

Application of Network Technology in Broadcasting and Television Engineering Technology in the Information Age: Postprint

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Abstract

With the development and social progress of China, science and technology have grown increasingly advanced, and network technology has found extensive application and development across numerous domains, thereby engendering profound transformations in people's lifestyles. As a principal form of media, the application of network technology can accelerate the development of broadcast television engineering, inspire innovation in broadcast television engineering technology, and forge a new platform for the broadcast television domain. The means and technologies for recording broadcast television programs have achieved breakthrough progress, greatly facilitating both information transmission and public entertainment. From the perspective of the information age, this paper investigates the characteristics of network technology and its applications in television engineering technology.

Full Text

Preamble

The continuous evolution of information technology has fundamentally transformed information acquisition and transmission methods. Broadcasting and television equipment can now interconnect through network technology, enabling digitalized resource storage. With internet proliferation and the emergence of diverse new media platforms, audiences can access information through multiple channels, posing significant challenges to traditional broadcasting and television. In response, the industry must continuously reform by leveraging network technology to achieve digital transformation. The critical factor for successful digitization lies in fostering innovation and rationally applying network technology.

1.1 Network Technology Concept

Network technology has evolved alongside scientific and information technology advances, with computer technology as its foundation. It encompasses internet technology, QR code technology, and various new media technologies. Today, network technology is widely applied across all sectors and plays a crucial role in driving media industry development. In broadcasting and television engineering, effective utilization of network technology promotes media format diversification, strengthens audience interaction, and consequently enhances viewership ratings.

1.2 Development of Network Technology

Internet resources exist in a dispersed state, and network technology integrates these resources to enable sharing, providing clear structural understanding and enhancing resource utilization and information acquisition capabilities. These resources include computer resources, data resources, and databases. Initially developed for military applications, network technology has gradually achieved widespread adoption across various fields. Current developments have accelerated resource transmission speeds while making acquisition and dissemination more personalized. Today, network technology is intimately integrated with production and daily life, fundamentally transforming work and lifestyle patterns. In broadcasting and television, network technology application has streamlined program recording and enabled automated, flexible playback scheduling.

Network technology accelerates information transmission, making information acquisition and communication more convenient and efficient. Its application in broadcasting and television facilitates broader resource dissemination and promotes resource sharing within broadcasting engineering. This manifests in several key aspects. First, traditional radio stations operate numerous studios and control rooms where information communication is slow and collaboration errors are common. Effective network technology application enables seamless inter-studio communication, facilitating coordination and rational integration of materials and resources, thereby achieving true resource sharing and improving utilization efficiency. Second, network technology connects various resource points in broadcasting and television, forming an extensive network that allows users to promptly locate desired resources, achieving genuine sharing.

3.1 Improving TV Program Recording Effects

As a vital component of mass media, traditional broadcasting and television engineering has faced significant disruption from emerging media. The critical challenge for broadcasting professionals is enriching television programs to improve ratings and retain audiences. To remain competitive, the industry must undergo technological innovation, adapt to contemporary trends, and leverage network technology features to achieve information-based development. Network technology application enhances operational coordination, substantially

improves program production quality, and enables audience-driven program customization, significantly elevating service quality and providing personalized services. However, network technology integration cannot be achieved overnight; it requires sustained effort, continuous innovation, and incremental improvements. Through collective industry efforts, broadcasting and television will achieve greater development.

Network technology profoundly impacts all aspects of broadcasting and television engineering, particularly demonstrating excellent results in program recording. In today's internet environment, many television program recordings rely on network technology guidance for precise control and production of video images and audio. This simplifies production workflows, reduces workload, and improves quality. Broadcasting professionals must thoroughly understand contemporary trends, seize opportunities, and apply network technology throughout all recording stages to enhance overall efficiency. Program images and animations can be generated through network technology. The stable development of broadcasting and television depends on full network technology utilization, which holds profound significance for industry advancement.

3.2 Expanding the Transmission Range of Cable Broadcasting

Network technology offers substantial application potential in cable broadcasting. The two most common broadcasting transmission methods are cable and wireless, with cable broadcasting being the most frequently used medium for transmitting various data information. Cable broadcasting networks transmit pictures, sound, and text as data to terminals, characterized by long transmission distances, high fidelity, strong anti-interference capabilities, and high transmission quality. Compared to traditional cable broadcasting, new cable television networks integrating network technology offer superior advantages. This integration significantly expands service scope, allowing more audiences to experience network technology convenience. Leveraging the latest scientific and technological achievements, viewers in the same region can obtain customized services according to their needs, creating vast development space for cable television programs.

3.3 Promoting Information Dissemination and Sharing

Network technology application manifests as new media technology development, and television program...

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