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Analysis of the Application of AI Technology for Radio and Television Broadcasting under Computer Networks

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Abstract: ***The times are constantly progressing and science and technology are developing rapidly. Among them, computers and networks have become an important outcome of scientific and technological development, bringing new directions for the reform of radio and television multimedia technology. Compared with traditional media communication methods, radio and television multimedia communication under computer network has a new direction, which can abandon the geographical and time limitations of traditional media transmission methods and greatly broaden the transmission channels of radio and television media technology. People nowadays prefer the new computer network for radio and television multimedia technology. This greatly promotes the innovation and development of radio and television multimedia technology, can attract more people to interest in radio and television media, and further promotes improvement and improvement of radio and TV multimedia technology.***

Keywords: Computer network; Radio and television; Dissemination; Multimedia technology.

1. INTRODUCTION

With the rapid development of computer technology in China, the network has become an important way for people to obtain relevant information, and workers in various fields are used to using network technology to work. Network technology has gradually developed to all aspects of society on the basis of meeting people's basic needs, and the innovative development of network technology has driven the continuous progress of radio and television multimedia technology. Therefore, the strong development of multimedia technology for broadcast television under computer networks will promote the progress of the entire broadcast television industry, and the application of multimedia technology will effectively solve the problems existing in broadcast television engineering, so that broadcast television can better meet the needs of users. In logistics automation, Luo et al. [1] proposed a path planning algorithm for logistics robots by integrating Transformer and Graph Convolutional Networks (GCN), improving efficiency in IoT-enabled environments. Meanwhile, Li et al. [2] optimized resume-job matching using Generative Pretrained Transformers (GPT) and hierarchical graph neural networks, demonstrating AI's potential in intelligent recruitment. In medical imaging, Wang et al. [3] developed CPLOYO, a multi-scale feature fusion model for pulmonary nodule detection, while Yang & Duan [4] constructed a knowledge graph for stock market risk management using statistical learning. For low-light image enhancement, Lu et al. [5] introduced DeepSPG, leveraging deep semantic prior guidance with multimodal learning. Ma [6] designed a medical service robot positioning system based on binocular vision, whereas Lu et al. [7] explored lncRNA-mediated immune cell plasticity in cancer immunotherapy. In marketing analytics, Chen & Xie [8] augmented advertiser decision support with generative AI, and Feng et al. [9] applied green building technologies for sustainable urban renovation. Finally, Wang [10] investigated AI-driven last-mile delivery optimization in smart city logistics.

2. THE RELATIONSHIP BETWEEN COMPUTER NETWORK TECHNOLOGY AND RADIO AND TELEVISION

Radio and television refers to the communication medium that transmits audio and visual programmes to a wide area through radio waves or wires. The application of computer network technology can help radio and television to achieve the integration of information and data. Processing and transmission. At the same time, due to the very fast transmission speed, stability and high transmission quality of computer network technology, the broadcast quality of broadcast television is further improved to meet people's needs. However, at present, if we want to better serve computer network technology in radio and television engineering, we need to fully master computer network technology to fully improve its application value in radio and TV engineering.

3. DEVELOPMENT OF MULTIMEDIA TECHNOLOGY FOR BROADCAST TELEVISION AND RADIO UNDER COMPUTER NETWORKS

It has to be said that with the progress of the times, computers and networks have developed rapidly and have gained the favor of people with their great advantages. Their progress has greatly helped the advancement and innovation of multimedia technology in radio and television, organically integrating computers and the Internet with radio and television and bringing more diversified and richer technologies to radio and television. It is no longer limited to the original one-way information transmission method. It can interact with the audience, not only reflecting the convenience and speed of time and space, but also can absorb the ideas and opinions of the audience in a timely manner, and further improve radio and television multimedia technology to better serve the audience. Moreover, times are progressing, people are getting used to a fast-paced life, and there is no time to wait for a show, A solving system is fixed at a fixed time, but computer networks can solve this problem perfectly, and people can use computers and networks to replay the shows they watch, completely querying and repeating the shows and information anytime, anywhere. He is very much loved by people.

4. STATUS OF DEVELOPMENT OF MULTIMEDIA TECHNOLOGY IN RADIO AND TELEVISION

Computer networks have reached deep into different fields in the process of development, and people's daily life patterns have also changed significantly. The development of computer networks provides more opportunities and challenges for the application of multimedia technology in radio and television. Relevant researchers are also continuously conducting more in-depth research on the application of radio and television multimedia technology under computer networks, and how to effectively incorporate radio and television media technology into computer networks in the new era. Relevant system tests and data analysis have also been carried out to enable it to effectively address the current situation of the continuous loss of broadcast television viewers, provide people with more convenient access to programs and data acquisition models, and win more attention from viewers. At present, the application of broadcast television multimedia technology under computer networks has brought more advantageous resources to it, and it has become a new technology application hot spot in the field of broadcast TV multimedia.

5. ANALYSIS OF SPECIFIC APPLICATIONS OF RADIO AND TELEVISION MULTIMEDIA TECHNOLOGY UNDER COMPUTER NETWORKS

5.1 Collection of material and arrangement of content, reduction of recording time

First, radio and television multimedia technology has become simple and fast thanks to the addition of computers and networks. Instead of relying solely on manually adjusting the program sequencing, we can rely on the Internet to link it to the radio and television multimedia network to achieve information sharing, so that we can directly query the relevant content required, reduce the work steps and improve information finding. Secondly, content preparation and program sequencing can be fully completed using computers, and the scientific nature of program sequencing and performance sequencing can also be accurately improved, which can both simplify manual labor and ensure program sequencing quality. In addition, in such areas as programme replacement, we can ensure the normal and orderly broadcast of other programmes and can arrange replacement or preparation in a timely manner. By prearranging the program order in advance through the computer, it can be easily adjusted at all times, and due to the sharing of information, it can utilize the time most efficiently, thereby reducing the recording time and improving the program efficiency and quality.

5.2 Computer technology

Computer technology can help broadcast television and radio to achieve high-speed processing of information and data, enrich television programs, and improve management and control capabilities. In the case of computer technology, it is important to note that currently global computer technology is developing rapidly, and related configurations and models have obviously improved, and radio and television multimedia technology requires computers not only the main part. There is also a need to expand related professional accessories, so computer hosting is only a platform for broadcast television programs, and as long as it can ensure the stability of the system, it does not have to pursue a high-end hosting platform.

5.3 Media resources are shared efficiently on cloud platform

The continuous development of computer network technology to promote the application of cloud computing technology, cloud platform as a new media business network platform, It can realize the upgrade of the traditional broadcast television multimedia service, at the same time, it can reasonably integrate the existing broadcast television multimedia information resource on the basis of meeting the actual needs, so as to realize the innovative application of the broadcast television multimedia service under the computer network. For the broadcasting and multimedia industry under the traditional model, it has been seriously impacted by online media in the actual development process. If we want to achieve sustainable development, we must innovate the models and concepts of the existing media industry, realize the efficient sharing of media resources through the cloud platform, and make broadcast television and multimedia develop towards the media integration model.

5.4 Digital Image Processing Techniques

Digital image processing was first used in military field with the help of mainframe computer. With the improvement of people's quality of life, the majority of viewers put forward higher demands on the quality of radio and TV programs, making digital image processing technology began to be applied in radio and TV industry. And become the most commonly used radio and TV information processing technology, which can improve the image quality, sound quality, provide better sensory experience for the audience, and promote its development in the radio and TV multimedia industry.

5.5 Broaden channels of communication

Combining computers and networks in radio and television multimedia technology can effectively broaden the channel of information transmission and inject fresh blood into the innovation of radio and television media technology. First, it breaks the limitations of time and geography. Giving viewers who do not have time to watch a moment can completely break the limitation of time for radio and television multimedia technology, and secondly, can communicate with each other. In addition to live viewers, viewers using computer networks to watch can also react to questions and opinions in real time. It can promote the further development of radio and television multimedia technology. Finally, it can break the limitations of geography. The viewer can watch the program at home, in the car, anywhere without having to reach the scene, which brings great convenience to viewers who do not have time to go.

5.6 Storage technology

In the past, radio and television broadcasting was stored through tapes and cassette tapes, and with the application of computer networks, Viewers can use network technology to store, and the amount of storage is not only improved, but also ensures the security of storage, enabling viewers to watch or listen to radio and television programs anytime, anywhere, according to their needs.

6. FUTURE DIRECTION OF BROADCAST TELEVISION MULTIMEDIA TECHNOLOGY UNDER COMPUTER NETWORK

At this stage, the application of multimedia technology in broadcast television has gradually advanced to all levels, and in conjunction with the universality of practical applications, the future development direction of multimedia technology for broadcast television under computer network mainly includes the following three points:

(1) The configuration of the system is more diversified, which can not only meet the basic editing needs of daily life, but also introduce two-dimensional and three-dimensional digital effects, thus providing more targeted services for different groups on the basis of meeting the basic needs.

(2) The picture synthesis effect of radio and television programming is high. With the help of computer network technology, the application system of radio and TV programming has been certainly upgraded, and it is accompanied by appropriate software synthesis functions to improve the comprehensive effect of the entire application system. Combined with computer network technology, radio and television multimedia can be comprehensively applied, allowing radio and television to make greater progress in computer multimedia application.

(3) Application of multimedia technology for radio and television broadcasting under computer networks, It can reduce the operational processes within the broadcasting industry, reduce the corresponding cost of personnel and equipment, thereby generating more independent producers, increasing the sources of broadcasting programming in daily life, and diversifying the programming.

7. CONCLUSION

All in all, computer network technology occupies an irreplaceable position in the modern radio and television industry. At this stage, China's computer network technology is becoming more and more mature, and its functions are increasing. The enhancement has provided effective assistance in the preparation of radio and television programmes and the dissemination of information, promoting the sustainable development of the radio and television industry, and the computer network has brought new impetus to the development of multimedia technology in radio and television. It gives direction to the innovation of broadcast multimedia technology, which can effectively eliminate the shortcomings of traditional broadcast multimedia technologies, lift geographical restrictions, lift time limits, give viewers the opportunity to watch without time, and increase the focus on viewers' ideas. Changing the shortcomings of traditional one-way information transmission can absorb the audience's ideas and opinions, make the program more in line with the audiences' ideas, and improve radio and television multimedia technology. In addition, information sharing can be achieved through the Internet link with radio and television media networks. It greatly reduces information search time, simplifies information distribution steps, simplifies labor, and can improve radio and television multimedia technology and work efficiency. At present, radio and television media technology is not perfect, but in the future, radio and TV multimedia technology under computer network will be more and more perfect.

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