Research Article

Development Strategy of Internet Interactive Video under the Background of 5G Converged Media and Wireless Communication

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At this stage, the promotion of 5G network has a positive basic value for the development of Internet interactive video. With the arrival of 5G era and the vigorous development of wireless communication technology, the trend of media convergence is more and more intense. The innovation of emerging technology and communication mode provides a strong support for the development of interactive video. With 5G technology as the background, Internet interactive video ushered in a blowout period of development. In recent years, video websites at home and abroad have launched interactive videos with their own characteristics. So, the imagination of integrated media evolved into the reality gradually. However, the excessively fast development speed concealed many existing shortcomings. There are still many constraints and deficiencies in the deep integration of each link of Internet interactive video. This paper discusses the development status of Internet interactive video and deeply analyzes the development characteristics of interactive video. In view of the existing problems, this paper puts forward development suggestions from the aspects of creating high-quality content and building “interactive video +” to help the better development of Internet interactive video.

1. Introduction

Under the background of the rapid advancement of information technology in recent years, the streaming media industry has also undergone tremendous changes. Traditional video gradually cannot meet the needs of the audience, and interactive video gradually enters public's field of vision. In order to better strengthen management, SARFT will officially define interactive video for the first time in 2020, emphasizing its “multitype interaction,” “nonlinear process,” and other characteristics [1]. At the same time, the development of 5G technology has provided a strong foundation for the development of interactive video. Major video platforms have launched representative interactive video products to compete for audience resources. The theoretical research and practical exploration of interactive video are also in full swing.

In terms of theoretical research, Li Siyao, from the perspective of media integration, conducts research on the integration of contemporary film and television dramas with games, analyzes interactive video in terms of aesthetics, communication methods, and audience psychology, and looks forward to the future of this field direction of development [2]. Starting with the communication characteristics of interactive video, Du Jixi sorted out and analyzed the problems existing in the development of interactive video at this stage and then gave suggestions for improvement in terms of technical production, story layout, and interactive design. Wang Yan conducted empirical analysis on specific interactive film and television dramas, selected the more influential “Love Apartment 5” as the research object, analyzed the multiple interactive nodes of the episode, especially the 13th episode, and compared the role of these nodes in breaking the “fourth

wall.” The play became an important reason for the popular video at that time [3].

In terms of practical exploration, although China’s interactive video started late, it has also recently ushered in a blowout trend. In July 2019, in order to cope with the problem of continuous loss of users, station B began to launch interactive videos, which regained the attention of a large number of users for itself. Since then, major domestic video production websites have joined the ranks of interactive video production, so 2019 can also be regarded as the “first year” of China’s interactive video development. In this year, the audience was exposed to domestic interactive film and television dramas, interactive variety shows, and short videos for the first time [4, 5]. This “novel” video method has refreshed most domestic users, and major websites have gained a high level of success, attention.

This research mainly explores the analysis of the main characteristics of Internet interactive videos, especially representative interactive video works in China, with the help of typical works analysis in a point-to-surface manner under the background of the increasingly deepening trend of 5G media convergence [6]. The characteristics of the era of the development of interactive video in our country are presented, and several suggestions for sustainable development in this field are put forward.

2. The Characteristics of the Development of Internet Interactive Video in the Context of 5G Converged Media

Although the interactive video format appeared as early as the 1960s, due to technical limitations, this interactive movie called “Kinoautomat: One Man and His House” did not attract public attention. However, with the development of information technology and the maturity of media integration, the industry development of interactive video and the appreciation experience brought to the audience have developed by leaps and bounds. See Table 1 for representative interactive video works launched by major domestic video platforms.

2.1. Inject More Vitality into the Industry. At this stage, audiences are generally tired of the linear structure of traditional film and television dramas and hope to incorporate their own wishes in the development of the plot. The popularity of online games has increased in recent years for this reason. The emergence of fusion media interactive video meets audience’s needs for psychological satisfaction of the subject status and nonlinear open ending in the current context [7]. The increase in audience’s right to speak in video works has largely got rid of the passive position when viewing traditional video programs, so that their own choices can have an important impact on the advancement of the storyline and the final outcome.

By transferring part of the initiative, the interactive video adds a sense of participation to the work similar to that of the game, and integrates the various feelings of video appreciation, game participation, and plot determination into the work, so that the relationship between the traditional work

and the user takes place. Change: such a change has injected more vitality into the development of the video industry and weakened or even reversed the unfavorable momentum of declining active members. From the financial annual reports of major video websites in recent years, it can be seen that the participation of the interactive video market has brought positive effects that cannot be ignored on company’s revenue and the growth of the number of members. Therefore, all major domestic video websites regard the production and promotion of interactive videos as one of their key targets.

Regardless of the starting point of the video website’s active involvement in interactive video, its objective effect is indeed to promote the innovation and development of the entire video industry, and at the same time, attract the attention of the audience again and further focus on user participation and other aspects as the video production [8]. One of the standards: in the era of big data led by 5G technology, the higher the user participation, the more data that can be obtained in the background, and the clearer the “individual sketch” of the user. So, the platform can more accurately grasp the real needs of users. On this basis, the introduction of interactive video has given the platform more commercialization and technical choices. In turn, let your own production also provide better conditions for the retention of users. Judging from the current situation, although various platforms generally adopt interactive video into the charging system, it has not affected the enthusiasm of users at all.

2.2. Bringing a Better Participation Experience for Users. According to media situation theory, electronic media can arrange and reorganize situations that originally belonged to various types. Judging from the reality, interactive video also conforms to this trend, fusing the two traditional scenarios of “interaction and video” together. This form brings a better participation experience to users. First of all, interactive videos help users realize the conversion of identities. Users are no longer passive viewers of video works but are able to integrate their own wishes into the work and evolve from video spectators to video participants, resulting in higher spiritual satisfaction. Although major video websites have their own interactive video products at this stage, most of the products are made by bloggers from the media groups. This diverse source of authors makes almost every work present its own unique characteristics, with both role substitution and an omnipotent God’s perspective. Let users have a variety of viewing experience.

Secondly, the current video production market is very competitive. For video sites, relying solely on the production of products such as interactive videos cannot ensure long-term maintenance of user loyalty. Therefore, the website must use high-quality products and designs to increase user retention. If you want to win a place in the video market, you must establish a sense of quality to ensure that you can attract users for a long time. Most users participate in the interaction out of a kind of curiosity, and it is an exploration of the influence of self-participation on the plot. For example, “Love Apartment 5”, which attracted the attention of the public in 2019, catered to audience’s psychology to a large extent and was a great success. Although iQiyi lags

TABLE 1: Interaction mode of main interactive products of each platform.

Platform name	Main interactive products	Interactive mode
Tencent video	Antique bureau	The plot which can choose
IQiyi	His smile	The plot which can choose
Mango TV	Star detective	Audience participation
Netflix	Black mirror: Pandas Nike	The plot which can choose

TABLE 2: Number of subscription members and payment proportion of domestic representative video platforms (as of the third quarter of 2020).

Platform name	Active member	Payment proportion
Tencent video	120 million	23.33%
IQiyi	100 million	18.03%
Station B	12.8 million	7.61%
Mango TV	36 million	15%

behind station B in the launch of interactive videos, with the strong audience base of the “Love Apartment” series and multiple interactive nodes, many episodes of the series have firmly occupied the main domestic social network once they are launched. Top of the platform rankings: with the help of the show, the iQiyi platform’s revenue in 2019 was nearly 30 billion yuan, an increase of 16% over 2018; subscription members exceeded 100 million, an increase of more than one-fifth over 2018.

It can be seen from Table 2 that in 2020, China’s top three video platforms have more than 100 million active members, and their annual revenue has also achieved substantial growth. This kind of growth rate is extremely rare in an environment where domestic video platform competition is extremely fierce.

3. Development Strategy of Internet Interactive Video under the Background of 5G Convergence Media

The reason why interactive video can quickly attract a large number of audiences on major platforms is mainly because it has interactive attributes, which have a wide range of attractiveness to audiences. Nowadays, interactive video has gradually become popular in variety shows, movies, games, and other fields and brings huge economic value. With the rapid development of 5G integrated media, interactive video will also have broad development prospects in e-commerce, medical, advertising, and other fields. However, many problems have been exposed during the development of interactive video. For example, in terms of communication channels, although there are a large number of communication channels, the communication form is relatively single, the video content lacks novelty, and the interactive form is not rich enough. If the above problems can be solved, interactive video will usher in a broader development prospect [8].

3.1. Break Platform Barriers, Win-Win Cooperation, and Broaden Communication Channels. At present, competition among major video platforms has intensified, building barriers to each other, and lack of communication and cooperation. Take IQiyi and Tencent video as examples. They each produce interactive video content with incompatible formats and cannot distribute it on the other party’s communication channels, which makes it impossible for interactive videos to establish a complete transmission chain. This situation is also common among traditional social media platforms such as WeChat, Weibo, and Toutiao. This way of doing things independently and lacking cooperation has resulted in the inability of interactive videos to reach a wider audience, and the inability of barrier-free communication and exchanges between audiences on various platforms, which makes it difficult for interactive videos to become popular.

As shown in Figure 1, although the number of interactive videos has increased on a large scale in recent years, the proportion of official production on the platform has gradually declined, which cannot effectively avoid the problems of inconsistent format and uneven content.

With the formal implementation of the “Internet Interactive Video Data Format Specification” issued by the State Administration of Radio, Film and Television, this situation has been improved, and the standard of interactive video has been unified. It has broken the barriers between various platforms and made communication channels more diversified. It has also promoted the wider dissemination of interactive videos among audiences. With the popularization of 5G wireless communication technology, network bandwidth and transmission efficiency will be further improved, which will help the efficiency and development of interactive video transmission [9].

3.2. Innovative Video Format Optimizes Video Content. Interactive video requires high professionalism and production costs from material collection and video editing to postproduction. Although there are some novel and popular interactive videos appearing on major platforms, in general, interactive videos still show uneven quality levels, lack of new ideas in content, and lack the characteristics of high-quality video content, which greatly restricts the development of interactive videos. The reason for the above-mentioned problems is that the production of interactive video requires professional technology, and the production cycle is long, and the production cost is high.

Today’s interactive video market lacks innovative video formats and high-quality video content, and a large number of similar content appears, causing aesthetic fatigue to the

FIGURE 1: Comparison of interactive video producers in recent four years.

audience. In addition, in the process of creating interactive videos, creators either pay too much attention to interaction and lack in-depth analysis of the theme or pay too much attention to the discussion of the theme, and the interaction is insufficient to bring the audience an immersive experience in time and space. Therefore, if interactive video wants to develop rapidly, it must focus on innovative video formats and optimize video content. With the advent of the 5G era, intelligent video processing technology has brought great convenience to creators, simplifies the creation process, and saves creation costs, which can improve the production efficiency of interactive videos, innovate video formats, and optimize video content.

3.3. Build a New Business Model and Ecosystem. The main interactive form of interactive video still stays in the text interactive stage, and the interactive form is relatively single. Audiences can only watch videos through terminal devices such as computers and mobile phones, and the interactive space is limited, which makes interactive technologies still have huge development potential. The above-mentioned problems are caused mainly because the network transmission rate is not high, and new technologies such as VR and AR that rely on low latency and high transmission rate cannot be popularized, thus failing to provide users with an immersive interactive experience.

With the advent of the 5G era, the low latency and high speed characteristics of 5G communication technology will solve the above problems. The audience will also turn from viewers into real participants, elevating the form of interaction to a new level. 5G technology has promoted the change of interactive forms and will also change the traditional business form, especially in games, movies, sports, and other programs with strong interactive attributes, through the participation of audiences to achieve good interaction.

As shown in Figure 2, in 2021, interactive video is expected to focus on games, film and television integration, live broadcast, and other fields. For example, “interactive video + game” can enhance the gaming experience immer-

FIGURE 2: 2021 interactive video development trend analysis.

sively; “interactive video + film and television” can bring more shocking visual and auditory perception to the audience [10].

At the same time, the social attribute of interactive video also brings huge commercial value to online video outlets. For example, iQiyi added interactive form to the advertising content of the eighth issue of “China new rap” broadcast in 2019, so that popular players can directly become advertising spokesmen and help the brand realize flow cash. It also shows us the new business form brought by Internet interactive video [11]. This new business model of “interactive video +” can tap the great potential of Internet interactive video in the business field, not only in traditional games, film, and television industries but also in tourism, education, e-commerce, sports, and other fields with the trend of media convergence [12, 13]. In short, in the 5G era, more and more advanced intelligent technology will bring users a smoother interactive experience, thereby building a new business format for Internet interactive video.

4. Conclusion

The wireless communication technology represented by 5G communication technology has improved the production efficiency and spread of video content and promoted the field of interactive video to a new level. Wireless communication technology has played an important role in promoting interactive video content reconstruction, user stickiness, and marketing depth. China’s major interactive video platforms have focused on the field of interactive video, but they have not achieved the expected results in terms of economic benefits. This shows that in the context of 5G technology, how to use wireless communication technology is to promote the innovative development of interactive video to a new level. The height is still worthy of our continuous exploration. We have reason to believe that interactive video will have a broader development prospect with its unique and diverse interactive methods and high-quality video content. We must seize the opportunity and use 5G and other technological advantages to promote the rapid development of interactive video.

Data Availability

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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