Research On the Application Research of Digital Media Technology - Taking Digital Film and Television as an Example

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Abstract: With the rapid nonlinear evolution of computer hardware and software, digital media technology is widely used in various fields, especially in the digital film and television industry. Science and art are presenting a more captivating scene, and the digital media profession has emerged. It is natural for her to be at the forefront of the collaboration between science and art. Due to the rapid development of digital media technology, digital survival urgently requires research that keeps pace with the times. Taking digital film and television as an example, we focus on the application research of digital media technology to digital film and television, to promote the development of digital survival.

Keywords: Digital Media Technology, Application Research, Digital Film, Television

1. INTRODUCTION

The application of digital media technology has brought new vitality to the development of film and television advertising business. Strengthening relevant research plays an important role in enhancing the scientific and artistic value of film and television advertising works. In this context, this article focuses on exploring the application of digital media technology in film and television advertising. What is "digital media technology"? Digital media technology is based on computer technology, with network communication technology as the main means of communication. It comprehensively processes media information such as images and graphics, sound, and text, and achieves the recording, representation, processing, transmission, storage, and management of digital media. It is a software and hardware technology that concretizes and manages abstract information.

This is a new technology discipline based on optical and electronic media as the basic languages and is a new technology that relies on digital and networked technologies to transform and innovate media from form to content, based on digital technology as the core. Firstly, the promotion of film and television works often requires the use of audiovisual and emotional trailers. The dissemination of these trailers is the application of digital media technology. As digital media is stored in binary form, this method allows information to be easily copied, quickly spread, and reused. If a trailer is remade, it will inevitably squeeze investment funds. However, using digital media technology for secondary tailoring saves this trouble. Not only can the most exciting links in the film and television work be selected to form a trailer for promotional purposes, but multiple trailers can also be produced repeatedly.

Virtual worlds, 3D images, and videos have broken the limitations of textual and graphic expression in advertising creation, providing more choice space for film and television advertising creation. In film and television advertising, digital multimedia technology has endowed various aspects of China's film and television advertising with a certain degree of richness and diversity. The combination of digital media technology and film and television works can be traced back to the stage of "digital imaging". From the 1960s to the 1970s, computer image researchers began to study the implementation technology of digital imaging. The rapid development of communication technologies such as computer internet and satellites, as well as the advancement of digital cameras, digital editors, digital projectors, and animation image compression technology, has also driven the rapid development of the digital film and television field. The influence of digital technology is gradually breaking through the film and television production process and extending to the distribution and screening process.

At the same time, there are various forms of digital media dissemination, and people can easily access various types of information through channels such as the internet, QQ, Weibo, TV, radio, etc. As a result, a group of online porters emerged. They processed the information they received on platforms such as Bilibili, increasing the popularity of their film and television works. This dissemination is also a form of publicity generated with the help of digital media technology. For example, Cai Xukun, the star who was spoofed by netizens in the Bili Bili platform ghost livestock district, has gained great attention in a short time. Compared with other flat form advertisements, film and television advertisements have outstanding advantages. They can rely on their unique forms and techniques of expression in the shortest possible time to stimulate people's curiosity about the product, and fully showcase the characteristics of the merchant and the product.

2. THE PROPOSED METHODOLOGY

2.1 The Application of Digital Media Technology in Film and Television Advertising

In traditional postproduction of film and television advertisements, the artistic effect of film and television advertisements is usually unsatisfactory, and a large amount of time, manpower, and material resources must be spent on modifying and improving the works. The entire process of film and television production can be achieved through digital media technology. Film and television works have

transformed from being edited, stored, and projected in the physical form of film in the past to being shot and edited using digital cameras, disseminated through advanced communication methods such as satellites or the internet, and presented to the audience through digital projectors. Digital media technology is widely used in film and television production, resulting in corresponding digital movies.

Digital movies include animated movies and stunt movies. All the big scenes that cannot be achieved can be displayed through digital media technology, giving people unexpected effects. In the experience of film and television works, digital media technology, combined with advanced communication technology, can fully enable the simultaneous release of digital films and television. This not only allows others to be more involved, but also significantly reduces the cost of certain films and television. For example, the Spring Festival Gala and the live broadcast of global Chinese shared moments, as well as sports events such as the Olympics, are all manifestations of digital media technology. In addition, today's developed virtual reality technology can more attract viewers to fully immerse themselves in the plot, experience the characters and atmosphere in film and television works, and break through the limitations of watching flat film and television works.

For example, the half hour dream dizziness created by the movie 'The Last Night of Earth' is only felt using three-dimensional glasses. Through the application of this technology, artistic processing and reprocessing of film and television materials can be carried out, effectively improving the artistic effect of the work. While improving the efficiency of work creation, it also innovates the content and form of film and television advertisements, improving the integrity and expressiveness of the work. Digital film and television are a new field that has emerged based on digital media technology, mainly including digital movies, digital television, online media videos, and mobile TV. Digital media technology has been widely applied in the creation, production, and dissemination of film and television, not only allowing people to feel the entertainment fun and convenience brought by digital media technology, but also promoting the production and dissemination of film and television works, mainly reflected in the production, distribution, and screening stages of film and television. Due to the development of digital media technology, the protection of digital film and television has become somewhat outdated. However, in recent years, it has finally been possible to use digital media technology for anti-infringement activities, such as adding additional copyright information to film and television works. This information does not affect the screening of the video, but can be recorded by storage media, effectively solving the problem of rampant infringement.

2.2 The Application of Digital Media Technology in Digital Film and Television Communication

With the rapid development and integration of computer technology and digital communication technology, traditional broadcasting, television, and movies are rapidly moving towards digital audio, digital video, and digital movies. At the same time, they have formed a new generation of digital communication media along with the increasingly popular computer animation and virtual reality. The digital media technology major has also emerged. Firstly, this is an emerging profession with a broad focus on technology, supplemented by art, and a combination of technology and art.

To study this major, we need to master the basic theories and methods in the field of information and communication, possess professional knowledge and skills in digital media production, transmission, and processing, and have a certain level of artistic cultivation. We can comprehensively apply the knowledge and skills we have learned to analyze and solve practical problems.

Digital media technology exhibits three stages of development characteristics due to the size of digital media broadband, as well as the degree of network integration and popularity. The development of the digital media industry has also gone through three stages. In the first stage of the development of the digital media industry, digital media technology is mainly used in the field of broadcasting and television, spreading content to users through digital television. Currently, the acceptance of information is still relatively passive, mainly in the form of single release, the consideration is the need for digital media dissemination and management. In the first stage of the development of the digital media industry, the application of digital media technology has expanded from the field of broadcasting and television to various industries, such as scientific research institutions, universities, advertising industry, etc., mainly through digital media technology to build communication platforms and enhance their own image. This stage needs to be developed based on industry characteristics to effectively solve the problems of publishing and management.

The widespread application of digital media technology in film creation is closely related to the digital, interesting, and interactive characteristics of digital media technology itself. Firstly, digital media technology has distinct advantages, breaking the basic form of using models to store information in the past, making information flow and storage more convenient. Secondly, digital media technology embodies a strong sense of interest, with rich, vivid, and interesting content. Digital media technology provides good technical support for film creation, allowing film creation ideas to be expressed in various ways.

The training direction of digital media technology major is mainly to train units such as digital film production companies, television stations, advertising companies, television channels and column packaging departments, interactive entertainment companies. Animation companies and other film and television production institutions with high theoretical level of film and television production and digital art literacy, be able to master the most advanced digital film and television technology, and be familiar with the production process of digital film and television production, digital media technology is a double-edged sword in the dissemination process of digital film and television: on the one hand, it can carry out more effective dissemination, attract huge attention to digital film and television, and also increase the expressive power of digital films. But on the other hand, it is also a powerful means of deception, which can deceive the audience into watching a film and television work they do not want to watch, and sometimes it can also promote online violence against celebrities.

From the perspective of the connection between technological characteristics and virtual reality technology, digital media technology includes virtual reality technology. Its new development trend is to enhance reality through virtual reality, reproduce physical information in the real world through simulation, and enable the audience to obtain sensory experiences beyond reality.

3. CONCLUSION

To sum up, digital media technology mainly includes digital video processing technology, digital sound processing technology, digital image processing technology, digital media information output and acquisition technology, digital media communication technology and information processing technology, digital media information retrieval and security technology and database technology, digital media information storage technology and computer graphics technology. The development and application of digital media technology have driven the rapid development of film and television animation, presenting new visual effects in both form and content. It reveals that there are still many areas to explore in the application of digital media technology in digital film and television. In addition, the application of these digital media technologies can provide reference for network regulations and further improve network regulations.

4. ACKNOWLEDGEMENT

5. REFERENCES

[1] Gao Xiaofang. Research on the Application of Digital Media Technology - Taking Digital Film and Television as an Example [J]. Digital Technology and Applications, 2015 (11): 2. DOI: CNKI: SUN: SZJT. 2015-11-191

[2] Lv Weiyan. Research on the Application of Digital Media Technology - Taking Digital Film and Television as an Example [J]. Computer Application Abstract, 2023, 39 (2): 33-35

[3] Tan Yaping. Application Analysis of Digital Media Technology - Taking Digital Film and Television as an Example [J]. Television Guide, 2018 (6): 1. DOI: CNKI: SUN: ZNDS.0.2018-06-210

[4] Teng Yijie. Application Analysis of Digital Media Technology - Taking Digital Film and Television as an Example [J]. Digital Users, 2019

[5] Hu Ting. The Application of Digital Media Technology in Specific Fields - Taking the Film Industry as an Example [J]. Editing and Editing, 2019 (3): 3. DOI: CNKI: SUN: CXBI. 0.2019-03-006

[6] Zhou You. Research on the Application of Digital Media Technology in Film and Television Advertising [J]. Art Technology, 2019 (8): 2. DOI: 10.3969/j.issn.1004-9436.2019.08.120

[7] Li Chaolin, Wu Kexu. Research on the Application of Digital Media Technology in Film and Television Advertising in the New Era [J]. Huaxi: Literature and Art Education, 2020

[8] Liu Linxiao, Zhang Xinyu, Yang Zheng. Research on the Application of Digital Media Interaction Technology in Film and Television [J]. Published in Wide Angle, 2018. DOI: 10.16491/j.cnki.cn45-1216/g2.2018.24.019

[9] Chen Hong. Introduction to Digital Media Technology [M]. Beijing University of Posts and Telecommunications Press, 2015

[10] Li Li. On Digital Media Technology and Its Main Applications [J]. Digital Technology and Applications, 2015 (009): 000

[11] Tian Hua. Research on the Application of Digital Media Art in Film and Television Animation [D]. Northwestern University [2023-07-12]. DOI: CNKI: CDMD: 21014.253928

[12] Shang Huibin. Application Research and Development Prospects of Digital Media Technology [J]. News Research Guide, 2017, 8 (23): 2. DOI: CNKI: SUN: XWDK.0.2017-23-194

[13] Ye Shuaibo. Application Research of Digital Media Technology - Taking Digital Film and Television as an Example [J]. Satellite TV and Broadband Multimedia, 2019 (14): 2. DOI: CNKI: SUN: WSDS.0.2019-14-050

[14] Xu Zecheng. The Application of Digital Media Technology in News TV Programs -- Taking News Eye of Jiangsu Television as an Example [J]. Research on Communication Power, 2019 (16): 1. DOI: CNKI: SUN: CBLY