Key Technologies and Application Analysis for Television Station Media Convergence (Post-print)

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Abstract

The integration of key media technologies is crucial for enhancing the comprehensive development quality of television stations. This paper first summarizes the main concepts of converged media key technologies for television stations and analyzes the platform architecture and business logic. It investigates the primary approaches to television station converged media key technologies from several perspectives, including the integration of APP technology, live streaming technology, WeChat Official Accounts, and microwave technology. Furthermore, it summarizes the existing problems in current television station converged media key technologies, such as the unreasonable construction of new media supporting systems, imperfect schemes for creating branding activities, lack of advanced media convergence concepts, and poor construction levels of information-based new media. Based on these specific issues, it formulates measures to improve the quality of media key technology integration in television stations, which is of great significance for enhancing their comprehensive development quality.

Full Text

Preamble

Analysis of Key Technologies and Applications for Converged Media in Television Stations

Abstract: The integration of key media technologies is crucial for enhancing the comprehensive development quality of television stations. This paper first summarizes the main concepts of converged media key technologies for television stations, analyzes platform architecture and business logic, and investigates primary integration approaches including APP technology, live streaming technology, WeChat Official Accounts, and Weibo. It also identifies current problems: unreasonable construction of new media supporting systems, incomplete

branding activity plans, outdated converged media concepts, and poor informatization levels in new media construction. Corresponding measures are proposed to improve the quality of media key technology integration, which is of great significance for enhancing the comprehensive development of television stations.

Keywords: Television Stations; Media Key Technologies; Convergence

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With the rapid popularization of information technology across various sectors of society, the traditional media industry urgently needs technological innovation. Integrating and applying key media technologies can enable television stations to achieve higher-quality technical integration and effectively enhance their comprehensive development quality.

1. Main Concepts of Converged Media Key Technologies for Television Stations

The integration of key media technologies is essential for television stations, particularly as intelligent technologies have achieved widespread adoption. The coordinated deployment of data resource retrieval and mining technologies, combined with the construction of foundational platform framework schemes from a media processing perspective, forms the basis for rationalizing distributed computer architecture construction.

2.2 Platform Business Logic Structure

Media key technologies refer to the primary technical resources that enhance the quality of media information resource integration and dissemination, thereby optimizing market competitiveness. Comprehensive integration of these technologies provides television stations with more robust technical support, ensuring that outdated technologies and concepts in traditional media can be replaced by learning from emerging media, better adapting to new-era market competition demands. While previous media technology innovation primarily involved additive incorporation of emerging technologies into traditional media frameworks, improving the efficiency and accuracy of media information resource transmission remains critical for maintaining competitiveness and accumulating development experience during the formulation of television station media key technology integration strategies.

2.1 Platform Framework Structure

Based on existing television station media convergence implementation cases, the combined use of computing engines and data engines forms the foundation for rational platform framework construction. The establishment of data storage management mechanisms is also crucial for optimizing the application value of platform frameworks. During specific platform framework construction, encapsulation using foundational frameworks is key to ensuring effective improvement of media key technology integration outcomes. In data engine construction, database development serves as the fundamental guarantee for improving comprehensive information resource acquisition quality. Advancing platform framework construction through integrated memory resource utilization and technical processing of data gateways can effectively enhance overall data supply quality. Additionally, computer engine construction ensures high-quality integration of television station media key technologies.

The clarification of platform business logic is essential for rational application of various technologies. Current platform business logic construction emphasizes flat information storage methods as key to improving media information integration quality. During the integration of new media technologies and concepts, ensuring different media resource types are built upon a unified address basis is fundamental for achieving effective unified data resource management. Furthermore, platform business logic construction pays considerable attention to information resource storage formats, where various foundational information resources are collected on the same platform, existing independently yet freely intermingling to facilitate effective resource retrieval and application.

2.3 Microservices Architecture

Microservices architecture provides direct support for television station media technology integration. This service structure employs functional decentralization to optimize adjustment of various technical solutions that facilitate system operation, ensuring the architecture can better adapt to innovative integration needs of new media technologies when service frameworks are properly configured. Microservices architecture design also clarifies component functions within systems, particularly ensuring appropriate handling of various component assembly processes. Microservices architecture construction enables more rational processing of service system centers, supporting independent operation of new media resources for television stations and facilitating more rational construction of functional expansion schemes for foundational technologies. During construction, microservices architecture functions also expand according to media technology integration needs, providing support for improving system microservice performance.

3.1 Integration of APP Technology

APP technology has been widely applied across various social sectors, and television stations must position it as a primary technical resource during media key technology integration to gain broader market recognition through technical advantages. In designing APP technology integration strategies, innovative application of various technical resources through triple-network convergence is crucial for improving integration quality. Additionally, multi-screen interactive system construction helps APP technology fully realize its value. With current personalized service demands for media resources across society, APP technology innovation also prioritizes personalized service technology provision. Consequently, television stations often attempt to apply APP technology resources from perspectives of video-on-demand or replay services while ensuring mature construction of related paid technical services.

3.2 Integration of Live Streaming Technology

During live streaming technology integration design, technical integration gains clearer direction. Television stations' existing live streaming experience and technical advantages complement new live streaming technologies, providing ample assurance for live streaming model innovation. From a technology integration perspective, innovative development of network anchor business systems can become key to live streaming model promotion and application, particularly as many popular anchors have achieved progress in monetizing their influence, making live streaming technology integration more attractive to external parties. This attraction further promotes optimization of television station media technology integration quality.

Strengthening analysis of audience interaction effects provides direct guidance for live streaming technology integration, especially as network anchor technical forms innovate, the authenticity characteristics of live streaming further meet actual audience needs. Live streaming technology currently enjoys widespread popularity across society, exemplified by the construction of bullet comment interaction platforms. Therefore, television stations must emphasize the value of live streaming models during media convergence technology innovation design, particularly innovating network anchor activity forms to optimize live streaming technology integration through technical support mechanisms.

3.3 Integration of WeChat Official Accounts

Rational application of WeChat Official Accounts is crucial for achieving technical integration between traditional information services and new social software. Given current widespread adoption of WeChat software across society and its continued rapid 普及 across various sectors, television stations possess broad market audience resource advantages when integrating WeChat Official Account technologies. Creating and configuring WeChat Official Accounts based on existing television station foundational information service characteristics is key to

enhancing resource application value. Using Official Accounts to aggregate various user groups helps optimize user stickiness and ensures Official Accounts can better integrate media technology advantages while effectively controlling market resources. WeChat Official Account platform construction features technical virtualization, further highlighting its role in controlling technology platform construction costs.

3.4 Integration of Weibo

Weibo has accumulated certain technological innovation experience during the integration development of many media technology resources, particularly becoming a focus for many media convergence strategy builders when information resource 普及 demands are extensive across sectors. During Weibo technology integration, television stations prioritize traditional program format innovation, ensuring Weibo can extend traditional program dissemination methods when combined with program content, thereby highlighting its technical advantages through comprehensive program resource integration. Television station anchors possess certain public influence, and Weibo accounts established in anchors' personal names can better highlight media technology advantages in information resource sharing mechanism construction. Additionally, Weibo' s convenient forwarding feature can enhance program influence through information resource forwarding, providing stronger technical advantages for television programs.

4.1 Lack of Rationality in New Media Supporting System Construction

Some television stations focus solely on introducing and integrating technical resources during new media convergence strategy design, lacking necessary analysis of new media resource influence. Under these circumstances, although new media technology resources can achieve integration, they struggle to maturely adapt to television station technical resource innovation application needs, making progress in integrated new media technology application difficult. While some television stations possess the cost expenditure and social resource mobilization capabilities to introduce new media technologies, they pay insufficient attention to constructing management mechanisms related to new media technology application, failing to treat the improvement of new media technology application systems as foundational business, and cannot fully rationalize television station converged media technology schemes through institutional reform advantages. Integration of some new media key technologies has not constructed coordination mechanisms from a management system perspective, particularly lacking in-depth analysis of traditional media resources' mainstream value dissemination status, failing to effectively break free from traditional media management system constraints, which is detrimental to free integration and innovative development of media key technologies.

4.2 Incomplete Branding Activity Development Plans

Improving branding activity development plan rationality is crucial for enhancing television station media convergence enthusiasm. However, some existing television stations simplistically focus on media technology integration operations, lacking necessary attention to branding activity value, making it difficult to help branding activities maturely adapt to television station media innovation scheme construction needs. During specific branding activity development plan construction, some plans lack effective attention to offline activity organization design, particularly lacking necessary research on connection mechanisms between program producers and social groups, resulting in branding activity construction that cannot be reasonably disposed to fully adapt to media convergence strategy construction needs. Some branding activity development plans also pay insufficient attention to operation methods of research and investigation activities, particularly lacking effective research on whether television programs possess sufficient people-friendly characteristics, ultimately preventing television stations from effectively recognizing new media resource integration application value during branding activity creation, and making it difficult to maturely adapt to branding activity development innovation needs in interactive mechanism construction and audience demand investigation.

4.3 Lack of Advanced Converged Media Concepts

Converged media concepts are foundational factors guiding media convergence strategy implementation. However, some existing television stations lack complete analysis of media convergence value, causing converged media concepts to fail to update according to new-era needs, which is detrimental to further improvement of television station development innovation schemes. Additionally, some television station workers have not comprehensively summarized media content update demands, causing converged media concepts to fail to completely adapt to interactive exchange system construction needs during innovative disposal, and unable to provide experience reference for converged media concept improvement.

5.1 Improving Rationality of New Media Supporting System Construction

Based on existing new media supporting system construction situations, obtaining further institutional-level support is key to ensuring high-quality construction of television station media convergence strategies. Television stations need to seek favorable conditions, improve relevant management mechanisms while introducing new media technologies, and enable new media technology resource application to more maturely adapt to new-era social media audience needs. Television stations bear certain responsibilities in disseminating mainstream social values; under current strong demands for personalized media services across society, avoiding excessive constraints from mainstream ideology is key to en-

hancing new media supporting system value monetization levels. Additionally, new media supporting system construction work needs to strengthen attention to system update demands, draw more lessons from existing media convergence operation experiences, and develop designs for technical complementarity between traditional and new media, enabling new media supporting systems to maturely adapt to actual needs of media convergence industry construction and providing support for new media key technologies to better highlight their functions.

Attention must be strengthened toward new media supporting system operation groups, and institutional design work must be emphasized from perspectives of personnel assessment and incentive mechanism construction, enabling incentive systems to more maturely align with television station converged media key technology application needs during construction, thereby better enhancing new media supporting system technology application value.

5.2 Enhancing Completeness of Branding Activity Development Plans

Television station media convergence scheme designers need to conduct complete analysis of branding activity organization construction needs, particularly researching all aspects of branding activity creation to help branding activity organization work win broader understanding and attention within media teams. During branding activity production design processes, attention must be strengthened toward research and investigation activity needs, particularly summarizing all foundational conditions of television program production to enable more complete construction of media-public interaction mechanisms, and effectively adapting to television station media convergence technology optimization application needs through effective branding activity innovation.

5.3 Enhancing Advanced Converged Media Concepts

Television station staff must pay sufficient attention to the necessity of concept innovation. During television station development concept innovation processes, attention must be strengthened toward television station development needs, enabling converged media concept construction to adapt to promotional work needs and better highlight converged media concept value. Television stations need to summarize the flexible and open advantages of new media to provide sufficient experience support for media convergence work implementation. Television stations also need to comprehensively strengthen attention to converged media concept value while absorbing and drawing lessons from new media technology advantages.

Currently, information technology has achieved widespread application across various social sectors, exerting significant competitive impact on traditional media. Only by ensuring mature and complete application of new media technology

can information technology utilization quality be fully enhanced, helping media better adapt to social development needs through technological innovation. Based on existing media innovation development situations, strengthening integration of media key technologies can provide direct technical support for media technology innovation, ensuring media can better meet innovation development needs under information high-speed development backgrounds.

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