Issues and Optimization Strategies in Radio and Television Broadcast Monitoring Technology (Postprint)

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Abstract

As China' s modernization accelerates, current broadcast and television monitoring has become inadequate to meet societal development needs. Broadcast and television monitoring technology requires appropriate improvement and optimization to better serve broadcast and television programs. This paper proposes corresponding optimization strategies based on an analysis of existing problems in China' s current broadcast and television monitoring technology.

Full Text

Problems and Optimization Strategies in Radio and Television Monitoring Technology

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Abstract: With the acceleration of China' s modernization process, current radio and television monitoring can no longer meet the needs of social development. Radio and television monitoring technology should be appropriately improved and optimized to better serve radio and television programs. This paper proposes corresponding optimization strategies based on the existing problems in China' s current radio and television monitoring technology.

Keywords: Radio and television; Monitoring technology; Monitoring equipment

Radio and television are indispensable media in people' s daily lives, and their development is closely related to monitoring technology. For example, if monitoring technology departments fail to pay sufficient attention to monitoring technology, resulting in radio and television monitoring technology not being

updated and upgraded in a timely manner, the monitoring technology will remain stagnant and naturally cannot achieve effective development. Affected by backward monitoring technology, its effectiveness fails to play a critical role, ultimately rendering it unable to meet the needs of modern radio and television transmission systems. The root cause lies primarily with the monitoring technology departments, as the management of radio and television monitoring technology is heavily influenced by the management of relevant departments. At present, many regions in China lack communication between radio and television monitoring technology departments and relevant authorities. Management regulations for broadcast monitoring technology in many localities are not clearly defined, leaving it in a state of neglect, with problems and failures not being handled promptly and effectively. This significantly hinders the smooth application of radio and television monitoring technology. Meanwhile, the upgrading of radio and television monitoring technology lacks designated departments, thereby constraining its development.

2.3 Emerging Media Monitoring Issues

With the development of the information age, various emerging media technologies have emerged incessantly, and radio and television have begun to disseminate through multiple channels such as mobile phones and the internet. Viewers are no longer limited to watching radio and television programs indoors, but can also watch them outdoors, in vehicles, and in public places via computers or mobile phones. However, as the scale and quantity of emerging media continue to expand, current radio and television monitoring technology appears somewhat outdated and struggles to meet the needs of today' s society. Therefore, monitoring emerging media has become a critical issue for radio and television monitoring technology, requiring further improvement and development.

2.4 Networking with the State Administration

As science and technology continue to develop, China' s State Administration of Radio and Television has established a complete monitoring technology center and created multiple radio and television monitoring network systems to achieve nationwide monitoring. Regional radio and television centers across the country can connect with the State Administration through network systems, thereby enhancing the convenience of monitoring work. Furthermore, to promote the development of radio and television monitoring technology, broadcasters should also emphasize communication and exchange with other business operations, strengthen connections between different fields, and achieve higher-level development of China' s radio and television monitoring technology through integrated development models. However, according to relevant surveys, monitoring departments in most regions have not established connections with monitoring systems in other areas, thus failing to achieve communication with other regional monitoring departments and preventing the networking of radio and television monitoring systems, which limits the maximization of monitoring technology' s

effectiveness.

3. Optimization Strategies

3.1 Strengthening Maintenance

Due to the complex system design of radio and television monitoring technology, numerous difficulties and challenges exist in its maintenance process. To improve the quality of maintenance work, efforts should be intensified, particularly in the monitoring and control processes of equipment such as monitors and broadcast controllers. Potential instrument failures must be carefully investigated to ensure the smooth broadcasting of radio and television programs. Additionally, relevant technical personnel should provide detailed explanations to maintenance workers about key considerations for radio and television monitoring technology, along with solutions to common problems. In recent years, with the rapid development of information technology, maintenance of radio and television monitoring technology must keep pace with technological advancements to ensure quality standards are maintained.

3.2 Strengthening Management

The development of radio and television monitoring technology is closely related to its management approach. Therefore, in the future development process, China must strengthen management of radio and television monitoring technology and establish scientific and comprehensive management systems to lay the foundation for comprehensive and effective development. Future management development should focus on three main aspects: (1) Clarifying the functions of management departments, with strict requirements for establishing regional radio and television monitoring management departments. A coordinated management model should be implemented to manage government departments in their respective jurisdictions, with clear definition of management responsibilities. (2) Establishing dedicated funding departments primarily responsible for daily service and management of radio and television monitoring technology, including routine evaluation and maintenance, research and development of advanced technologies, and monitoring technology upgrades. (3) Enhancing the authority of management departments to grant them greater scope of power. Improving and supporting management departments equates to improving and supporting radio and television monitoring technology. If management departments have significant functional limitations, they will inevitably hinder the development of monitoring technology. Therefore, China should appropriately delegate more authority to management departments, enabling them to conduct scientific and professional management of monitoring technology development effectively and comprehensively, thereby indirectly promoting its advancement.

3.3 Optimizing Equipment and Technology

The optimization of radio and television monitoring technology is characterized by complexity, precision, and long-term commitment. Whether expanding business scope or extending application range, optimization of its advanced capabilities is essential. By monitoring potential interference across different frequency bands, problems can be identified promptly and handled effectively, thereby improving information transmission quality and enabling better analysis and monitoring of impacts caused by different frequency band information, which lays the foundation for normal equipment operation. Moreover, as monitoring technology continues to develop, feasible monitoring systems should be constructed through technological updates, existing detection technology should be upgraded, coordination between monitoring technologies should be established, and reasonable and efficient linkage mechanisms should be formulated to meet the demands of media transmission during rapid development. Additionally, China should introduce and learn from advanced foreign technologies to promote the development of its radio and television monitoring technology.

3.4 Strengthening Technician Training

To effectively promote the development of China' s radio and television monitoring technology and enable it to adapt to the demands of the times, in addition to strengthening technology management and maintenance, training for monitoring technicians should be enhanced to improve their professional competence and comprehensive capabilities. Currently, some technicians in China' s radio and television monitoring departments do not have comprehensive understanding of relevant monitoring technologies and practical situations, the application of some advanced equipment remains to be improved, and they have not yet fully adapted to monitoring technology work. Therefore, cultivating monitoring technicians is particularly important, as it can not only enhance their professional knowledge but also strengthen their comprehensive skills. Helping monitoring technicians improve their mastery of advanced and scientific detection technologies will promote the long-term sustainable development of the radio and television industry.

4. Future Development Directions

At present, against the backdrop of new media integration, China' s radio and television technology must continuously break through and innovate to meet modern people's needs. Future development will mainly proceed in the following directions.

4.1 Optimizing Digital Technology

In recent years, with continuous innovation in digital technology, it has been widely applied in the radio and television field and has achieved good results. Through continuous improvement and upgrading of digital technology, radio

and television have won unanimous praise from numerous users. Therefore, in future development of radio and television technology, digital technology development should be the core focus, with continuous optimization and upgrading. Currently, the application of digital technology in China' s radio and television field still has considerable room for improvement, and both the refinement and application of digital technology remain in the development stage. Examples include research and exploration of intelligence in radio and television digital technology, and diversified innovation in radio and television digital technology.

4.2 Promoting Live Broadcasting Technology

During the construction of ground antennas, China attaches great importance to reception elevation, hence designing them relatively high, which greatly facilitates the optimization and development of China' s satellite live broadcasting system. China' s use of live broadcasting satellites is gradually being standardized, and problems and special circumstances encountered in applying satellite systems to radio and television technology are being collected and organized to lay the foundation for future adjustments. Moreover, China will also rectify illegal construction of ground digital television transmission stations, conduct inspections based on approval records, and severely punish illegally constructed digital television transmission stations. This ensures that digital television transmission station construction complies with regulations while enabling better optimization and development of satellite live broadcasting systems, laying an important foundation for live broadcasting of radio and television programs and significantly promoting innovation and optimization of China' s radio and television technology.

4.3 Developing Network-Based Broadcasting

Against the backdrop of deepening informatization, internet technology has entered various industries and sectors, becoming closely related to the development of many fields. Without the internet, rapid development that keeps pace with the times cannot be achieved. Therefore, the innovation and optimization of network technology play a crucial role in the development of radio and television technology and the industry. In developing network-based radio and television technology, internet technology can be leveraged to build a comprehensive network television station with data collection, planning, and transmission capabilities, thereby improving the speed, security, and stability of radio and television data transmission.

4.4 Integrating Multiple Technologies

To achieve long-term sustainable development, radio and television technology cannot rely solely on the continuous improvement of a single technology, but must integrate multiple technologies for joint development. For example, integrating satellite live broadcasting technology with digital technology can solve the problem of signal coverage gaps in certain areas of radio and television,

achieving large-scale coverage of high-definition radio and television signals. Additionally, the integration of network technology and digital technology can establish channels for real-time communication between users and radio and television, enabling not only interaction with users but also appropriate adjustments and modifications based on their feasible suggestions, thereby improving public satisfaction with radio and television.

4.5 Developing Wireless Broadcasting Technology

Against the backdrop of deep integration between radio and television technology and new media, the business volume of radio and television has increased significantly, and the user base has expanded substantially. With the growing number of users, existing radio and television wireless communication systems can no longer meet current development needs. Therefore, in future development of radio and television technology, the anti-interference capability of broadcasting communication systems must be continuously strengthened, and wireless radio and television technology should be vigorously developed. This will not only solve various problems arising from large user volumes but also improve user satisfaction. Furthermore, the frequency band utilization of radio and television wireless communication systems should be enhanced to improve the stability of wireless broadcasting technology.

Conclusion

In summary, since radio and television monitoring technology was introduced to China, it has undergone decades of development and achieved considerable success, though certain aspects remain to be improved. This paper' s discussion and research on strengthening radio and television monitoring technology maintenance, management, equipment and technology optimization, and technician training hold significant importance for the development of China' s radio and television monitoring technology.

References

[1] Wang Jiawei. Problems and Solutions in Radio and Television Monitoring Technology[J]. West China Broadcasting TV, 2018(16): 214, 216.

[2] Wu Rong, Xiao Chen. Research on Multi-Screen Display and Monitoring Alarm System Technology in Radio and Television Broadcasting Rooms[J]. West China Broadcasting TV, 2018(14): 191.

[3] Zhang Jun. Design of Radio and Television Safety Monitoring and Digital TV Network Technology Online Monitoring[J]. Digital Communication World, 2018(3): 59.

[4] Li Yue. Analysis of the Transformation and Future Development Model of Radio and Television Technology in the New Era[J]. Science and Technology Innovation, 2018(4): 80-81.

[5] Gesang Quzhen. Discussion on Problems and Optimization Strategies in Radio and Television Monitoring Technology[J]. West China Broadcasting TV, 2017(17): 189-190.

[6] Guan Yanjun. Problems and Solutions in Radio and Television Monitoring Technology[J]. TV Guide, 2017(8): 214.

[7] Huang Xiang. Discussion on Problems and Optimization Strategies in Radio and Television Monitoring Technology[J]. New Media Research, 2016, 2(4): 23-24.

[8] Li Zhiqiang. Research on Radio and Television Monitoring Technology[J]. West China Broadcasting TV, 2016(2): 196.

[9] Wang Chunyu. Problems and Suggestions on Radio and Television Monitoring Technology[J]. Communication World, 2015(24): 38.

[10] Gao Chenguang. Helping monitoring technicians improve their mastery of advanced and scientific detection technologies will promote the long-term sustainable development of the radio and television industry.

Note: Figure translations are in progress. See original paper for figures.