Technology Application and Development Trends of County-Level Converged Media Centers (Post-print)

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

Abstract

At present, new media is experiencing vigorous development, the channels through which people obtain information have become increasingly complex, the position of traditional media in information dissemination is being challenged, and the discourse power of news and publicity has shifted toward new media. In response, the construction of county/district-level media convergence centers should be placed on the agenda, with a breakthrough point identified for the integration of media information resources. To this end, this paper analyzes the construction background of county/district-level media convergence centers and the existing problems in their construction, proposes technical application pathways for these centers, and forecasts the development trends of their technology.

Full Text

Technical Applications and Development Trends of County-level Integrated Media Centers

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Abstract: With the vigorous development of emerging media, people' s access to information has become increasingly complex, shaking the dominant position of traditional media in information dissemination and shifting the discourse power of news propaganda to new media platforms. In response, the construction of county-level integrated media centers should be prioritized to identify breakthroughs in the integration of media information resources. This paper analyzes the construction background of county-level integrated media

centers and identifies existing problems in their development. It proposes technical application pathways for these centers and explores future development trends in county-level integrated media center technology.

Keywords: county-level integrated media; central technology; application; development trends

CLC Number: G2
Document Code: A
Article ID: 1671-0134(2021)10-078-03
DOI: 10.19483/j.cnki.11-4653/n.2021.10.022
Citation Format: Zhen Juan. Technical Applications and Development Trends of County-level Integrated Media Centers [J]. China Media Technology, 2021(10): 78-80.

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1. Construction Background of County-level Integrated Media Centers

With the continuous advancement of high technology, traditional media has faced certain challenges, although television, radio, and newspapers still maintain significant influence. Media convergence has become an inevitable development trend, making the construction of integrated media centers essential. Numerous media organizations in China, influenced by market factors, have entered a period of transformation and reform to pursue better development. In daily life, audiences now engage with complex media formats, paying attention not only to radio and television but also, more importantly, to online platforms. Consequently, county-level radio and television stations should establish credible integrated media news platforms to publish the latest information, ensuring that the public can access rich and diverse content.

1.1 Requirements of the Era The construction of county-level integrated media centers represents a requirement of the Party Central Committee. Against the backdrop of the times, these centers must fulfill public opinion guidance tasks by building upon existing county-level media platforms, integrating traditional and new media operations to create new media operation models. Before the rapid development of new media, county-level media had already undergone complex development phases, with traditional print media being superseded by television-dominated media operation models. County-level media, as an intermediate layer within television stations, exerted significant influence on the lives of county residents. However, with the rapid development of new media, various social media platforms have entered a new development stage, with short-video-based mobile media becoming important channels for news dissemination. In this context, social opinion guidance and propaganda face enormous challenges, as traditional media operations can no longer meet the requirements of propaganda work. Therefore, building integrated media centers

containing various media operation technologies based on radio and television stations represents a requirement of the times.

1.2 Driving Factors for Integrated Media Centers The establishment of integrated media centers by county-level radio and television stations involves multiple driving factors. At the policy level, following the 2018 National Conference on Propaganda and Ideological Work, county-level integrated media centers began construction, with various guiding documents distributed to local areas, which has promoted their development to a certain extent. At the technical level, information network technology has developed to a new stage, with digital media technology and 5G technology developing rapidly, providing technical conditions for various forms of media convergence. At the grassroots level, audiences now engage with complex media formats in their daily lives, paying attention not only to radio and television but also, more importantly, to online platforms. Consequently, county-level radio and television stations should establish credible integrated media news platforms to publish the latest information, ensuring that the public can access rich and diverse content.

1.3 Models of County-level Integrated Media Centers Different regions have developed different models for county-level integrated media center construction due to variations in past work models, funding, technical conditions, and resources. For example, the platform-sharing model relies on existing county-level platforms to provide relevant technology, media resources, and hardware, achieving content interoperability and information sharing. The financial support model, based on local and central government support, constructs new integrated media sharing platforms that require establishing content creation centers and news command centers to facilitate collection, editing, and integration of various resources, creating a vertically integrated operation model. The enterprise operation model, another common media operation approach, integrates existing county-level information media departments and follows the operational procedures of enterprises and institutions to establish news collection and editing processes and human resource management systems, thereby further enhancing the construction level of county-level integrated media centers.

2. Problems in County-level Integrated Media Center Construction

2.1 Construction Methods in Initial Stage with Significant Controversy Compared with provincial-level media, county-level media still exhibit differences in construction models and should pursue new development paths. Internet infrastructure development varies across regions, and current media applications are suitable for radio and television systems, which serve as the foundation for development. Some media groups in China have begun innovating development paths by creating county-level integrated media centers that integrate radio, television, newspaper, and other media resources, gaining widespread public recognition. However, media groups face enormous pressure during reform and require long-term improvement. The reform process for

county-level media has been slow, and these media centers still face significant difficulties in construction.

2.2 Incomplete Media Institution Integration and Difficulties in Unified Planning Currently, county-level media platforms lack interaction and centralized operation and management, making unified planning difficult. County-level media are generally managed by county-level propaganda departments, which facilitates resource sharing through unified dispatch but also constrains innovation due to institutional limitations. County-level media cannot form unified organizations, and funding methods for each media unit are singular, often relying on government support and institutional investment. Financial support for each county-level media platform is insufficient, media organizations have poor wealth creation capabilities, staff salaries are low, and talented individuals are unwilling to work in county-level media. County-level media suffer from talent and funding shortages, and with each media unit operating in isolation, they cannot innovate integrated media center technologies, resulting in poor resource sharing capabilities and inability to ensure real-time dissemination of propaganda information. When major events occur, each media institution prioritizes its own interests, making unified planning impossible and resulting in insufficient media influence and communication power.

2.3 Diversified Institutions but Monotonous Content County-level media platforms have achieved diversified development, with research showing that 60% of county-level media in China have undergone three reforms and can integrate more than three types of media, while 40% have established third-party popular platforms. County-level WeChat platform construction has achieved ideal results, with over 1,600 WeChat public accounts in China, but county-level client platform construction remains poor. Although county-level integrated media have developed complete communication models, some platforms lack resources and face operational difficulties. County-level integrated media development faces numerous constraints, as new media platforms cannot organically integrate with traditional platforms after incorporation, and problems of scattered information and resource waste persist. County-level integrated media exercise cautious content management, often lacking innovation, resulting in poor overall information dissemination effectiveness.

3. Technical Application Pathways for County-level Integrated Media Centers

Technology investment is crucial content in the development of county-level integrated media centers and represents a key focus for promoting their development. In engineering construction, equipment selection, and system design, compliance with relevant Chinese radio and television broadcasting standards is required, along with meeting requirements for network communication technology, computer technology, and video and audio editing technology. Integrated media

centers should feature ease of maintenance, compatibility, advanced characteristics, and high cost-performance ratios. By analyzing problems in county-level integrated media center development and innovating based on existing equipment, studios can be upgraded. During the upgrading process, in addition to equipment upgrades, network transformation is necessary, and special topic production studios should be established to facilitate the creation of various types of special topics.

3.1 Integrated Media Center Technology in Editing Equipment Integrated media center technology integrates traditional media and internet-based methods, merging hardware equipment and resources while optimizing and upgrading equipment and software to expand information dissemination scope. In the past, news topics were produced using EDIUS editing software and Legend subtitles for program production. During integrated media center construction, relevant configurations should be provided to optimize and upgrade editing equipment. For example, one Legend Thunder 5000 and two Legend Thunder 4000 units can be configured, selecting the Legend Thunder 4000 host and equipping it with multiple high-definition monitors, speakers, and headphones. The configuration includes motherboards, optical drives, Blu-ray burners, power supplies, and WIN 7 64-bit enterprise systems.

3.2 Integrated Media Center Technology in Special Topic Studios Aerial photography technology is widely used in information collection and resource gathering, facilitating the collection of rich information. In the application of aerial photography technology, the traditional television broadcasting platform's microwave and satellite transmission models have been changed. The overall operation process is relatively complex, imposing high skill requirements on staff. With the development of network technology and live streaming technology based on computers, county-level integrated media centers can utilize mobile live streaming technology according to actual conditions. It is necessary to purchase aerial photography equipment based on current shooting requirements. County-level integrated media centers can purchase two sets of aerial photography equipment: one large set for major occasions and a small set for special topic aerial photography. Purchase AU-V35LTMC cameras, configure original camera equipment and tripod connection plates, and tripods, as detailed in Table 1 .

Table 1: Supporting Equipment List - AU-VCVF10MC viewfinder (10 inches) - AU-VSGL2MC construction bracket - USB3.0 card reader - AU-XP0256AMC EX256GP2 - Professional camera configuration - Professional camera configuration - Technical standard: USB3.0 interface, Windows7 32/64 support system - Long recording function: recording time exceeds 200 minutes, with adaptability to complex environments such as temperature and humidity - AJ-MH800G - AJ-MC900G - SHAN-TM700 - Connection with tripod and camera - Matte box, lens bracket, cage, dovetail plate set

3.3 Mobile Live Streaming Technology Application in County-level Integrated Media Centers With the widespread market application of mobile live streaming technology, platforms such as Douyin, Kuaishou, and Huoshan have entered a stage of rapid development. These platforms are user-based, and research on program live streaming functions is lacking in county-level integrated media center construction. County-level integrated media centers should build well-structured mobile live streaming platforms from a practical perspective. For example, a certain county-level integrated media center in China has achieved remarkable results using mobile live streaming technology. Mobile live streaming platforms include audio and video content, as well as interactive and management functions. In the use of mobile live streaming technology, business processes include interactive live broadcast room management, live broadcast room role management, graphic live broadcasting, live broadcast delay management, and live broadcast assistant apps. The processing objects mainly involve managing live broadcast room titles, times, introductions, and status, as well as managing live broadcast sources for television and mobile phones, selecting appropriate hosts and guest roles, and counting text and images. Interaction is completed through comment posting and lucky wheel functions. Building mobile network live streaming platforms makes service content more flexible. During operation, platform content can be configured, and functions can be appropriately expanded to meet actual business needs. All modules involve visual management methods to further enhance editors' work efficiency.

3.4 High-definition Broadcasting Technology Application in County-level Integrated Media Centers County-level integrated media centers must provide high-definition products to the public through high-definition technology platforms to complete system control, signal transmission management, and security protection. First, the management system directly affects high-definition broadcasting of materials and requires management of program playlists and platform operation maintenance, including material management and program broadcasting list systems. In the material management subsystem, county-level integrated media centers have a certain amount of resources. Although their material libraries often contain less content than provincial and municipal media libraries, the content is comprehensive, making broadcasting material management tasks heavy. Material management work includes material acquisition, organization, editing, storage, and release. The material management subsystem migrates resources from DVDs and online media to meet program broadcasting requirements. Material management work primarily involves managing material migration and material storage. Storage management targets materials on broadcasting servers and in systems, while material migration management addresses program broadcasting requirements in management systems, automatically and manually migrating program materials and controlling migration status. Intelligent processing of materials should be implemented when developing control strategies. The program playlist is an important subsystem that undertakes the heavy responsibility of program broadcasting and

serves as the work interface for broadcasting programs. In county-level integrated media center work, common broadcasting methods include on-time, sequential, and triggered broadcasting. The management system involves rich content, and subsystems should be adjusted according to actual conditions to ensure reasonable use of high-definition broadcasting technology. Second, the data statistics system: county-level integrated media centers must count both programs and advertisements broadcasted. Complete data is important for system analysis and audience rating statistics, facilitating future program list adjustments. Third, the operation management system: when using high-definition broadcasting technology, the operation management subsystem includes platform user and platform equipment monitoring modules. After users log in to the program production platform, relevant management permissions are set, and equipment operation status is monitored to adjust network parameters in a timely manner, providing clear programs to the public and enhancing audience viewing experience. Fourth, the control system: the control system includes automatic control systems and program uploading control systems. Taking the broadcasting automatic control system as an example, in high-definition broadcasting platforms, video servers are managed, playback matrices and subtitle equipment are controlled, system status and program broadcasting conditions are analyzed, program source conditions are judged, and broadcasting modes are selected according to system functions. Once system failures occur, information should be transmitted promptly, and the system should issue alerts. Generally, automatic control systems have delayed broadcasting and full tape broadcasting functions. Through high-definition broadcasting technology, the actual requirements of county-level integrated media centers can be met. County-level integrated media centers can adjust resolution according to actual conditions to ensure program broadcasting effects, laying a solid foundation for expanding media influence.

4. Development Trends of County-level Integrated Media Center Technology

To ensure stable and secure technology usage in information institutions and grassroots media institutions, county-level integrated media should focus on data storage, information resource management, system control, and media content release. Consequently, integrated media center technology has high security requirements. To ensure stable and secure usage of county-level integrated media center technology, in addition to unified management of technology platforms by provincial and central television stations, county-level television stations should also focus on technology maintenance and training efforts. When conditions permit, technical security maintenance institutions should be created to guarantee system security. Currently, in the development of county-level integrated media center technology, key content includes the fact that different media face different situations, and the technology systems and platforms used also differ. Multiple systems are prone to creating barriers during integration, affecting county-level integrated media center development. In re-

sponse to technical problems, system universality should be adjusted according to the "County-level Integrated Media Center Provincial Technology Platform Specification Requirements" to break down technical barriers to a certain extent and address existing problems promptly. This will achieve vertical integration across all media and establish a new development mechanism for county-level integrated media.

County-level integrated media center construction has entered a new stage. As a product of the internet era, integrated media centers can complete one-time collection and multiple integrations, broadcasting programs across multiple media institutions to increase radio and television station ratings. Through integrated media center technology, high-quality programs can be actively broadcasted to guide the public and provide good media services. To achieve this goal, media platforms such as WeChat and Weibo can be used to integrate resources and build a widely covered integrated media communication mechanism, ensuring media influence.

References

[1] Luo Xin, Cai Yuting. Institutional Dilemmas and Innovation Paths in Urban District-level Integrated Media Construction—An Empirical Study Based on G City [J]. Journal of Fujian Normal University (Philosophy and Social Sciences Edition), 2021(4): 111-122, 171.

[2] Jin Hui, Wei Haojun, Yao Lili. The "Shanghai Model" of Regional Integrated Media Construction—A Research Report on the Construction of District-level Integrated Media Centers in Shanghai [J]. Party and Government Forum, 2021(4).

[3] Zi Qian. "Integrating" People, Money, and Content to Jointly Build County-level Integrated Media Platforms—Analysis of Typical Cases of County-level Integrated Media Centers in China [J]. Journalism Lover, 2021(4): 49-51.

[4] Shen Weiqun. A Preliminary Study on District-level Integrated Media Development Strategies Under the Background of Yangtze River Delta Integration —Taking Qingpu District Integrated Media Center in Shanghai as an Example [J]. China Radio & TV Academic Journal, 2020(9): 119-122.

[5] Chen Xin. On the Construction of Communication Influence of District-level Integrated Media Centers—Taking Minhang District in Shanghai as an Example [J]. China Newspaper Industry, 2020(12): 18-19.

[6] Zhang Kexu, Zhao Shilin, Deng Jiang. National Strategy, Local Path: Shanghai' s Exploration in District and County Integrated Media Center Construction —Based on Field Research and Questionnaire Surveys of 8 District-level Integrated Media Centers in Shanghai [J]. Shanghai Journalism Review, 2020(6): 28-.

[7] Gao Wei. Analysis of the Construction Characteristics of District-level Integrated Media Centers in Provincial Capital City Central Urban Areas—Obser-

vation on the Construction Practice of Jinniu District Integrated Media Center in Chengdu, Sichuan Province [J]. West China Broadcasting TV, 2020(10): 6-9.

[8] Yu Hai, Wan Xuqi. Analysis of Smart Solutions for County-level Integrated Media Center Construction—Taking Some Counties in Southern and Northern Jiangsu as Examples [J]. China Radio & TV Academic Journal, 2020(4): 112-115.

[9] Zhao Leiming. Keeping Pace with the Times to Develop Local Media —Interpreting County-level Media Development Through the Development of Zhaoyang District Integrated Media Center [J]. Media Forum, 2020(3): 70.

[10] Yan Hanmei. Exploration of the Integrated Development of Traditional TV Media and New Media—Short Video Production and Dissemination [J]. China Media Technology, 2021(8): 62-.

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Responsible Editor: Zhang Xiaojing

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