Research on Visualization Development of Broadcast Programs Based on Big Data Analysis in Converged Media Environment

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Abstract. According to the data released by Saixin Media Research "data Broadcasting", the broadcast contact rate in China is 59.5%. Although in the era of media integration, the mobile Internet has some influence on the traditional media, but for broadcasting, it still has no less influence in its hands than in the past, and still maintains a steady upward trend. According to the relevant statistics, on the Internet, the audience on the Internet only ranks second behind the television media, followed by the traditional radio and newspaper traditional media broadcasting. In the process of continuous development and reform, it has not been eliminated by today’s market, but has shown a trend of growth against the trend. It can be seen that radio programs that rely solely on sound communication and information consultation are in the process of the development of traditional media. There is still a very large audience. In the era of media development, traditional media is also absorbing a new generation of radio listeners through the means and technology of the new era, among which the visual development of broadcast programs is the focus of its reform and development.

Keywords: Integrated Media, Radio Programs, Visualization, Big Data Analysis

1. Visual integration of broadcasting programs

With the development of the network era, radio programs are also adapting to the development of the times. With the gradual integration of radio programs and live video, we will realize the visual development of radio programs. In traditional radio programs, the form is too single, so the audience can only understand the corresponding information through hearing. If the traditional broadcasting program is visualized, we can make the broadcasting content present an intuitive effect. Audiences can understand the relevant content more easily through visualization, and enriching the content of the
program will deepen the audience's impression. In addition, through visualization, radio programs can interact with the audience. In the process of live broadcasting, the distance between the host and the audience is closer, and the audience can better understand the program information. Visual live broadcasting provides audiences with hearing, vision and perception, which effectively improves the listening rate of radio programs. Chengdu people’s Radio, for example, carried out frequency digitization as early as 2000, the main purpose of which is to explore live video broadcast. At the beginning, surveillance video is used to ensure the picking of sound pictures in each broadcast room and to improve the security of the program. During the Wenchuan earthquake in 2008, the radio broadcast room screen, the host’s voice was recorded through the lens, recorded by the server, and then broadcast on TV. This is the first time that Chinese viewers have seen "radio waves in the earthquake" on the television platform. For example, in 2003, the program "Leap FM", which first relied on the website to listen to the broadcast, was broadcast in that year, mainly using the camera that could shoot the video to broadcast the host’s status in the whole process, and then put it in your website for the audience to enjoy, and achieved good results. At present, many video animations and audio are integrated with each other, more novel ways are introduced one by one, and widely loved by the majority of listeners, changing the rigid impression of traditional programs[1].

At present, there are more than 300 million users of live broadcast platform in China (see figure 1), and the market scale is more than 15 billion yuan. Under the environment of fusion media, broadcast programs can be integrated into live video broadcast, and then transformed into video broadcast. Finally, the visualization of broadcast programs can be realized, and the broadcast programs with vivid and visual nature can be disseminated to the audience.

![Figure 1. The size of radio listeners in China (100 million).](image)

However, at present, the visualization of radio programs has not yet reached a fully mature situation. In many cases, most of the programs have only audio but no image, many radio programs only set aside the camera equipment in the process of video broadcasting, thus not having enough stability, and the hosts of some radio programs are not used to hosting the camera, thus the expression of expression is too rigid and the action is very casual in the live broadcast process. There are also some lack of professional and technical staff, unable to make good use of network technology, which leads to the appearance of changes in radio programs is too monotonous. Therefore, there are still many problems in the current broadcast program visualization, so we need to find the corresponding
solutions to realize the development of broadcast program visualization.

2. Problems in Visualization of Broadcasting Programs

2.1. Great gap between interactive audiences

At present, radio programs generally have the function of bullet screen in video live broadcast. But in the process of interaction, different audience groups have different cultural levels, ideas. There are many bad remarks in the process of video live broadcast, which reduces the health of broadcast video broadcast[2].

2.2. Instability of video signals

In today’s network information age, the new media industry is developing very rapidly, the network technology is also developing, and the coverage of network signals is also increasing day by day. In the whole network environment, a large number of constantly changing information is filled with it, so many factors, such as mobile media equipment, data transmission bandwidth and so on, have an impact on the live broadcast signal of broadcast program video. In the process of watching, it is easy to appear Catton phenomenon, especially far from the urban area, without 4G signal coverage, the network speed will be very slow, resulting in video playback Catton and picture quality is not clear, fluency is also very poor, which increases people’s dissatisfaction, but also seriously affects the listening rate.

2.3. Lack of video lighting technology

Traditional broadcasting rooms only need light, it does not need to consider the impact of live broadcasting. At present, many local radio stations do not pay attention to the time and shadow comparison, so the host will appear in the picture will appear in the yin and yang face, the hairline is too high, seriously affecting the host’s image and the program quality. Traditional broadcasters are often resistant to the camera, or do not look up at the camera, or dead, lack of basic care with the audience. These will make the video audience do not communicate with the host atmosphere, thus reducing the host’s good impression, but also because of the lack of "human" host performance and away from the program[3].

3. Countermeasure on broadcasting programs visualization

3.1. Carefully designing the content of the programme

Under the environment of integrating media, broadcast programs turn to video development. And at the same time, they transmit a new way of live video broadcast to the audience. The soul in it is still the main content of the radio program. Therefore, in the process of live video broadcast, the content of the program must be carefully designed and selected, so as to stimulate the attention of the audience and then improve the listening rate. In the information age, the diversity of audience groups is obvious, therefore, in the setting of live broadcast columns, there should be personalized, multi-category, in order to meet the requirements of different audiences. According to statistics, most of the current audience groups are more interested in talk shows, emotional exploration and other programs, and some middle-aged and elderly audiences are also involved. Therefore, in the setting
process of broadcast program video broadcast, we should fully consider the frequency, time and other factors to improve the listening rate[4].

3.2. Ensuring the stability of video signals

At present, China's 4G signal coverage is expanding. The coverage of every corner between urban and rural areas has basically been realized, which provides a good convenience for people's life. But at the same time, it will make the signal influence each other, resulting in the instability of broadcast video signal. Therefore, the radio station must communicate with the relevant telecommunications departments to solve these problems. By increasing the signal strength and speed, it is best to transmit the broadcast video on a dedicated line in advance, so as to ensure the smooth and clear broadcast of the broadcast video.

3.3. Providing a clean and healthy network environment

Audiences need a healthy audio-visual environment, so we should purify the network environment. By transmitting positive energy through broadcasting programs, audiences can improve their understanding of video broadcasting programs. Nowadays, information explodes, a large number of mixed information is filled in the network, therefore, many people will have an impact because of bad public opinion, therefore, we must use the corresponding evaluation to purify the network environment and filter the bad information, so as to ensure that visual broadcast programs can bring healthy information to the audience and create healthy radio programs. Relevant government departments should also establish audio, screen purification related mechanisms, expand the scope of inspection.

3.4. Innovating live broadcast content and highlighting service function

Broadcast video broadcast should be more vivid, rich content to improve the listening rate, therefore, for the relevant practitioners have higher requirements and standards. In order to improve the professional skills and level of the relevant staff and improve the attraction of the program, radio stations need to organize professional training and lectures, increase the participation of relevant staff, improve the professional level, innovate the concept of live broadcast, and then make full use of network technology in broadcasting, integrate the two parts of resources, and ultimately enhance the richness and innovation of direct broadcast content of food. At the same time, it is necessary to reform the way of live broadcast. To attract the attention of the audience with creative programs, so as to meet the new requirements and standards of the audience for broadcasting, establish a good brand image of live broadcast video, and promote the visual development of radio programs in our country[5].

4. Conclusion

In the current media environment, the new media industry has developed rapidly. Therefore, China's radio programs should also adapt to the development of the times. Visualization is an important way to promote the development of radio programs. Therefore, we need to optimize the content of live programs. By constantly improving the program form and signal, we can improve the program effect and listening rate, which promotes the sustainable development of the broadcasting industry[6].
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