# The Development Status and Future Trends of China' s Broadcasting and Television Industry: A Postprint

**Authors:** Li Jun, Temür Chorig

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## Abstract

In recent years, developments in media technology have presented China' s radio and television industry with new opportunities and challenges. On the one hand, the emergence of new media and technologies has facilitated television program production; on the other hand, the rise of emerging media and self-media has led to audience attrition for traditional broadcasting, making innovation and reform imperative for the industry. Against this backdrop, this paper analyzes the current development status and future trends of China's radio and television industry based on practical considerations, for reference.

## Full Text

## Abstract

In recent years, media technology developments have presented both new opportunities and challenges for China' s radio and television industry. On one hand, the emergence of new media and technologies has facilitated television program production; on the other hand, the rise of emerging media and self-media platforms has caused traditional broadcasting to face audience attrition, making innovation and reform imperative. Against this backdrop, this paper examines the current development status and future trends of China' s radio and television industry, drawing on practical realities to provide insights for stakeholders.

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**Authors:** Li Jun[1], Temurichaoge[2]

## Introduction

Promoting the healthy and stable development of the radio and television industry contributes significantly to strengthening China' s cultural sector and advancing national information development. In this new era of coexisting opportunities and challenges, strengthening technological reform and implementing policies better suited to China' s national conditions are crucial measures for ensuring the long-term healthy development of the industry. However, under the impact of new media, traditional broadcasting has fallen into a developmental predicament. The following analysis examines the current development status of China' s radio and television industry.

Government support has created a favorable policy environment for industry development. For instance, the State Administration of Radio and Film has issued four IPTV licenses (both regional and national) to CCTV International, Shanghai Media Group, and Zhejiang Radio & Television, providing important momentum and protection for triple-network integration. Additionally, the administration has strengthened industry regulation by introducing specific entertainment restriction policies, guiding China' s media sector toward more standardized and healthy development.

Nevertheless, policy changes also present challenges. The IPTV licensing initiative, while standardizing market order and avoiding cutthroat competition, may simultaneously dampen industry dynamism and passion, posing challenges for other television stations. Similarly, entertainment restriction policies have forced traditional broadcasters to reduce advertising volume and cancel numerous film and television productions, resulting in both economic losses and audience attrition as viewers migrate to online video platforms.

## 1. Emergence and Development of China's Radio and Television Industry

The advent of radio and television brought unprecedented speed and depth to human information dissemination. China' s earliest radio broadcasting emerged in 1923, later than global counterparts, but the industry has maintained rapid momentum with continuously improving technology and an expanding audience base. Since implementing reform and opening-up policies, China has pursued a strategy of coordinated economic construction and reform, which has mobilized local enthusiasm for broadcasting construction. Regions have continuously strengthened technical research and increased investment in capital and human resources, leading to the formation of modern electronic media.

Modern electronic media integrates cable, wireless, and satellite direct broadcast technologies, significantly improving information transmission speed and quality while creating diverse possibilities for industry development and transforming people' s lifestyles and entertainment options. The government has consistently supported new media development through relevant policies and

guidance documents, creating a sound policy environment for the broadcasting industry.

## 2. Current Development Status

### 2.1 Rapid Development Pace

Radio and television media play vital roles in information dissemination, public education, resource optimization, and social guidance, making them essential for enhancing China' s soft power and promoting cultural industry upgrading. Since the 21st century, rapid technological advances have driven swift industry development. The construction and deployment of broadcasting networks have greatly improved domestic coverage, providing the public with more comprehensive, high-quality, and convenient services.

In high-definition interactive television, technological progress has continuously advanced program production capabilities, improving television quality across picture, sound, and special effects, delivering enhanced viewing experiences. Additionally, China' s economic growth has enabled seamless urban-rural coverage through limited networks. Despite its late start, China' s broadcasting industry has achieved high-quality, high-efficiency development. In recent years, the application of "safe broadcast early warning systems" in county-level and above network machine rooms has effectively protected television networks, enhancing transmission security and stability.

### 2.2 Developmental Challenges

Despite rapid growth, China' s radio and television industry faces several unresolved issues. First, although industry scale has expanded with continuous innovation in security and program production technologies, domestic technological capabilities and industry scale still lag behind international standards. Regional disparities in broadcasting technology are significant, hindering unified and consistent development.

Second, the industry suffers from a shortage of professional backbone personnel. Current practitioners lack deep industry knowledge, possess relatively low technical expertise, and demonstrate insufficient innovation capacity, with few interdisciplinary talents. This stems from China' s talent cultivation overemphasizing traditional media technology while neglecting comprehensive ability development, leaving students with limited exposure to advanced global broadcasting technologies and constrained innovative thinking under traditional media concepts.

Third, under the backdrop of new media' s rapid expansion, broadcasting must collaborate with emerging media to achieve mutual benefit and stable development. However, due to constraints from concepts, technology, policies, and other factors, integration remains insufficient, leading to competition over markets and resources that hinders industry progress. Finally, imperfect domes-

tic policies have left the industry lacking a solid development foundation and safeguards, resulting in weak regulation and various malpractices that obstruct development.

## 3. Future Development Trends

### 3.1 Broadcasting New Media

In the context of rapid scientific and technological development, the broadcasting industry is actively seeking integration points with new media to achieve mutual benefit. Broadcasting new media represents a concept and media form relative to traditional media like newspapers, journals, and television—it constitutes innovation and extension of traditional media.

Currently, China' s broadcasting new media can be divided into three categories based on different carriers: mobile group, television group, and internet group. For the mobile group, broadcasting new media manifests as mobile radio and mobile television; for the television group, it appears as digital television IPTV; and for the internet group, it takes the form of internet radio and online video [1].

### 3.2 Waterfall Flow and Digital Microwave Technology

Driven by technology and influenced by emerging media, the industry shows another development trend: the emergence and application of waterfall flow interfaces. It is evident that waterfall flow will drive new network development patterns in broadcasting while delivering novel visual experiences. In practical terms, the widespread application of television QR codes and ultra-high-definition visual standards will enable audiences to have more virtual and intuitive experiences with broadcasting media.

As broadcasting becomes increasingly popular and user numbers grow substantially, existing signal transmission technologies can no longer meet actual capacity requirements. To address this, digital microwave technology has emerged as a new signal transmission solution. Its primary function is digital signal transmission, with systems mainly comprising PDH and SDH standards. The most important feature is "microwave" itself—microwave radio frequency wavelengths range from 1 meter to 1 millimeter, offering enormous adjustment space, extremely wide frequency bands, and high band frequencies exceeding 300 Hz. Using digital microwave technology for broadcasting signal transmission changes microwave transmission frequencies, completing coverage through specific transmission methods.

### 3.3 Triple Network Convergence

The integration of broadcasting with internet technology represents an inevitable trend. Internet application in broadcasting will innovate information transmission methods while effectively compensating for broadcasting' s

immediacy limitations, making it more competitive. In traditional contexts, television programs could not be saved, failing to meet audience demands for repeated viewing. However, with internet technology, broadcasting information can be preserved, categorized by content, and retrieved directly on television for replay, giving audiences more choice and selection rights.

Internet technology also improves and innovates broadcasting transmission methods, expanding coverage to achieve cross-temporal and large-scale dissemination. Against this backdrop, China has proposed the "triple network convergence" strategy, aiming to organically integrate computer networks, telecommunications networks, and cable television networks. This involves achieving interconnectivity and seamless coverage at the network level, cross-penetration at the business level, and adopting unified IP protocols at the application level. The ultimate goal is to provide unified, multimedia, diversified, and personalized services that comprehensively satisfy user viewing needs and social development requirements.

Triple network convergence represents a significant development opportunity. For example, integrating computer and cable television networks improves hardware and software conditions, particularly through computer technology application in wireless relay stations, which effectively meets diverse user needs and enhances relay quality and efficiency [2]. In harsh environmental conditions, computer technology enables remote monitoring and control, eliminating environmental impacts on broadcasting relays while improving informatization and automation levels and facilitating management.

Before computer technology became widespread, analog signals dominated broadcasting, but information reception and transmission suffered from external interference, resulting in poor relay quality such as audio-visual desynchronization, frozen frames, or blurred images. However, with advanced computer technology, digital television broadcasting equipment can convert analog signals to digital signals [3]. Compared with analog signals, digital signals are more stable, offering higher transmission quality and rates, effectively solving problems like blurring, stuttering, and desynchronization while improving service quality and user experience.

### 3.4 Next Generation Broadcasting Network

China' s Next Generation Broadcasting Network (NGB) represents another future trend. NGB is a next-generation broadcasting network jointly organized and developed by the State Administration of Radio and Film and the Ministry of Science and Technology. Compared with traditional broadcasting, this new network better suits China' s national conditions and social development needs. NGB construction is based on mobile multimedia broadcasting and cable television network digital conversion technology, supported by high-performance broadband information network technology. Its characteristics and central objectives include full-network coverage, wired-wireless integration, and triple net-

work convergence.

NGB development is significant for advancing the broadcasting industry and promoting socialist society construction in China. As an important public opinion platform for the Communist Party and the people, radio and television bear crucial responsibilities in information dissemination, mainstream culture promotion, and core ideology communication. The industry' s long-term stable development not only promotes China' s cultural industry but also enhances socioeconomic levels, national cohesion, and comprehensive national strength. Therefore, broadcasting networks are indispensable in future national information infrastructure, playing vital roles. In the context of rapid information technology development, strengthening NGB construction is both necessary and inevitable.

For a long time, China' s broadcasting industry has suffered from limited information dissemination scope, low transmission rates, and high operational costs, making it difficult to compete under new media impact. However, NGB construction can restore competitive advantages by addressing these deficiencies at lower cost and bridging the digital divide. Moreover, NGB aims to provide rich and colorful services for users. Whether traditional broadcasting or NGB, the industry always serves the public, and effectively meeting diverse learning and entertainment needs while delivering superior user experiences is essential. From a terminal perspective, current broadcasting suffers from low interactivity—viewers watch programs unidirectionally without interaction. After NGB implementation, this problem will be resolved. For example, when watching an entertainment program, if viewers wish to replay content, they can directly click into the internet option, and a small screen will pop up displaying internet content for user selection.

## Conclusion

Promoting the healthy and stable development of the radio and television industry helps strengthen China' s cultural sector and advance national information development. In this new era of coexisting opportunities and challenges, the industry should seize opportunities under Party leadership, fully utilize available resources, continuously innovate business models, strengthen technological construction, improve service quality, and ensure long-term healthy development to maximize its social value.

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**Author Affiliations:**
1. Bairin Left Banner Station 739, Inner Mongolia Autonomous Region Radio and Television Administration
2. Chifeng Central Station, Inner Mongolia Autonomous Region Radio and Television Administration

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