
AI translation · View original & related papers at
chinaxiv.org/items/chinaxiv-202310.01256

Research on Communication Modes of Mainstream Media in the Context of Media Convergence in the 5G Era: Postprint

Authors: Xiong Ying, Yang Jianmin

Date: 2023-10-08T00:00:00+00:00

Abstract

In the 5G (5th Generation Mobile Communication) era, media convergence has become an inevitable trend, and its modalities have evolved from simple “addition” to complex “integration”. News and public opinion work will face even more severe challenges. This study will take provincial traditional mainstream media, particularly television news, as an example to explore the communication of traditional mainstream media from the perspective of media convergence in the 5G era.

Full Text

Research on Communication Methods of Mainstream Media from the Perspective of Media Convergence in the 5G Era

Xiong Ying¹, Yang Jianmin²

(1. Hebei Radio and Television Station, Shijiazhuang, Hebei 050031; 2. Great Wall New Media Group, Shijiazhuang, Hebei 050031)

Abstract: In the 5G (fifth-generation mobile communication) era, media convergence has become an inevitable trend, evolving from simple “addition” to complex “integration.” News and public opinion work will face more severe challenges. This study takes provincial traditional mainstream media, particularly television news, as examples to explore the communication of traditional mainstream media from the perspective of media convergence in the 5G era.

Keywords: 5G technology; media convergence perspective; mainstream media; media convergence; communication methods

Classification Number: G206

Document Code: A

Article ID: 1671-0134(2021)01-039-03
DOI: 10.19483/j.cnki.11-4653/n.2021.01.009

Citation Format: Xiong Y, Yang J. Research on Communication Methods of Mainstream Media from the Perspective of Media Convergence in the 5G Era[J]. China Media Technology, 2021(01): 39-40, 64.

1. 5G Technology Development and the Needs of Provincial Mainstream Media in Media Convergence

The *Decision of the Central Committee of the Communist Party of China on Several Major Issues Concerning Comprehensively Deepening Reform* proposed the requirement to “integrate news media resources and promote the integrated development of traditional and emerging media” [1]. On August 18, 2014, the fourth meeting of the Central Leading Group for Comprehensively Deepening Reform passed the *Guiding Opinions on Promoting the Integrated Development of Traditional and Emerging Media*, where General Secretary Xi Jinping delivered an important speech, elevating media convergence to a national strategic level. In 2016, the “media convergence showcase” People’s Daily Central Kitchen was launched, marking a leap from theory to practice for the value of “media convergence.” In September 2020, the General Office of the CPC Central Committee and the General Office of the State Council issued the *Opinions on Accelerating the In-depth Integrated Development of Media* [2], comprehensively promoting the pace of media deep integration in the new era. The topic of media convergence has thus established a complete framework for in-depth discussion and research from the perspectives of national strategy, professional theory, and practical operation.

On September 16, 2020, the *Shanghai Securities News* reported that the State Grid Corporation of China planned to invest 60-80 billion yuan to establish a joint venture with China Broadcasting Network, accelerating 5G construction. On October 12, 2020, China Broadcasting Network Co., Ltd. was officially established in Beijing, representing an important step in advancing the integration of national cable television networks and the integrated development of broadcasting 5G construction.

1.1 Four Innovations Brought by 5G Technology to Mainstream Media’s Content Industry

The 2019 Tencent Technology Conference noted that with the development of 5G technology, the content industry has already presented a “new momentum, new inflection point, and new world.” 5G will bring four innovation opportunities to the content industry, including creative innovation, interactive innovation, experiential innovation, and carrier innovation. Seizing this opportunity, mainstream media should leverage the trend to create a new communication

style for the 5G era that combines “good content + good technology.”

1.2 5G Technology Brings Ultra-Experience to Mainstream Media Users

The arrival of the 5G era not only brings an explosion in data volume but also increases the demand for ultra-high-definition content. While producing quality content, mainstream media should also fully leverage their late-mover advantages to reserve and upgrade relevant equipment and technology, continuously promoting deep media integration to bring users a more immersive audio-visual experience.

Currently, the living space of traditional mainstream media is severely suppressed by the internet. Data from China Audience Research Rating (CSM) shows that from 2014 to 2019, the average daily TV viewing time per capita across 71 cities nationwide decreased by 41 minutes [3]. On June 6, 2019, China’s Ministry of Industry and Information Technology issued 5G commercial licenses to China Telecom, China Mobile, China Unicom, and China Broadcasting Network, officially marking China’s entry into the 5G era. By the end of June 2020, 81 operators worldwide had deployed 5G commercial networks, covering regions accounting for 72% of global GDP. It is estimated that by 2025, 5G commercialization will create an economic value of 10.6 trillion yuan and provide 3 million jobs.

The arrival of the 5G era presents a new opportunity for mainstream media to win the battle for users. Mainstream media should leverage the communication advantages of 5G and rely on terminals such as 5G mobile phones (with an estimated 3.044 billion 5G commercial phones worldwide by the end of 2025) and large screens to firmly occupy the commanding heights of mainstream media communication methods in the 5G era, achieving the integration of good content and good technology.

1.3 New Opportunities Brought by 5G Technology for Mainstream Media Convergence (Provincial Media Examples)

1.3.1 Hebei Radio and Television Station On October 1, 2019, the whole nation celebrated at Tiananmen Square. Hebei Radio and Television Station produced the “Magnificent 70 Years · National Day Special Program” titled *Tear-Jerking Scene at Tiananmen Square: Ten Thousand People Watching the Flag-Raising, Singing “I Love You China”*. As a converged media masterpiece, it was broadcast simultaneously on large and small screens, accumulating 6.14 million views on Toutiao. User comments such as “Moved to tears! I believe every Chinese person who watches this 298-second video will have uncontrollable emotions gushing out! Patriotism is the tremendous energy contained in the hearts of 1.4 billion Chinese people and the spiritual driving force for realizing the Chinese Dream of the great rejuvenation of the Chinese nation!” prompted numerous user follow-up posts, praising the good life and expressing patriotic

feelings on the 70th anniversary of the founding of the People's Republic of China.

During the COVID-19 pandemic, the radio and television station promptly issued authoritative voices through its official accounts and mobile platforms. Reporters conducted in-depth interviews on the front lines of epidemic prevention and control for consecutive days, producing multiple heavyweight reports that showcased the heated scenes of Hebei people's resumption of work and production, strengthening their confidence and determination to restore normal production and life.

In the decisive year of building a moderately prosperous society in all respects and fighting poverty alleviation, Hebei Radio and Television Station flexibly used graphic illustrations, audio-video content, VR, and live streaming to publish over 18,000 graphic and video articles with total views exceeding 355 million [4], launching special series programs such as *Gathering Strength to Build a Moderately Prosperous Society* and *The Road to Transformation*, which quickly became converged media brands with over 100 million clicks. The all-media news program *Flying Over Hebei*, produced for two consecutive years, became a phenomenal news product, with each episode exceeding 10 million clicks.

1.3.2 Hainan Radio and Television Station Hainan Radio and Television Station has expanded its display space in converged media thematic reporting, providing more opportunities for interaction between mainstream media and audiences. During the 2019 Boao Forum for Asia Annual Conference, Hainan Net TV's converged media live program *Boao Time • The First Ray of Sunshine* became the first in the country to use 5G+4K+8K VR large and small screen interactive technology, attracting 110,000 online viewers. The series of short videos was reposted by more than 30 media outlets inside and outside the province, with cumulative repost views exceeding 1.5 million.

1.3.3 Hunan Radio and Television Station As a "pacesetter" in media convergence development among domestic provincial mainstream media, Hunan Radio and Television Station's Mango TV has established a 5G research laboratory in partnership with strategic partners such as China Mobile, dedicated to research on new technology applications. In addition, it has actively promoted national network integration, achieved the establishment and product launch of the national key laboratory for 5G high-tech video multi-scenario applications [5], and continuously explored content creation and commercial monetization in the 5G era.

1.3.4 Shandong Radio and Television Station In October 2016, *Shandong News Broadcast*, which bears the heavy responsibility of mainstream propaganda, was placed under the management of the Converged Media Information Center. As one of the first provincial mainstream media to include it in the media convergence position, Shandong Radio and Television's *Shandong News*

Broadcast and other TV news columns produce more than 400 minutes of news information daily. Seeking good technology, Shandong Radio and Television independently designed and built a 4K OB van, using 6K or 4K ultra-high-definition equipment to shoot *Flying Over Shandong*. It has steadily advanced strategic cooperation with Huawei Group, particularly in-depth cooperation in the 5G field.

2. New Characteristics of Mainstream Media Communication Methods in 5G-Powered Media Convergence

2.1 Faster Transmission Speed

Information transmission speed in the 5G network environment has been greatly improved. While current LTE peak rates can reach 100MB/s, transmission speed in a 5G network environment can be increased by 10-100 times, with LTE peak speeds reaching 10GB/s. Audiences of mainstream media will have a better sense of experience and gain.

2.2 Shorter Latency

Compared with 4G networks, 5G networks have shorter latency. End-to-end latency in 5G networks is one-tenth of that in 4G networks, with latency less than 5ms, greatly improving the efficiency and speed of mainstream media communication.

2.3 Lower Power Consumption

Compared with 4G networks, 5G networks have lower power consumption. In the information age, to better meet the requirements of mainstream media communication and audience needs, the low power consumption of 5G networks is more suitable for large screens and mobile client audiences.

2.4 Stronger Media Interaction

Compared with 4G networks, 5G networks enable stronger media interaction. Currently, the “Jimu” 100-megapixel camera in the “Array Sensor Wide Field High-Resolution Light Field Imaging Key Technology” independently developed by Tsinghua University can freely switch between close-up shots with millisecond-level switching output, enabling both live broadcast of scenic panoramic dynamic images and coordination with tour guides and anchors to explain different scenic spots, providing more display space for interaction between mainstream media and audiences.

3. How Mainstream Media (Provincial) Can Seek Better Development in Media Convergence

In the process of media convergence, mainstream media must not only adapt to users' constantly improving aesthetic needs but also strengthen 5G internet thinking. While adhering to the laws of news communication and emerging media development, they must also have the courage to explore the complementary advantages of traditional and emerging media, continuously promoting in-depth integration of traditional mainstream media and emerging media in content, channels, management, and other aspects.

3.1 Adapt to New User Needs and Optimize News Supply Content

In terms of communication structure, converged media news centers are advancing with tremendous momentum. Currently, there are 147 county-level converged media news centers in Hebei Province. In terms of news supply philosophy, radio and television media should establish user thinking, transforming from news information producers to news information service providers. In terms of news supply content, radio and television media should shift from “program positioning as content orientation” to “meeting individual audiences' precise information needs as the orientation.”

3.2 Increase Media Contact Possibilities and Grasp New Spatial Scenario Variables

Under 5G conditions, traditional mainstream media needs to deliver news information to audiences through intelligent media adapted to spatial scenarios to achieve effective reach of news information. It is worth noting that rural users occupy a huge market share of media communication in the process of rural revitalization and urbanization. Through 5G technology, broadcasting and television can be interconnected with transportation, creating a “urban-rural transportation” media application scenario. Through 5G technology, broadcasting and television can also be interconnected with home life, consumption, entertainment, shopping, and live streaming for agriculture, rural areas, and farmers.

3.3 Precisely Analyze Audience Distribution and Broaden Production and Communication Channels

Mainstream media should consolidate existing audiences, attract potential audiences, and avoid losing...

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

Source: ChinaXiv – Machine translation. Verify with original.