traditional concept. Until the 21st century, with the real arrival of the digital age, the emergence and development of computers pushed the change of traditional works of art to the peak. The editing ability of computers for images and videos becomes increasingly powerful with the continuous development of technology. Its high flexibility and freedom make people full of enthusiasm for the secondary creation of works of art. The combination of computer digital information and art begins. People now use image processing to integrate different images into the same image content in the form of copy and paste, so as to achieve the collision between the real world and the imaginary world. People complete image works of art through manual drawing before the emergence of this processing method to break through the false and reality. In fact, the emergence of such a work is accompanied by massive time and human investment. For example, the Mona Lisa image created by Leonardo da Vinci takes four years, while computer image processing is much more convenient and fast. Regarding contemporary popular illustration art, it only takes a few days for extremely excellent painters to create an excellent work through computer image painting, and it only takes more than a month at most. Moreover, computer images can be saved permanently through the Internet, while manually drawn art images need to be saved by various harsh means. There are great differences between the two exhibition venues. Unlike the fixed exhibition places of traditional works of art, computer images can appear anywhere without fear of theft or destruction. Excellent computer images even combine UI and visual sensing technology, so that people can interact with artworks and give viewers an immersive feeling [20, 21]. Figure 4 can clearly show the differences between traditional art works and computer images.

The popularization of art does not only refer to people's artistic literacy, but also lies in the integration of art and people's daily life. Real artists can create excellent works after countless times of hard training and professional guidance, and using computer technology, even ordinary passers-by who have never received any professional art training can create excellent works. Some famous works will form new works that make people laugh are in the hands of ordinary people without artistic and cultural skills after simple processing by computer. These expression packs are circulating on the Internet, making countless people have a new understanding of art.

2.2. The Overall Impact of UI and Visual Sensing Technology on Digital Media. With VR technology as an example, this technology needs the combination of UI, visual sensing technology, and digital media art, which is suitable for the research of this exploration. This combination of virtual and reality brings people a new physical and mental experience. The combination of UI and visual sensing technology blurs the boundary between reality and virtual, makes the experiencer linger and forget to return, and truly realizes the immersive physical and mental feeling. In the information age, the development of new technology is bound to bring a great impact on traditional ideas. From traditional art to digital media art, it is not difficult to find that digital media art has extremely strong tolerance. In addition to accommodating all kinds of new technologies, it also realizes the inclusion of traditional art. The pioneering technology in the development of digital media art is VR technology, which breaks the boundary between virtual and reality and is widely used in various fields. It has completed many impossible experience designs, such as using VR technology to realize jumping simulation and Knight duel, so that the experimenter can complete the role transformation to replace himself to experience this stimulation and impact. Contemporary digital media art should include traditional art, so it is more or less influenced by traditional art. The combination of reality and virtual is also growing because of this influence. The realization of VR technology requires the cooperation of various means, including visual sensors, computer image processing technology, and UI design. It is a combination of various technologies. Computer image processing technology constructs three-dimensional illusory images and improves them to make them closer to reality, so as to realize the simulation of vision, hearing, and even touch and realize the unique interactive and immersive experience of VR technology [22, 23].

Present VR technology has been relatively mature. It provides a large amount of information, which can satisfy some senses of the experimenter. Moreover, this satisfaction has the characteristics of long duration and obvious feeling [24]. Its unique immersive experience opens the door to a new world for the experimenter. The combination of virtual and reality makes it possible to break through the

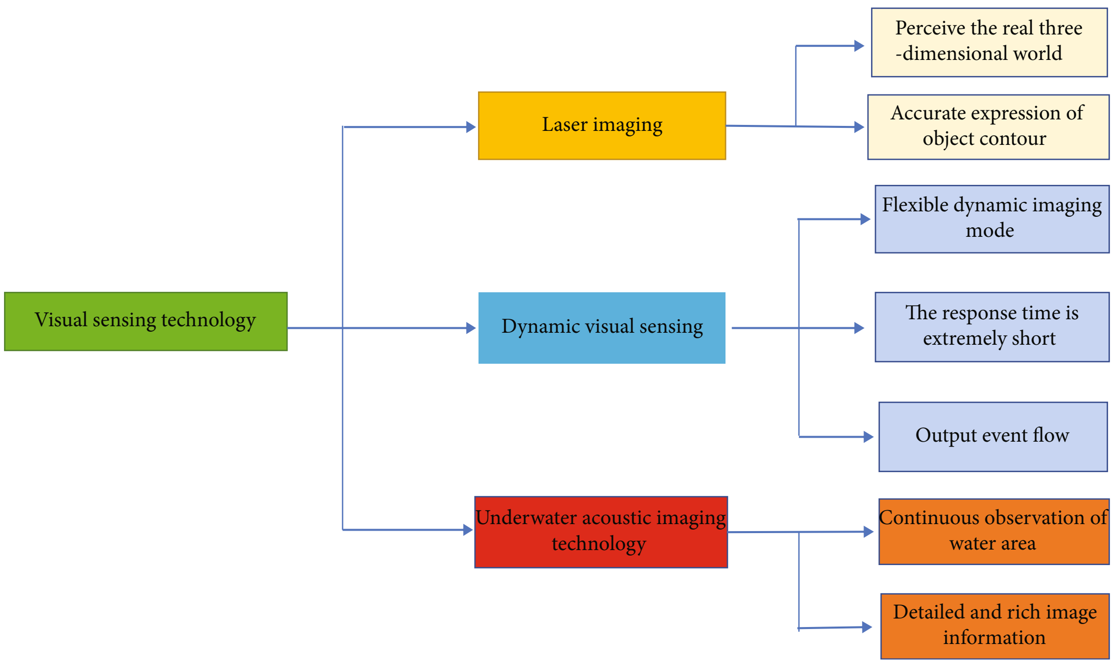

Figure 3: Mainstream visual sensing technology.

Figure 4: Differences between traditional art works and computer images.

constraints of the real world and briefly bring the experimenter's senses into the virtual world, making it more focused on the experience of the immediate world. In essence, one of the differences between digital media art combined with VR and traditional art is its interactivity and immersion. The experiencer is also regarded as a kind of data to realize the mutual integration of people and art, so as to convey more information. This provides a near-real operating environment for some operations that need to be practiced, so as to adapt to this operation as soon as possible. VR technology completes the establishment of the virtual world through the regulation of light. Before the emergence of this multiaspect fusion technology, people save images through cameras and other devices, but the images saved in this way lack sufficient information. The emergence of virtual technology has solved this problem well. Simple image storage has become the storage of a complete world. For viewers, the observed scene is completely the reproduction of the scene on the ground, not the mechanical image. With the further development of UI technology and visual sensing technology, VR technology will shine in the field of digital media art and bring people different artistic experiences [25].

At present, VR technology has three characteristics: immersion, interaction, and conception, so that people can occupy a dominant position in VR, as shown in Figure 5.

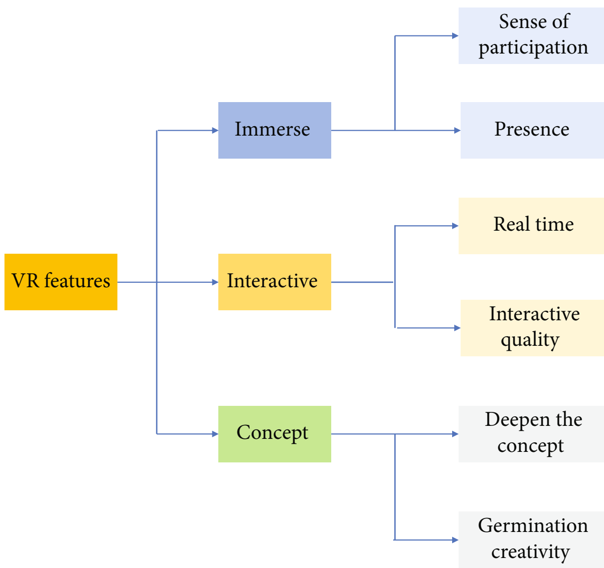

Figure 5: Characteristics of VR technology.

Figure 6 shows the general process of VR from image acquisition to generating a complete panorama.

The key point, namely, projection transformation, is discussed. The following is the traditional cylindrical orthographic projection algorithm. The algorithm projects multiple real images onto the same cylindrical surface and realizes the storage of cylindrical panorama. Figure 7 is a schematic diagram of cylindrical orthographic projection [26].

The linear equation of op can be expressed by parameter equation, as shown in Equation (1).

$$\begin{cases} u = t(x - w \setminus 2), \\ v = t(y - w \setminus 2), \\ w = t(-f). \end{cases} \quad (1)$$

u, v, and w are the projection parameter coordinates of point p on the cylindrical surface. f is the camera pixel focal length (cylindrical radius), and t is the parameter. Equation (2) is a cylindrical equation [27, 28].

$$u^2 + w^2 = f^2. \quad (2)$$

f is the camera pixel focal length (cylindrical radius), and u and w are cylindrical coordinates. Equation (3) can be obtained by combining Equations (1) and (2).

$$\begin{cases} t = \dfrac{f}{\sqrt{(x - w \setminus 2)^2 + f^2}}, \\ u = \dfrac{f(x - w \setminus 2)}{\sqrt{(x - w \setminus 2)^2 + f^2}}, \\ v = \dfrac{f(y - H \setminus 2)}{\sqrt{(x - w \setminus 2)^2 + f^2}}, \\ w = \dfrac{f^2}{\sqrt{(x - w \setminus 2)^2 + f^2}}. \end{cases} \quad (3)$$

u, v, and w are the projection parameter coordinates of point p on the cylindrical surface, and H is the height of the image I. The above parameter coordinates are converted into two-dimensional coordinates, as shown in Equations (4) and (5).

$$\begin{cases} x = f \cdot \arctan\,(u \setminus w) + f \cdot \theta, \\ y = v + H \setminus 2, \end{cases} \quad (4)$$

$$\theta = hfov \setminus 2 = \arctan\,(w \setminus 2f). \quad (5)$$

f is the camera pixel focal length (cylindrical radius); H is the height of image I; u, v, and w are the projection parameter coordinates of point p on the cylindrical surface. The projection equation of point p on the image I on the cylindrical panorama can be obtained from Equations (3)–(5), as shown in Equation (6).

$$\begin{cases} x = f \cdot \arctan\left(\dfrac{x - w \setminus 2}{f}\right) + f \cdot \arctan\left(\dfrac{w}{2f}\right), \\ y = \dfrac{f(y - H \setminus 2)}{\sqrt{(x - w \setminus 2)^2 + f^2}} + \dfrac{H}{2}. \end{cases} \quad (6)$$

f is the camera pixel focal length (cylindrical radius), H is the height of image I, and w is the projection parameter coordinate of point p on the cylindrical surface. Based on the above content, the classical somatosensory simulation algorithm of VR is given here, which includes high-pass acceleration channel, tilt coordination channel, and high-pass angular velocity channel.

Equation (7) displays the coordinate transformation link L_{IS} of the high-pass acceleration channel.

$$L_{IS} = \begin{bmatrix} (\cos\theta \cos\psi)(\sin\varphi \sin\theta \cos\psi - \cos\varphi \sin\psi)(\cos\varphi \sin\theta \cos\psi + \sin\varphi \sin\psi) \\ (\cos\theta \cos\psi)(\sin\varphi s\theta \cos\psi + \cos\varphi \cos\psi)(\cos\varphi \sin\theta \sin\psi + \sin\varphi \cos\psi) \\ (-\sin\theta)(\sin\varphi \cos\theta)(\cos\varphi \cos\theta) \end{bmatrix}. \quad (7)$$

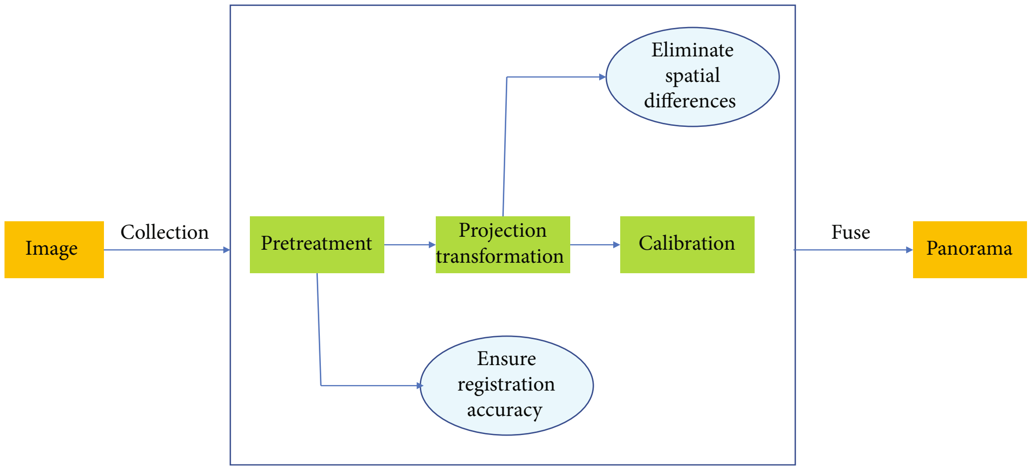

FIGURE 6: VR panorama generation process.

φ is roll angle, θ is pitch angle, and ψ is yaw angle. Equation (8) is the high-pass acceleration filter H_{ah}.

$$H_{\mathrm{ah}} = \frac{s^2}{s^2 + 2\xi_{\mathrm{ah}}\omega_{\mathrm{ah}}s + \omega_{\mathrm{ah}}^2} \cdot \frac{s}{s + \omega_0}. \quad (8)$$

Dimensionless ξ_{ah} is the damping ratio of high-pass acceleration filtering, ω_{ah} (rad/s) is the cut-off frequency of high-pass acceleration filtering, ω_0 (rad/s) is the cut-off frequency, and the value is 1. Equation (9) is the low-pass acceleration filter H_{al} of the tilt coordination channel.

$$H_{\mathrm{al}} = \frac{\omega_{\mathrm{al}}^2}{s^2 + 2\xi_{\mathrm{al}}\omega_{\mathrm{al}}s + \omega_{\mathrm{al}}^2}. \quad (9)$$

Dimensionless ξ_{al} is the damping ratio of low-pass acceleration filtering, and ω_{al} (rad/s) is the cut-off frequency of low-pass acceleration filtering. Equation (10) is the tilt coordination part.

$$\begin{cases} \varphi_{\beta L} = \tan^{-1}\left(-\dfrac{f_{Ly}}{g}\right), \\ \theta_{\beta L} = \tan^{-1}\left(-\dfrac{f_{Lx}}{g}\right). \end{cases} \quad (10)$$

$\varphi_{\beta L}$ is the roll angle, $\theta_{\beta L}$ is the pitch angle, f_{Ly} is the proportion in y direction, f_{Lx} is the proportion in x direction, and g is the gravitational acceleration. Equation (11) is the coordinate transformation link T_S of the high-pass angular velocity channel.

$$T_S = \begin{bmatrix} (1)(\sin\varphi\tan\theta)(\cos\varphi\tan\theta) \\ (0)(\cos\varphi)(-\sin\varphi) \\ (0)(\sin\varphi \setminus \cos\theta)(\cos\varphi \setminus \cos\theta) \end{bmatrix}. \quad (11)$$

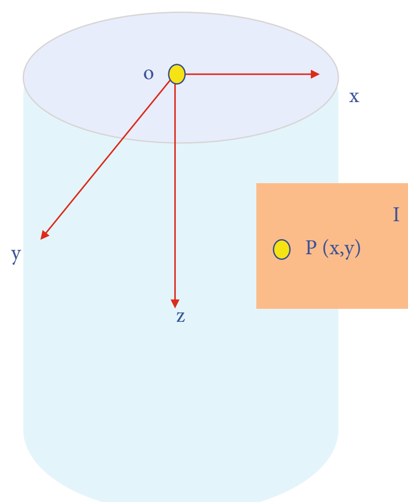

FIGURE 7: Schematic diagram of cylindrical orthographic projection.

s is sin, c is cos, t is tan, φ is roll angle, and θ is pitch angle. Equation (12) is the high-pass angular velocity filter $H_{\omega h}$.

$$H_{\omega h} = \frac{s^2}{s^2 + 2\xi_{\omega h}\omega_{\omega h}s + \omega_{\omega h}^2}. \quad (12)$$

Dimensionless $\xi_{\omega h}$ is the damping ratio of high-pass angular velocity filtering, and $\omega_{\omega h}$ (rad/s) is the cut-off frequency of high-pass angular velocity filtering.

3. Results

Digital media art has the strong visual effects and interactive characteristics. As a comprehensive art system, it includes art, multimedia, UI design, and visual sensing technology. The emergence and rapid development of VR have completely changed traditional digital media art. The above

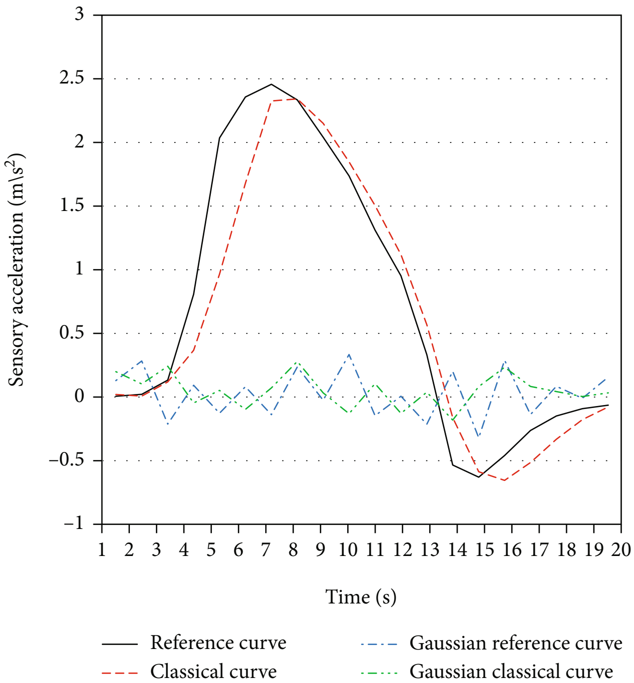

Figure 8: Simulation curve of sensory acceleration.

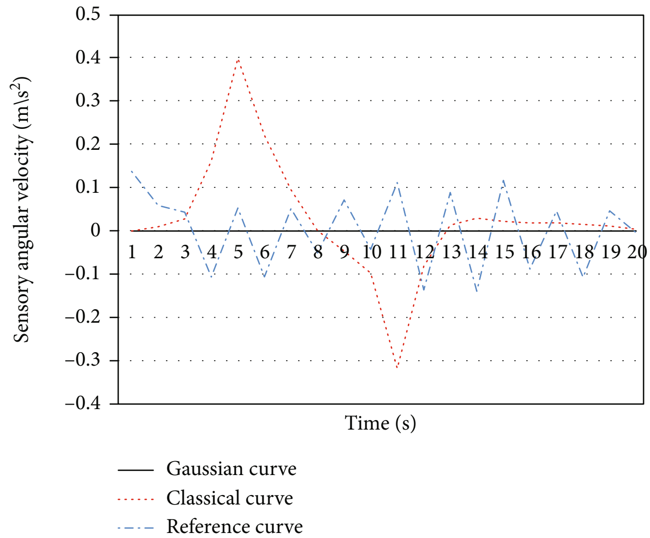

Figure 9: Simulation curve of sensory angular velocity.

algorithm is simulated and verified. Figure 8 is the simulation curve of sensory acceleration.

Figure 9 is the simulation curve of sensory angular velocity.

The reference curve can be obtained by inputting the acceleration and angular velocity signals in the VR scene into the human vestibular model. The classical curve is obtained by inputting the acceleration and angular velocity signals in the VR scene into the classical somatosensory simulation algorithm, processing them into signals that can be recognized by the VR motion simulator, and then processed by the human vestibular model. It is obvious that the algorithm described is feasible to a certain extent and can be used as a reference for VR somatosensory simulation.

3.1. Effect of VR on Society. The society is investigated through a web questionnaire, and 1000 valid questionnaires are selected for survey result statistics. In order to ensure the reliability of the results, the selected questionnaires are teenagers who often contact computer images, and 500 male and female questionnaires are selected to reduce the impact caused by gender differences. The specific survey results are as follows.

Table 1 displays the results of the contact history survey of VR.

Table 1 reveals that not all personnel have experienced VR. Most people's understanding of VR only stays at the stage of hearsay, and a few people's concepts of VR are completely blank. It suggests that VR technology has not really been popularized, and there is still a long way to go before it is well known by the public. This needs the progress of science and technology and the breakthrough of VR technology. The reduction of cost will inevitably make this technology widely used by people.

Table 1: Survey results of VR contact.

Situation of contact for VR	Number	Proportion (%)
I have experienced it	296	29.6
Just heard of it	678	67.8
Never heard of it	26	2.6

Figure 10 displays the survey results of interest in VR technology based on UI, visual sensing, and other technologies.

Figure 10 suggests that most people are interested in VR, and only a few people are not interested in it at all. It suggests that people have high enthusiasm for VR technology. If the cost is not considered, the promotion and application of VR technology will be extremely rapid.

Figure 11 displays the survey results of the view that VR technology can develop rapidly in the field of digital media art.

Figure 11 displays that the public has a more positive attitude towards the combination of VR and art. Most people hope that VR technology can be combined with digital media art, so as to bring them better sensory experience. A few people with indifferent attitudes may not have a clear understanding of digital media art or may lack the experience of VR. It is believed that they will change to a certain extent after experiencing relevant applications.

3.2. Effect of VR for Digital Media Art. Besides, 1000 experimenters are invited to experience the results of VR application in the field of digital media art and investigate their actual feelings. The results are as follows.

Figure 12 is a survey result of the experience of VR application in the field of digital media art.

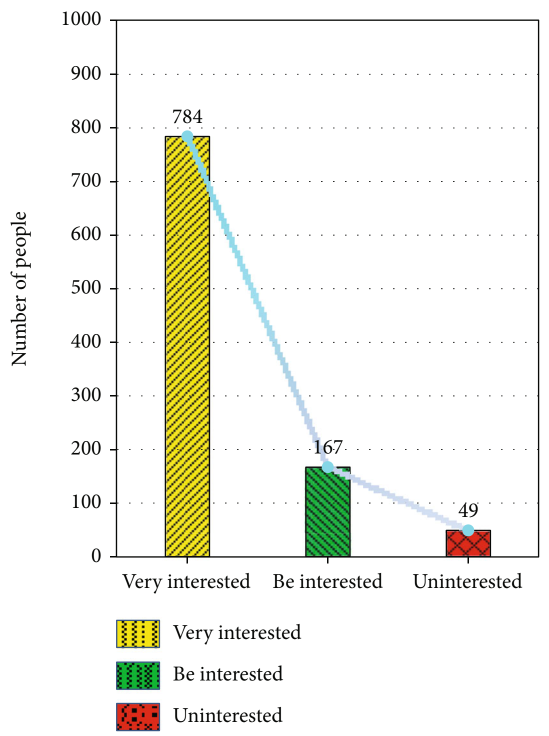

FIGURE 10: Survey results of interest in VR technology based on UI and visual sensing technology.

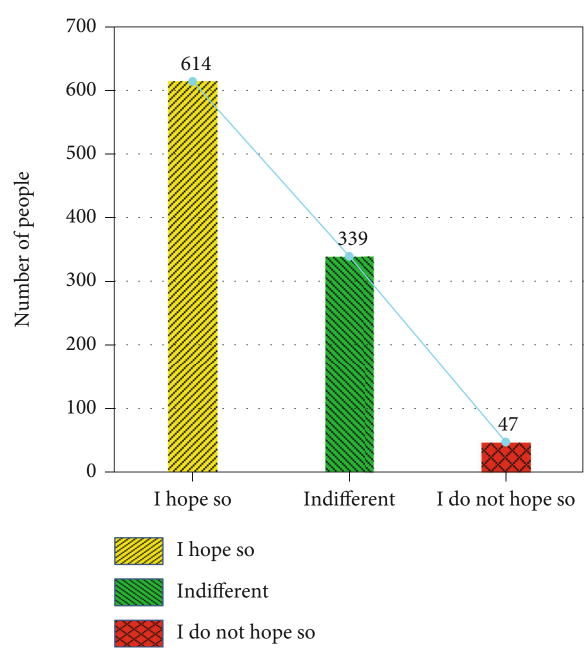

FIGURE 11: Survey results on the view that VR technology can develop rapidly in the field of digital media art.

Figure 12 suggests that this VR technology based on UI, visual sensing, and other technologies has achieved great success in the field of digital media. People are highly satisfied with their experience, and only a few people hold dissatisfied attitudes towards it.

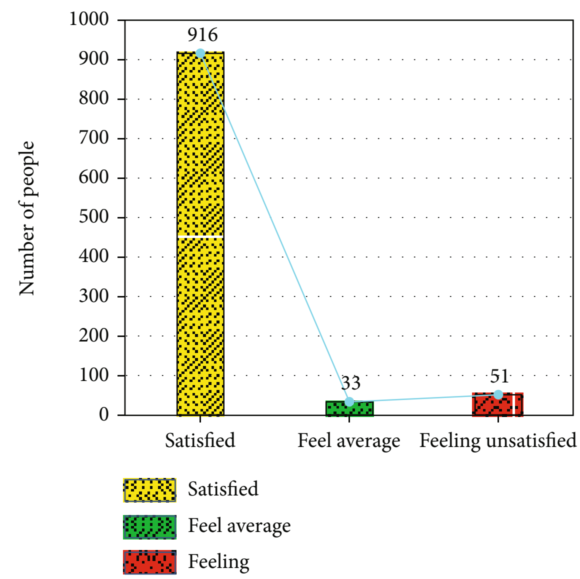

FIGURE 12: Survey results on the experience of VR application in the field of digital media art.

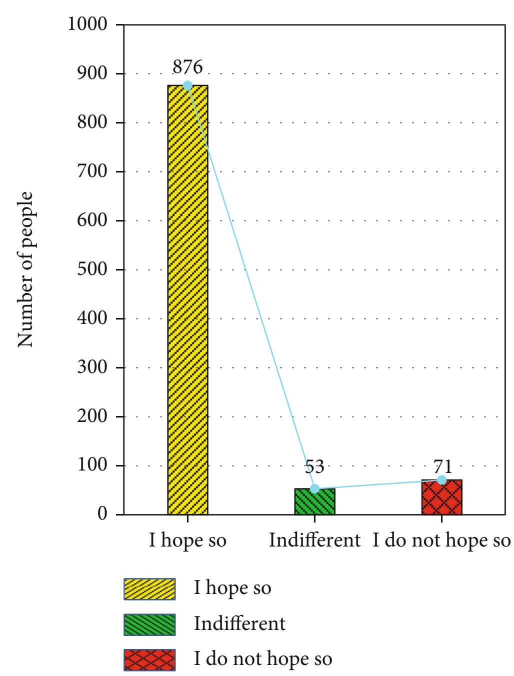

FIGURE 13: Survey results of attitudes holding the hope that new technologies can bring changes to future life.

Figure 13 displays the survey results of attitudes holding the hope that new technologies can bring changes to future life.

Figure 13 displays that most people are happy to see their lives changed by new science and technology, so as to give them a different live entertainment experience. Interestingly, it has been found that the number of people who choose not to be changed is higher than the number of people who hold indifferent attitudes. This phenomenon may explain different values, and it will not be evaluated here.

4. Conclusion

Visual sensing image technology shortens the distance between people and art due to the rapid development of digital media, but new art forms continue to appear. Hence, this exploration is aimed at studying the application of visual image technology based on UI and VR technology in art. Based on the development characteristics of media art in the digital age, the application of VR technology based on UI and visual sensing technology in the field of digital media art is studied. The results show that the application is feasible. Most people hold a positive attitude towards the product of this combination and have a good practical experience effect on the combination of VR and digital media art. The shortcomings are that the media art in the digital age belongs to the public, and people of almost all ages have corresponding contacts and feelings for this art. However, the selected research objects are almost all young people, and a few are teenagers. This has brought certain limitations to the survey results, which will be optimized and improved in the future. The research on the application of UI and visual sensing technology in the field of digital media art has a certain contribution to the development of media art in the digital age, narrowing the distance between the public and art culture and realizing the "popularization" of art and culture.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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