

Research on the Future Development of "Slow Live Broadcast" News in 5G Context

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Abstract— With the progress and innovation of communication technology, the form of live news also changes and innovates constantly. During the COVID-19 epidemic, "Central Video" created slow live news for Wuhan Huoshenshan Hospital Construction, demonstrating the uniqueness and development potential of this content. This paper will analyze the development status and existing problems of slow broadcast, combine with the promotion and application of 5G communication technology, and propose countermeasures and personal outlook.

Keywords— Slow live news; 5G communication technology; Media convergence.

I. RESEARCH BACKGROUND

As a presentation form of live news, slow live news is characterized by its ability to synchronously transmit the real-time situation on the scene of news events by relying on surveillance cameras in the absence of reporters or anchors to explain and broadcast.

In 2009, the Norwegian broadcasting company NRK experimented with the slow broadcast mode, launching the documentary Bergen Railway: Minute by Minute, which comprehensively shows a local railway journey through more than seven hours of unedited live broadcasting.^[1] This is an early case of the adoption of slow live broadcast for content transmission worldwide. In China, the "Beijing Time Blooming China" large-scale slow broadcast was launched in 2016. The country's first slow broadcast platform of bird wetland was launched on Qinghai Network Radio and TELEVISION in 2018. In 2020, under the background of COVID-19 epidemic, China Central Video relied on 5G technology and attracted more than 100 million "cloud supervisors" in the slow live news report of huoshenshan Hospital construction. For a time, "slow live broadcast" has become a popular means of communication. From the perspective of media convergence, the slow live news report supported by 5G communication technology will be recognized by more small-screen users and large-screen users simultaneously in the future.

II. WATCH SLOW LIVE BROADCAST CONTENT TRANSMISSION AND TECHNICAL FEATURES WITH "CLOUD SUPERVISOR OF RAYTHEON AND VULCAN"

1. Technical Level

The successful spread of the slow live broadcast news about Wuhan "Raytheon" Hospital and "Vulcan" Hospital benefits from the development of network communication technology and strong guarantee of filming equipment. At the

beginning of the construction of the hospital, the three major domestic network operators started the coverage construction project of 3G, 4G and 5G wireless communication networks^[2]. At the same time, the central video as a new media platform, the first state-level 5g with 5g + fiber ShuangQian trillion network technology, set up three road signals, based on the Angle, a full range of monitoring equipment, ensure the thor mountains and fire two big hospital in the process of building a live to live via mobile devices provide a national audience clear picture of the rebound, the stability of the speed and quality.

2. Content Presentation

In the slow live presentation of "Panorama direct Hit Wuhan Vulcan Mountain and The Construction of Raytheon Hospital", the central video client used four lenses to show the progress of hospital construction in all aspects to the audience from the panorama and close-up. Through to the construction site of all kinds of mechanical equipment of anthropomorphic named (called top crane for the emperor, blue excavator is called "blue forget machine"), make the lack of interactivity of mechanical equipment in the absence of journalists or host explanation becomes vivid and lively, promoted the sense and content, become a live audience focus of "interaction"^[3]. This kind of content setting, similar to virtual idols, to a large extent stimulates the emotional resonance of audiences and enhances the emotional sharing and interactive communication experience of users in mobile live broadcasting.

3. Audience Psychology

The most distinctive feature of slow live news is that it can create a mimicry environment full of "sense of presence" for the audience. Combined with Merovitz's media scenario theory, "every unique behavior requires a unique situation, and the situation is dynamic and variable, while the use of mass media will confuse the boundaries of different situations". Under the coVID-19 epidemic, the slow live news broadcast on the construction progress of the hospital, because it creates a unique dynamic and changeable scene for the audience, further enhances the audience's emotional enthusiasm for the event and their trust and recognition of the news content in terms of communication effect. At the same time, CNV launched this slow broadcast under the name of "Cloud supervisor". While satisfying the "sense of presence" of news viewers, CNV also enhanced the sense of interaction and participation through live discussion, which effectively

alleviated the audience's negative psychological emotions such as panic, loneliness and anxiety caused by the epidemic.

4. *Difference from Fast Streaming*

Fast broadcast news or fast broadcast content tends to focus on major emergencies and provide a large amount of effective information per unit of time. On the other hand, slow live news tends to record the content of the whole process in a single set scene, so as to realize a comprehensive display of the all-round details, the development and changes of events and the development process. Content interpretation is needed to ensure the comprehensiveness and accuracy of information output within the specified time. On the other hand, slow live broadcast does not require active interpretation, but requires the audience to watch the live broadcast as both an observer and a participant, and achieve a comprehensive grasp and deep understanding of the information content through interactive comments.

III. ANALYSIS OF THE DEVELOPMENT PROBLEMS OF SLOW BROADCAST AT THE PRESENT STAGE

1. *Small and Medium-Sized Media Cannot Afford High Cost Production*

Under the background of media convergence, major head media represented by the China Media Group took the lead in completing multi-directional resource integration and improvement input of production technology, equipment and talents. "Epicenter video" thor hill hospital in Wuhan, make phenomenal "cloud supervisors" after the broadcast, and measurement during the mount Everest in May this year, combined the Chinese credit "5 g + cloud network technology, the perspective of 4 k + VR to live" 12 "Everest Chen" series slow^[4], 360 - degree panoramic display to all the audiences to Everest 24 hours real-time changes. Slow live news of national major projects is produced by CCTV and other head media. But sinking into the local government's media finance center or other local media often faces the cost problems of talent, technology, financial support and equipment shortage when producing slow broadcast of major local engineering events.

2. *Strong Interaction Makes the Role of Gatekeeper Difficult*

Slow broadcast on the mobile Internet brings viewers a strong sense of interaction and participation, which naturally forms a new way of public opinion supervision: the audience can comment and interact as a public opinion supervisor anytime and anywhere according to the immediate changes of the live content. In this process, some highly personal and emotional words are likely to arouse emotional resonance among other audiences and induce others' desire for expression and interaction. Once relevant remarks trigger a lot of communication and discussion, comment publishers become temporary opinion leaders in the real-time broadcast. Some audiences lacking subjective judgment and independent thinking ability will be largely influenced by relevant remarks, thus producing similar subjective opinions and psychological cognition. The large group of real-time online watching will also increase the difficulty of public opinion monitoring and

overall control and management, thus making it difficult for the traditional role of news gatekeeper to play its due role.

3. *Not All Content Themes are Suitable for Slow Streaming*

After the slow broadcast of the construction of Raytheon and Vulcan Hospital, which was launched with the slogan of "cloud supervisor", became a phenomenon news work, all kinds of media units and program producers at all levels began to strengthen their efforts and actively tried to use the slow broadcast for content dissemination. Xinhua News Agency, together with China Mobile and Wuhan University, launched a slow live broadcast of "Cloud sakura appreciation" to help Wuhan fight against the epidemic during the cherry blossom season, which also received double revenue from traffic and public praise. However, due to the biggest feature of slow broadcast without editing, not all news topics are suitable for slow broadcast. For some legal crimes and social moral and ethical events, the all-round presentation of news events often requires in-depth information collection and logical sorting, reprocessing and editing. When it comes to relevant information that needs to protect the personal privacy of the person concerned, it is even less suitable to be presented in real-time broadcast without editing.

IV. COUNTERMEASURES AND SUGGESTIONS

1. *Break Hierarchical Barriers and Build Resource Exchange Platform with Third-Party Technical Teams*

About slow or melting at the county level to solve the problem of small and medium-sized media media broadcast content production cost and technical support, all kinds of media can lead head butt third-party Internet technology company with secondary media unit, the three parties for strategic cooperation, explore the possibility of sharing and open technology platform, from top to bottom, equipment and technical personnel of channel resource exchange (refer to the People's Daily and Tencent collaboration "in the Chinese media fusion cloud").Will be needed to slow live news content production of various kinds of broadcast signal and equipment technology in resource integration platform, let the local media can be a unified platform for the technical support, to try to slow live new way of news production, solve the problem of the shortage of its resources, capital and technology and the development bottleneck, promote the innovative development of the media convergence.

2. *Strengthen the Backstage Supervision and Construction to Improve the Effect of Public Opinion Checking*

In the future transmission process of slow live broadcast content, the producer can constantly try to explore a new set of public opinion check mode suitable for slow live broadcast. With the help of technical support, real-time comment monitoring function is added in the background of live broadcast. On the basis of ensuring that the audience can interact in time and comment freely to the maximum extent, the comment content is initially filtered and then put on the public screen of live broadcast, so as to avoid the occurrence of network kidnapping.

At the same time, can be set up in the air the news producers of official small trumpet role, different from traditional broadcast the news reporter or host detailed explanation of the official trumpet in slow live is simple introduction in the form of public screen interactive real-time broadcast schedule and content, to help the audience know more fully live broadcast content and more comprehensive understanding the content, on the way to avoid some subjective interactive comments with unilateral emotional color.

3. Choose the Way of Live Broadcasting Reasonably According to the Types of Content and Themes

According to the 45th Statistical Report on the Development of The Internet in China, by March 2020, 19.3 percent of China's Internet users were young people aged 10-19, accounting for nearly one-fifth of the country's total Internet users. For teenagers, especially minors, slow live news supported by media convergence and technology is more attractive than traditional text and picture news. However, based on the subject matter and content mentioned above, future news producers need to make further creation based on the event content and "material" : make accurate planning for major national construction projects (such as scientific and technological exploration, historical inheritance and cultural communication), and constantly explore the possibility of slow live broadcast presentation; For social seriousness or profound education significance of the news content, target, according to the audience's age and cultural acceptance, disgraceful consideration to follow the law of propagation and social, to avoid excessive live exposure and privacy issues, avoid the webcast excessive entertainment and the seriousness of the loss of part of the social news or political news, educational, and balance problem of the scale of the authority.

V. FUTURE PROSPECTS

1. The "Central Kitchen" Mode Facilitates the Production of Slow Live News

With the development of media convergence, the news production mode of "central kitchen" arises at the historic moment, which is characterized by one-time collection, multiple generation and multiple dissemination^[5]. The production mode of slow live news is highly consistent with the overall operation mode of "central kitchen" to a large extent. In the future, for major national construction projects and all kinds of historical and cultural dissemination activities, all kinds of media can be used at all levels "central kitchen" model for slow broadcast news: early in the material integration and content of information inside the kitchen planning, technical post more access to the news site for different angles and the arrangement of the flight reservation layout, using different field of shooting scale, from different aspects to show news events real-time situation of the development of the whole. For events synchronized in multiple regions, slow live shots can be set at multiple information sources for the same theme, multiple signals can be synchronized back to the network, and mobile transfer in front and rear locations can be carried out according to the

context of events, so as to further ensure the comprehensiveness and coherence of news content.

2. Advanced Technologies Represented by 5G Provide More Possibilities for Slow Broadcast

With the arrival of the first year of media convergence in 2014 and the first year of mobile live broadcast in 2016, the China Media Group, after its establishment, under the major strategic background of "putting equal emphasis on network and network and putting the backstage first"^[6], has vigorously developed ultra-HD and surreal image lens presentation technologies such as 4K, 8K and VR virtual reality. At the same time, through the strategic cooperation with China Mobile, China Telecom and China Unicom, the latest 5G+ fiber network technology support will be used to bring the audience more immersive news content with a sense of presence and real experience. Future live broadcast news or slow slow program content, will be in 5g communication technology, ultra hd display technology, artificial intelligence and advanced technologies such as virtual reality, the audience can watch the live in with more the emotional expression of the echo of emotional experience, more interactive and more synchronicity between virtual interactive spatial experience.

3. Innovatively Create Old-Style News and TV Content with Companion Characteristics

By the end of 2018, China's population aged 60 and above has reached 249.49 million, accounting for 17.9% of the total population^[7]. According to the latest report released by the China Development Foundation, the population aged over 65 will account for 14 percent of the total population in China by 2022, and the country will enter an aging society. Therefore, how to make use of new technologies to produce innovative news and TV content suitable for old people that is oriented to the needs of the audience and meets the needs of the news acquisition of the huge elderly population has become a new issue worth discussing.

Slow broadcast with strong accompanying function can bring new news viewing experience to the elderly population in the future. All kinds of media units and new media content production company, should slow dig deep live production technology, in the older population as the main target audience, to grasp the slow live with sex, empathy, interactivity and emotional communication characteristic, let the elderly can also share 5 g era of innovative technological innovation under the news content, to open up new target audience, media practitioners to promote mobile terminal elderly audience participation.

4. To Achieve the Integration of Talents and Technology by Changing the Time

The current stage is in the transition period from 4G technology to 5G. While the network communication speed is constantly upgraded, the innovation and innovative application of virtual reality and picture display technology are also constantly emerging. It is easier for the younger generation to understand, master and apply new technologies, and more innovative in content production. Therefore, in the future,

media units at all levels and of all kinds will boldly use the post-90s, or even the post-95s, as the main force in the production of slow live news, and the young and middle-aged generation will guide the production of content with experience. Take Yangzi Evening News as an example, the core of its mobile live broadcast team is the post-1995 generation, the post-1980s generation provides technical support for visual module design, and the post-1970s generation takes advantage of experience to be responsible for topic selection and overall control of the keynote.^[8]

In the future, there will be more content producers of the post-1995 and post-2000 generations with technology and audience understanding. With the power of science and technology, they will break the space limit by mobile live broadcast, lead the audience to the scene of news events, and make quality, word-of-mouth and influential high-quality news. Similarly, the demand and vitality of content creation can also, to a certain extent, feedback the iterative renewal of communication technology and communication media, so as to realize the ingenious integration and complement of talents and technology.

VI. SUMMARY

To sum up, "slow live broadcast", as an innovative product of media convergence in the era of mobile Internet, will promote the innovation and transformation of news production mode to some extent. Content producers of media should grasp the popularity and traffic dividends of mobile live broadcasting, combine with the latest network communication technology, select appropriate subjects for slow live broadcasting content planning, so as to expand the volume of content transmission. Under the new mode, the integration and allocation of technology and talents, the process update of

production mode and the financial support source of operation cost are the new challenges faced by the industry workers, and the new opportunities for media transformation and integration are also sought.

ACKNOWLEDGEMENTS

This paper is supported by Shanghai Philosophical and Social Science Foundation project "Research on the reproduction of newsroom space in 5G context" (2019bxw004).

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