

Postprint: Impact of New Technology Applications in Audiovisual New Media

Authors: Yang Manman

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Abstract

With the advancement of scientific information technology, new media has become a defining characteristic of modern society. In response to public demands for media communication forms and content, audio-visual new media has become the principal developmental paradigm for future social media, and the application of emerging technologies within this domain will deliver more diverse experiences to audiences. This study undertakes an in-depth investigation into the impacts of new technology deployment on audio-visual new media, analyzing the implementation of technological innovations—including cloud computing, smart terminals, and the Internet of Things—and their resultant effects on audio-visual new media. The objective is to foster continuous enhancement of new technology application standards in the audio-visual new media sector, thereby facilitating the concurrent advancement of both audio-visual new media and high-technology industries.

Full Text

Abstract

With the development of scientific information technology, new media has become a defining characteristic of modern society. To meet public demand for media transmission forms and content, audio-visual new media has emerged as the primary developmental direction for future social media. The application of new technologies in the audio-visual new media field will bring audiences more diverse application experiences. This paper conducts an in-depth investigation into the impact of new technologies on audio-visual new media applications, analyzing the deployment of cloud computing, smart terminals, Internet of Things (IoT), and other emerging technologies, as well as their influence on audio-visual new media. The aim is to promote the continuous improvement of new technology application levels in the audio-visual new media domain, thereby achieving

the common development of both audio-visual new media and high-tech industries.

Keywords: audio-visual new media; cloud computing; smart terminals; Internet of Things; impact

Author Affiliation: Fuyang Daily Press, Fuyang City, Anhui Province

1. Cloud Computing Technology in Audio-Visual New Media: Application and Impact

1.1 Application of Cloud Computing Technology in Audio-Visual New Media

As internet users continue to increase, massive volumes of data are generated online. These data sets vary significantly in structure and require complex processing methods. Cloud computing technology makes the utilization of such information possible. Cloud computing offers distinct advantages including virtualization, high reliability, strong scalability, ultra-large-scale processing capabilities, and high cost-effectiveness. Cloud architectures are equipped with large-scale hardware and software systems that support data storage and computation, allowing users to obtain needed data from cloud centers without building their own application systems. Additionally, cloud computing achieves high intelligence, enabling timely adjustment and dynamic allocation of network user data, with systematic monitoring of real-time changes. This intensive processing model substantially reduces operational and usage costs. The application of cloud computing in audio-visual new media can provide technical and data support for media platform construction, broadcasting network development, audience application information, media content management, and business expansion. Due to its high application value, cloud computing will have even broader prospects in the audio-visual new media field.

1.2 Impact of Cloud Computing Technology on Audio-Visual New Media

Modern science and technology develop at a remarkable pace, and digital network information technology facilitates the construction of next-generation broadcasting networks. Development in the media field has expanded new pathways and spaces for the media industry, breaking through the technical limitations of traditional media and bringing profound influence to future media industry growth. The application of high-tech presents significant opportunities for new media transmission, while simultaneously posing substantial challenges. As public demands for media services gradually increase, traditional text and image transmission forms can no longer satisfy audience needs. Audio-visual new media has become the main trend in future new media development, not only constituting a new media transmission form but also providing audiences

with more diverse application experiences. With continuous transformation of emerging technologies, audio-visual new media must meet the developmental requirements of the era by continuously expanding its growth space, achieving higher-level advancement, and providing the public with richer media services.

The media field has determined that NGB (Next Generation Broadcasting) will be the primary form of next-generation broadcasting networks, with its most important characteristic being cloud computing functionality. NGB integrates the application advantages of internet technology with the strengths of broadcasting and television media to form distinctive network features that can achieve convenience, openness, and efficiency in media business forms. This can effectively enhance the credibility and influence of media operations, while cloud computing technology can provide technical support for its networks, offering new ideas for the national and even global development pattern of audio-visual media.

1.3 Facilitating Management and Rational Utilization of Media Content and Resources

Currently, provincial and municipal radio and television stations led by China Central Television have all achieved digital and networked development models, making full use of network resources to construct new media network platforms. However, these platforms suffer from dispersed resource system layouts and largely identical media service forms, failing to form scaled and intensive development models. These phenomena are detrimental to the healthy development of audio-visual new media, as repetitive transmission content and service methods struggle to meet users' diverse needs while also making resource sharing and added value realization difficult. The application of cloud computing technology can provide more possibilities for intensive development, reduce application costs of new media resources, and promote the construction and development of intensive media platforms [1].

1.4 Providing Technical Means for Data Monitoring and Regulation in Audio-Visual New Media

China's broadcasting system has established a comprehensive network monitoring system that can timely monitor program listening and viewing effects, providing data references for relevant media to make program production decisions. Through cloud computing technology application, future monitoring networks integrating program regulation, security scheduling, and other functions can be realized. Audio-visual new media represents an important form and component of new media, making technical detection and security supervision essential. With cloud computing technology, timely statistics and analysis of network data information can be achieved, thereby promoting scientific development.

2. Smart Terminal Technology in Audio-Visual New Media

2.1 Application of Smart Terminal Technology in Audio-Visual New Media

Smart terminal technology leverages smart chip processing capabilities, and the platformization and convergence of information terminals have become inevitable development trends. The smart terminal application of audio-visual media is based on the development of digital television broadcasting, featuring open or independent operating systems that can enhance the core competitiveness of digital television and media industries while providing audiences with more personalized service experiences. As smart terminal technology continues to develop, audio-visual new media forms will achieve higher-quality video and audio processing capabilities and stronger business carrying capacities, actively promoting the development of audio-visual new media [2].

2.2 Impact of Smart Terminal Technology on Audio-Visual New Media

2.2.1 Continuous Improvement of Video and Audio Processing Capabilities With continuous scientific and technological progress, smart terminal processing technology and computing power will gradually strengthen, with increasing processing efficiency and decreasing energy consumption, thereby enhancing the practical value of audio-visual new media. Meanwhile, various efficient hardware technology integrations provide the necessary technical foundation for business expansion of new media forms, bringing users higher-quality application experiences and subjective satisfaction.

2.2.2 Promotion of Audio-Visual New Media Platform Terminal Development As smart terminal technology continues to evolve, the programs and functions of terminal technology applications will gradually increase, with control interfaces trending toward maturity and humanization. Diversified application methods help realize open application modes for smart terminals, enabling the construction of third-party operating system platforms and the development of more applications. Such platform construction and application methods make it possible for users to achieve integrated application content, information consumption, and personalized platform interaction services within the platform. Platform terminal business expansion can promote the development of audio-visual new media business, with smart terminal technology providing technical support for these application methods [3].

2.2.3 Acceleration of Receiver Terminal Convergence Under the trend of application business convergence and technical application integration, smart terminal technology has simultaneously promoted the high-quality, multi-pattern, and interconnected development direction of audio-visual new media terminals. The service functions of information terminals continuously increase, integrating communication, media services, e-commerce, life

entertainment, and other functions. Meanwhile, continuous technological innovation and improvement enhance the convenience, reliability, and stability of technical applications. The open application model achieves information terminal convergence, combining television terminals, PC terminals, and mobile terminals to enhance audience application experiences.

3. IoT Technology in Audio-Visual New Media

3.1 Application of IoT Technology in Audio-Visual New Media

IoT technology employs network technology in intelligent forms, enabling physical objects to possess network information perception capabilities through implanted technical chips, while also providing certain computing and execution capabilities to serve people's intelligent lifestyles. IoT technology application enables intelligent control of life equipment, positioning, tracking, and effective management of objects. National regulations have clearly stipulated the application of IoT technology in the media field. Family broadcasting media users will gradually realize smart home network information systems, while various mobile device terminals will expand broader audience groups for audio-visual new media forms, which is of great significance for their future development [4].

3.2.1 Facilitating Construction of Audio-Visual New Media Home Service Platforms Currently, many families have already applied digital home networks, mainly realized through wired and ultra-broadband wireless networking technologies that connect home wireless gateways with smart terminal devices for network information exchange, providing modern network information services for home users. The expansion of audio-visual new media services such as mobile television and internet television has developed home networks into multifunctional media service platforms integrating data information exchange and processing, achieving home network interconnection and promoting the convergence of audio-visual new media home services.

3.2.2 Expanding Diversified Service Content for Audio-Visual New Media Traditional broadcasting media could only satisfy audience listening and viewing needs. The application of IoT technology and the expansion of its service fields have made possible various service methods including home multimedia entertainment functions, smart home service functions, and communication functions, realizing more diverse business experiences and application feelings for audiences. Diversified business functions help promote innovation in audio-visual new media business forms, catering to audiences' increasingly advanced application demands and thereby promoting more diversified development [5].

4. Conclusion

The application of cloud computing, smart terminal, and IoT technologies provides strong technical support for the development of audio-visual new media, offering diversified development methods, promoting the improvement of its applicability and value, and bringing more diverse application and experience feelings to media audiences. These technologies meet the demands of the era and the public for media service methods and content, promote further integration between new technologies and audio-visual media, and thereby realize the healthy development of audio-visual media.

References

- [1] Han Hao, An Weizhen. Preliminary Exploration of Integrated Management Ideas for Online Audio-Visual Media Industry Under Media Convergence Development Background [J]. Southeast Communication, 2015(5): 6-8.
- [2] Zhang Rui. Research on the Impact of New Generation Imaging Technology on Traditional Audio-Visual Media [J]. Sound and Screen World, 2016(8): 15-17.
- [3] Zhang Mingyao. Analysis on the Development of China's Audio-Visual New Media Industry [J]. Science and Technology Communication, 2016, 8(11): 29, 39.
- [4] Chen Jiyin, Liu Yingqi. Research on Development Status and Trends of 3D Audio-Visual New Media in the Mobile Internet Era [J]. Modern Communication, 2016, 38(10): 8-11.
- [5] He Jing, Wang Xiaoxia, Guo Jia, et al. Research on ITIL-Based Operation and Maintenance Index System for Audio-Visual New Media [J]. Television Technology, 2015, 39(1): 142-145.

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

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