Exploring the Development Trends of OTT TV in China for 2025 (Postprint)

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Abstract

To investigate the future development trends of OTT TV, this paper analyzes the development trends of OTT TV in China in 2025 from three aspects: development status, development challenges, and development trends. The analysis reveals that technology will empower the rapid development of OTT TV, accelerate the convergence between new and traditional media, and reconstruct the ecosystem, all of which require traditional media to transform in step with the times.

Full Text

Exploring Development Trends of OTT TV in China by 2025

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Abstract: To explore the future development trends of OTT TV, this paper analyzes the development trajectory of OTT TV in China by 2025 from three dimensions: current status, development dilemmas, and future trends. The analysis indicates that technology will empower the rapid development of OTT TV, accelerate the integration between traditional and new media, and reconstruct the industrial ecosystem. These developments necessitate that traditional media must transform to keep pace with the times.

Keywords: OTT TV; Internet TV; development trends; technology empowerment; reconstructing industrial ecology

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OTT (Over-The-Top) originates from the basketball term for a pass that goes over the opponent' s head. In its broad sense, it refers to online platforms using mobile operators as "transmission pipelines" to develop their own services [1]. In the narrow sense, it refers specifically to OTT TV, or Internet TV. The key difference from traditional IPTV lies in its bypass of conventional systems such as cable television and direct-to-home satellite systems, delivering content directly to users through public networks [2]. OTT TV features diverse terminals, including not only television displays but also computers, set-top boxes, tablets, smartphones, and other smart devices [2]. This has established a complete industrial structure spanning content providers, integrated service platforms (license holders), network operators, Internet TV/set-top boxes, and end users. The OTT TV discussed in this paper falls within the category of Internet TV.

The outbreak of COVID-19 in 2020 spurred the "stay-at-home economy" and drove record-high usage of smart screens. Relevant data indicates that China' s smart screen economic development value index grew by nearly 40% in 2020 compared to 2019, with Internet TV further integrating into daily life and becoming an indispensable part of people' s leisure and entertainment. As of May 2021, OTT TV user scale had reached substantial numbers, demonstrating broad development prospects and making discussions about OTT TV' s future particularly important.

1. Current Development Status

1.1 Comprehensive Industrial Policies

China' s OTT TV development has been guided by policy frameworks since its inception. In 2009, the State Administration of Radio, Film and Television (SARFT) issued the "Notice on Strengthening the Management of Internet Audio-Visual Program Services Using Television Sets as Reception Terminals," bringing Internet TV into focus [3]. By the end of 2010, SARFT had approved seven license holders and released documents regulating integrated services and content provision, gradually standardizing the industry system. That same year, the concept of "triple network convergence" was proposed, providing a solid policy foundation for Internet TV development. Between 2011 and 2015, the OTT licensing system was established, and SARFT's "Notice on Cracking Down on Illegal Television Network Reception Equipment" further regulated industry disorder [4]. The 2018 "Internet Integrated Service Platform Service Capability and Business Specification" made the OTT TV industry more legitimate and standardized. The 2020 pandemic increased smart screen utilization and OTT TV' s industrial value, leading to the timely introduction of the "Smart TV Boot Advertisement Service Specification" to further standardize advertising practices. In 2021, SARFT proposed new requirements for network television development, establishing four technical standards in the "General Technical Requirements for Internet TV" document to promote OTT TV' s technological transformation. Through these policy initiatives, OTT TV has formed strict industry norms, ensuring healthy and sustainable development while providing

broader prospects and more advanced technical requirements. Many companies have entered relevant fields under policy guidance, and despite limited licenses, numerous firms have partnered with license holders to jointly develop the OTT TV industry, creating relatively complete policy regulations across the upstream-to-downstream industrial chain.

1.2 Complete Industrial Chain Layout

OTT TV now possesses a complete upstream-downstream industrial system covering content production, content provision, content transmission and broadcast control, content aggregation platforms, content terminals, and final audience delivery, achieving seamless integration from content to viewers. As shown in [Figure 1: see original paper], only seven companies currently hold OTT TV licenses in China. Each leverages its resource advantages to cooperate with different platforms, forming unique industry characteristics. For example, Mango TV under Mango Supermedia holds an OTT license and has achieved considerable success in developing Internet TV by capitalizing on its content and platform strengths. In recent years, it has launched products such as the "Mango Moonlight Treasure" Internet TV set-top box, MUI autonomous smart TV system, and "iMango" Internet TV, further expanding its industrial layout. Some license holders have also established joint ventures with other platforms, such as the collaboration between Xinpai Co., Ltd. and Tencent to develop the Cloud Audiovisual Aurora project. Tencent provides high-quality video content, while Xinpai serves as the distribution channel to deliver content to terminals and ultimately into households. Cloud Audiovisual Aurora' s coverage increased by 5.4% between 2019 and 2020, placing it in a leading position among video platforms.

1.3 Multi-Channel Revenue Model of "Advertising + Content Payment + Traffic Diversion + E-commerce"

In OTT TV' s early stages, most platforms relied on free or low membership fees for revenue. This funding shortage was detrimental to a new industry, with most license holders serving merely as distribution channels rather than creating branded content. However, with technological advancement, policy support, and growing demand for entertainment diversification, the OTT TV industry has gradually risen. Users can now independently select preferred programs through OTT TV, especially after the COVID-19 outbreak, which spurred rapid growth in OTT TV advertising revenue. As shown in [Figure 2: see original paper], advertising revenue constitutes the core of OTT TV income, followed by content payment. During the pandemic, content payment' s proportion increased significantly compared to 2019, demonstrating that content control is crucial for OTT TV revenue. Many operators have adopted diversified payment models, such as bundled consumption: when launching the "MIFON F1C" 4K smart set-top box, Mango TV offered a promotion giving away Mango TV memberships with box purchases, encouraging users to adopt

multiple Mango Supermedia products and increasing user stickiness. Beyond advertising and content payment, traffic diversion and e-commerce services also generate considerable income. OTT TV has established a diversified revenue model that promotes industry development. With smart screen advancement and increasing service diversity, new revenue products will emerge, and income structures will evolve accordingly, moving toward greater diversification.

2. Development Dilemmas

2.1 License Barriers

Despite OTT TV' s broad prospects, many domestic IPTV operators hope to transform their industrial structure through this opportunity. However, China' s OTT TV industry chain requires OTT TV licenses, and policy restrictions limit license holders to only seven companies, with no new licenses being issued. This licensing system creates high industry barriers, causing many companies to abandon entry into OTT TV after prolonged unsuccessful applications, thereby missing numerous opportunities.

2.2 Lack of Quality Content

Policy restrictions prevent many quality content providers from building their own OTT TV platforms, forcing them to cooperate with designated license holders. This reduces content production motivation compared to foreign platforms. Many international OTT TV brands like Netflix and Disney own their content platforms, where long-established brand value creates user stickiness and high-quality productions drive long-term platform loyalty. Comparing two licensed companies, Xinpai Co., Ltd. and Mango Supermedia, reveals different revenue structures: Mango Supermedia achieves higher proportions in Internet video/TV business revenue through content advantages, while Xinpai Co., Ltd. derives higher revenue from private network services. Although both hold licenses, their income compositions differ completely. In the long term, quality content facilitates sustainable corporate development.

2.3 Unobvious Price Advantage

OTT TV' s advantage lies in lower costs, as it relies on the Internet for content dissemination, whereas IPTV requires specific cable installation. Therefore, OTT TV costs are lower. However, the current domestic reality shows similar pricing between IPTV and OTT TV, making users accustomed to IPTV unlikely to switch based on price alone. Internationally, the price gap between OTT TV and IPTV is significant, with OTT TV being cheaper. This encourages IPTV users to switch to OTT TV upon renewal to reduce expenses and gain more autonomous program selection rights, promoting OTT TV development. China could draw lessons from this factor by appropriately lowering prices to drive traffic to OTT TV and further increase user numbers.

3. Development Trend Analysis for 2025

3.1 Technology Empowerment

Internet development and technological progress offer more possibilities for OTT TV, with frontier technologies like AI, 5G, and IoT continuously empowering OTT services. Smart products have already emerged to further improve OTT TV technical standards. In May 2021, Changhong officially released its S2 series smart LED projector featuring AI voice recognition that can identify dialects for smooth user interaction, with built-in rich online resources from Youku, Tencent, and iQiyi. Changhong' s D7U laser TV pioneered the intelligent light mouse, allowing users to quickly navigate on TV like using a computer mouse, and also features AIoT intelligent IoT supporting smart control of multiple devices, achieving technology empowerment.

In 2020, 5G became a key component of China' s "new infrastructure" strategy. By March 2021, China had built 819,000 5G base stations covering all prefecture-level cities and above. Major cities and provinces including Shanghai have begun 5G testing, with full 5G coverage expected before 2025 [5]. As OTT TV is Internet-based, increased network speeds will deliver smoother viewing experiences. In 2019, the National Radio and Television Administration and China Media Group jointly released the "Ultra-High-Definition Video Industry Development Action Plan," supporting full 4K popularization and 8K front-end equipment industrialization. With 5G technology support, 4K and 8K high-definition video will shine on OTT TV, potentially creating "home theaters" with better audio-visual effects. Additionally, high-speed networks will promote development and application of other functions like gaming, shopping, and music. 5G development also positively impacts the IoT industry, enabling OTT devices to display IoT device information and support multi-terminal simultaneous viewing. China' s smart screens have already reached the stage of device interconnection. The development and deep integration of 5G, AI, and IoT technologies will gradually advance China' s smart screens toward the "5G + AIoT"deep intelligence stage, making OTT TV more intelligent by 2025 through technology empowerment.

3.2 Integration of New and Old Media

The joint entry of new and old media and multi-screen integration development enables easy switching between screens and between live and on-demand content. The competitive landscape between live channels and on-demand media will reverse, with on-demand media on OTT TV having substantial potential to catch up with or surpass traditional top five satellite TV channels. Previously, DTV (Digital TV) and IPTV (Interactive Network TV) viewers watched television programs through cable systems and direct-to-home systems via live broadcast, often developing habits of watching news or dramas at fixed times. With technological progress and improved material living standards, people demand more diversified entertainment. OTT TV satisfies more personalized needs, allowing

users to watch desired programs anytime through on-demand services without time constraints, while platforms provide personalized recommendations based on user preferences. In OTT TV' s 2025 development, traditional live channels and emerging on-demand media will better integrate. Smart TV systems will provide both on-demand services and live channels, increasing user option diversity. The great freedom in viewing time will influence users to form new viewing habits, with on-demand user numbers growing and breaking the previous live-channel-dominated pattern, injecting new vitality into on-demand media.

3.3 Reconstructing Industrial Ecology

By 2025, OTT TV industry development is expected to reconstruct its ecosystem, leverage vertical application markets, and create opportunities to feed back into OTT commercial operation space. Currently, OTT TV' s main functional attribute is audio-visual program viewing, resulting in a relatively singular ecological structure. Although many operators are developing smart TV gaming and shopping functions, technical limitations in network transmission speed and multi-terminal simultaneous online support create small deviations, limiting the number of users employing gaming and e-commerce functions on OTT TV. With scientific and technological progress and 5G network popularization, OTT TV' s multi-faceted value can be further unleashed. Applications in music, education, shopping, and screen casting can be more conveniently and quickly used on OTT terminals, meeting different port needs and reconstructing a more diversified ecological structure [6].

Conclusion

Since China' s first Internet TV emerged in 2009, OTT TV has formed a relatively complete industrial chain structure and industry norms under technological development and policy guidance, with diversified revenue composition maintaining its advanced position in the television industry. Despite existing challenges such as license barriers, lack of quality content, and unobvious price advantages, OTT TV shows strong overall development momentum and vitality through active internal industry adjustments. By 2025, China' s OTT industry is expected to fully integrate with 5G, IoT, AI and other technologies for greater product intelligence; achieve new convergence between on-demand channels and live media for more diverse viewer choices; and strengthen functionality to leverage vertical application markets for more convenient applications. OTT TV holds great development potential for the future, with content warranting further research beyond this analysis.

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