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Preliminary Exploration of Short Video Creation in New Media in the 5G Era (Postprint)

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Abstract

With the continuous advancement of China's scientific and technological capabilities, new media represented by short videos has gradually entered the public sphere and gained increasing recognition among the general populace. Sharing life through short videos has become a lifestyle modality for contemporary individuals. Against the backdrop of 5G network technology's provision of high-speed, low-latency data transmission, short video creation harbors relatively broad development prospects. This article explores the current development status, challenges confronted, and future prospects of short video creation for reference purposes.

Full Text

Preamble

Title: A Preliminary Study on Short Video Creation in New Media Under the 5G Era

Abstract: As China's scientific and technological capabilities continue to advance, new media represented by short videos has gradually entered public consciousness and gained widespread acceptance. Sharing life through short videos has become a modern lifestyle. Against the backdrop of 5G network technology's ability to provide high-speed, low-latency data transmission, short video creation holds broad development prospects. This paper examines the current development status, challenges, and future prospects of short video creation for reference.

Keywords: new media; 5G era; short video creation

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In today's fast-paced, high-pressure society, short online videos have emerged as a natural response to help people relieve stress. Their rapid dissemination, social sharing capabilities, and fragmented content format cater to popular aesthetic preferences, attracting increasing attention and affection. As 5G technology gradually rolls out and becomes more widespread, high-speed network transmission has enabled numerous mobile social platforms to incorporate short video functionality, fueling the rapid growth of the short video industry. However, a comprehensive review of major platforms such as Douyin and Kuaishou reveals persistent challenges including inconsistent content quality and inadequate regulation. Relevant authorities must clearly understand the situation and, based on actual market conditions, chart the correct development direction for short video creation in the 5G era.

1. The Current State of Short Video Creation in the 5G Era

1.1 Overview of the New 5G Technology

In recent years, China's rapid economic development has directly driven scientific and technological progress, with network technology achieving a qualitative leap. From the early internet dissemination of images, text, and video to today's nearly seamless high-speed connections between people, mobile internet has become an indispensable part of modern life. Having experienced and benefited from the conveniences offered by 3G and 4G technologies, people have every reason to believe that the more advanced 5G technology will deliver the safest and most convenient online experience.

5G refers to the fifth-generation mobile communication system. Compared with previous communication systems, its network capacity is a thousand times greater than 4G technology, with traffic density reaching 10 Mbps per square meter. This enables 5G technology to support large numbers of people using high-speed networks simultaneously in the same location [1]. Moreover, 5G technology can handle extreme business experiences such as virtual and reality integration, with connection density reaching 1 million devices per square kilometer. This means 5G networks can accommodate more IoT devices, facilitating daily management tasks for the public. Comparing different mobile communication eras reveals that 2G centered on voice transmission, 3G on text and image transmission, 4G on video and more complex data transmission, while 5G focuses on optimizing and enhancing previous technologies, dramatically increasing data transmission rates. Through 5G networks, data transmission can achieve peak

rates ten times faster than 4G, with guaranteed transmission quality.

1.2 Current Development Status of Short Video Creation

Short videos first emerged around 2013 and became widely known and accepted by the masses through 4G network technology, gradually sweeping across the nation. According to relevant statistics, the total daily active users across all short video platforms has reached 300 million. Currently, China has numerous short video platforms, with the most prominent being Douyin, Miaopai, Weishi, and Kuaishou. On these platforms, users can use mobile phones to capture moments from daily life, typically around 15 seconds in length. After publishing a short video on the platform, if the content demonstrates sufficient creativity and entertainment value, it can receive likes, comments, shares, and widespread distribution from the public. The platform will also give special attention to such videos, promoting them to the homepage to attract more viewers. Consequently, many short video creators have risen to fame overnight, becoming popular internet celebrities.

Short video creation is relatively simple and does not require complex procedures—virtually anyone can create content. Against the backdrop of increasingly popular short videos, various auxiliary tools have been applied to the creation process. Tools such as Meipai are used in post-production editing, allowing users to add beauty filters, background music, and special effects. Most platforms also support segmented shooting, greatly enriching creators' material options and enabling them to shoot scenes in different locations, making the final product more polished. These rich features, combined with simple and user-friendly operation, have attracted an ever-growing number of people to become short video creators [2]. Not only ordinary citizens but also new media professionals create short videos to enhance product visibility, expanding their influence while broadening the advertising market. Their short videos have earned excellent reputations among the public, maintaining consistently high click-through rates and securing an advantageous position in today's highly competitive market.

2. Prospects for Short Video Creation in the 5G Era

A comprehensive review of currently circulating short videos reveals that their content can be broadly categorized into four common types. The first is humorous and entertaining short videos. These share similarities with traditional sketch comedy but are shorter and more concise, aiming to gather life's humorous moments into brief videos to capture public attention and spread through social networks. Some creators in this category have gained nationwide attention, becoming internet celebrities with unique personal brands such as Papi Jiang and "Internet Celebrity Bear." The second type is lifestyle-featured short videos, mostly produced by professional teams and presented through character interviews, local customs, and scenario simulations. These aim to disseminate rich lifestyle sensibilities and provide practical life tips to the masses. Representative creators in this category include Zeng Chunqi, founder of the "Rural

Flavors” series, and “Big Stomach King Mini,” who creates content featuring different cuisines from across China. The third type involves short videos about celebrities and their surrounding stories. Creators in this category are numerous, including celebrity agency staff, fans, entertainment reporters, and even the celebrities themselves. Content is broad-ranging, from agency promotional activities to fan encounters with celebrities in daily life to celebrities’ personal life records. Regardless of form, these videos center on celebrities and leverage their influence for widespread dissemination on the internet. The fourth type is news and information short videos. Compared with the other three types, this category is relatively less common and less popular online, highlighting that this is an era of entertainment supremacy.

With the continuous promotion and popularization of 5G technology, we can anticipate that when the 5G era truly arrives, China’s network audio-visual industry value chain will be reconstructed. Short video creation will be significantly impacted, with application channels broadening. People will no longer be satisfied with merely watching short videos but will also use short video creation to help solve problems encountered in daily life [3]. This will transform the purpose of short video creation from simply seeking attention in the pan-entertainment era to providing genuine life convenience—a positive and beneficial shift. For instance, when the 5G era fully matures, short videos may integrate with mobile vehicle networking to create content centered on driving scenarios and in-vehicle displays, helping people better manage their vehicles and monitor their status in real-time. Users will also be able to learn about vehicle modification and simple maintenance experiences shared on short video platforms. Short videos may also integrate with the Internet of Things to create content for elevators, outdoor public spaces, public transportation, and dining tables, forming effective interaction with the public and expanding application channels for short videos.

We can foresee that the entire short video market will be deeply segmented, with content types evolving from the current four categories into countless sub-categories to meet users’ diverse viewing and creation needs. As a result, the time and energy people devote to short videos will decrease, using them only when necessary. Short video content may become part of fragmented reading on mobile internet terminals, and short video creation will shift its purpose and content toward smaller information volumes and more concise formats.

On the other hand, when the 5G era arrives, network download speeds will be faster, enabling ultra-high-definition videos to be downloaded almost instantaneously. This means short video quality will become smoother and clearer, with faster and broader dissemination [4]. While enjoying the conveniences brought by 5G technology, the public will demand higher quality from short videos, no longer passively accepting whatever platforms recommend. They will carefully select content that suits their tastes and show greater interest in personalized content. Currently popular content may be eliminated by changing times, naturally raising the difficulty of short video creation. Therefore, we can anticipate

that when the 5G era fully arrives, short video creation will face unprecedented challenges. Content that fails to align with development trends and cannot be applied to people' s lives in the 5G era will become worthless and impossible to promote online—a significant departure from the current creation landscape.

Consequently, short video creators in the 5G era should adapt to development trends, innovate content and formats, and adopt personalized creation methods tailored to their characteristics. For example, traditional media can view short video creation as an extension of their discourse space, focusing content on the collision between new and traditional media to expand their public discourse space. For ordinary individuals, they should not follow traditional creation methods but should strive to publish more creative audio-visual works to enrich their lives. For new media platforms represented by short videos, creation should be based on product selling points and brand alignment, creating immersive scenarios that resonate with audiences, keeping content aligned with platform trends, opening up novel interactive methods and sharing permissions, and achieving high-quality conversion from traffic to benefits.

Overall, audio-visual communication in the 5G era will develop toward ultra-high-definition and immersive experiences, while the entire broadcasting and television industry, under the umbrella of smart broadcasting construction, will break through toward greater intelligence and interactivity. The integration of content and technology has consistently been the driving force behind media transformation. The development advantages and future growth space of the audio-visual industry remain in the content domain, and more diverse content experience scenarios will provide greater imagination space for interactive, immersive, and mobile audio-visual experiences.

3. Challenges Facing Short Video Creation in the 5G Era

3.1 Challenges in Short Video Content Regulation

As short videos become increasingly popular with massive daily traffic, the content created is diverse and colorful, encompassing all aspects of life. It is foreseeable that when the 5G era arrives, improved network transmission speeds will mean even shorter creation times and more diverse content types, leaving short video content regulation in a difficult position [5]. Therefore, short video platforms must continuously strengthen internal review systems, combining technical means with manual review to efficiently examine content quality and curb the proliferation of 违规 content. Simultaneously, relevant authorities should intensify supervision efforts, conducting comprehensive reviews and showing zero tolerance for illegal or 违规 content, dealing with all violations seriously.

3.2 Challenges in Short Video Copyright Protection Management

Every short video creator invests significant effort into their work, which represents unique intellectual property regardless of quality. However, the current

short video market does not place sufficient emphasis on copyright protection management, directly resulting in the same short video content frequently being edited and distributed across different platforms without authorization. This greatly undermines creators' enthusiasm, and due to ineffective management, creators often fail to receive proper responses when reporting violations to authorities. Infringers remain unpunished, causing many short video creators to become disheartened and exit the market, which severely harms the industry's development. In the 5G era, with even faster information dissemination, pirated and plagiarized short videos will spread more rapidly online, making copyright protection management even more challenging. Therefore, relevant government departments should increase their emphasis on short video copyright protection, improve existing laws and regulations, update copyright protection technologies, and refine management systems to provide creators with adequate legal and technical protection and promote healthy short video development.

Conclusion

In summary, even before the full arrival of the 5G era, the short video industry has already occupied an important position in China's market, with a large and widespread audience that has become part of modern life. Although short videos have swept the nation, problems such as inadequate copyright protection and insufficient quality supervision persist in short video creation. As 5G technology gradually promotes and popularizes, the goals and types of short video creation will inevitably transform. Thus, new media short video creation in the 5G era has broad development space and promising prospects, positioning it as a leading force in the new era.

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

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