

The Development Path and Ecological Reconstruction of Podcast Software Empowered by AIGC - Taking the "XiaoYuZhou" APP as an Example

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Abstract. With the iterative development of new media technology, the forms and means of information dissemination are constantly being enriched, bringing about the recovery of the "ear economy". At the same time, with the development of cutting-edge technologies such as artificial intelligence, big data, and AIGC, the digital content industry is also undergoing profound changes. This article aims to take the "XiaoYuZhou" app as a typical case analysis and discuss the development status and trend of auditory software in the new media era. Analyze the restructuring effects of AIGC on podcast software in four dimensions: content production, distribution mechanism, user experience and business model. Combined with relevant theories and cases, this paper discusses the development trend of auditory software in the environment of new media and artificial intelligence, and puts forward suggestions and prospects for future development.

Keywords: New Media, Podcast Software, Ear Economy, AI-generated Content (AIGC)

1. Introduction

Podcasting is an audio medium that is based on an internet platform and is published and downloaded using cutting-edge technologies such as RSS Really Simple Syndication. In the Chinese world, the word podcast is directly translated as "podcast". On February 12, 2004, the Guardian first mentioned the concept of podcasting in an article titled "The Auditory Revolution: Online Radio Blooms Everywhere". In 2005, the term "podcasting" was included in the New Oxford American Dictionary and defined as "B-roadcasting".

The earliest definition of podcasts was relatively vague, and it was generally believed that podcasts were the ones who disseminated audio through the Internet. The domestic platforms we are more familiar with include Himalaya, Lychee FM, Dragonfly FM, etc. In the early days, due to immature reasons such as immaturity of content, convergence, and frequent advertising clutter, it was in sharp contrast with the prosperity and development of short video platforms, and has been in a disadvantageous position.

2000 is known as the "first year of Chinese podcasts", when podcasts officially entered China, accompanied by a wave of small development, which was known to some people, but the

performance was mediocre, and most industries were not optimistic about podcasts. Due to the impact of short videos and their own immature development, the user base is still relatively small, most people are not accustomed to using sound software, and the transfer cost of the platform is low, resulting in weak user stickiness and lack of development.

With the continuous improvement and development of new media platforms, in March 2020, China's first independent podcast platform "XiaoYuZhou" was officially launched, which greatly promoted the vertical development of blog content dissemination in China.

In recent years, the competition of short video platforms has entered a white-hot stage, with short videos, TV programs, and long videos competing for the length of stay of users, and the forms of resources that can be mined have basically entered saturation. With the silent development of the "ear economy", podcast software still has a lot of room for development.

Driven by national policies, social needs, and economic development, the XiaoYuZhou app has been further promoted, and now it has become a mature blogging software, and many people have settled on this platform, turning radio anchors into a profession, and the stickiness of users has also been strengthened. In the past, the podcast production process was time-consuming and resource-intensive, but with the emergence of AIGC, it has injected new vitality into the XiaoYuZhou app, and traditional podcasts rely on manual script creation, audio recording, and content editing, with a production cycle of several days and an insufficient supply of personalized content. AIGC has promoted the transformation of podcasts from 'human-led production' to 'human-machine collaborative production' through text generation, speech synthesis, data analysis and other capabilities, and has become a key technical driving force for the secondary growth of the 'ear economy'. In 2024, 47% of U.S. individuals listened to a podcast within the past month, a statistic that has more than tripled over the previous decade [1]. This dramatic increase reflects fundamental changes in how people prefer to consume information, with audio content becoming a primary medium for education and knowledge acquisition [2].

This article aims to analyze the impact of AIGC on the development path and ecological reconstruction of "XiaoYuZhou" software, analyze the advantages and disadvantages brought about by AI intervention, and explore the challenges and solutions faced by podcast applications under the development of artificial intelligence. Using case analysis and comparative analysis, the "XiaoYuZhou" app is used as the research object, combined with platform data and user network feedback.

2. Literature review

2.1. New media and AIGC

In today's society, the development of AIGC and Internet new media is a hot topic, and with the continuous enhancement of algorithms and the improvement of background data statistics capabilities, AIGC has penetrated into many fields. New media is one of them. And his appearance injects new elements into new media, living soul. For example, by reducing the time required for ideation and initial content drafts, generative AI allows human creators to focus on refining and perfecting the material, potentially increasing overall quality and strategic alignment with organizational goals [3]; At the same time, AIGC has also brought new industrial models to new media - interactive mode, personalized customization, analog sound effects, etc., attracting more users and companies to join.

2.2. Ear economy and podcast software

At present, short videos based on Douyin occupy the head resources of the market, and a large amount of visual information is full of people's lives, time is cut, memory, and information is fragmented. The market is gradually saturated, and the emergence of voice brings people a sense of intimacy and naturalness, giving birth to a new traffic market. Breaking the geographical and temporal limitations of traditional media transmission, the "ear economy" is everywhere. As early as 1997, the German contemporary esthetician Wolfgang. Welsch once again took the lead in calling for an auditory turn in his book "Reconstructing Aesthetics": "Our culture, which has been mainly dominated by vision until today, is turning into an auditory culture [4]. He clearly pointed out the momentum of auditory culture, and the prevalence of podcast software today also confirms that it is possible to transmit richer and more diverse content through audio, which also brings business opportunities. The world gets dark every day, but it has never fallen into silence, and auditory turning has become an important feature of the current era, as a medium integrated into the "digital broadcasting" of the times [5].

2.3. Summary of AIGC technology-related research

Recently, AIGC has been receiving widespread attention from society and is undergoing profound changes, especially chat gpt, gpt-4, SORA, etc. It can quickly summarize ancient and modern Chinese and foreign countries through accurate algorithms and information retrieval capabilities, and generate the pictures, audio, video, text, etc. that users want. It reduces the time and cost of thinking. This technology has penetrated into various fields such as news editing, medical services, education, industrial design, etc. AIGC is transforming from a digital model in the laboratory to a practical model in the real human field, and its value lies in using intelligence to generate information into the pattern needed by humans. Looking forward to the future, AI video generation technology will develop in the direction of real-time generation, interactive 3D environment construction, and "AI agent" that can perform complex tasks, and content will also be upgraded from "one-time generation" to dynamic generation and hyper-personalized experience that can change in real time with user interaction [6].

2.4. Traditional functions of the "XiaoYuZhou" app and AIGC application potential

As a major representative of Chinese podcast software, its traditional functions mainly focus on disseminating audio content, artificial curation, live broadcast e-commerce, etc. to create a light community atmosphere. Through basic functions such as subscription, recharge, playlist, and comment area interaction, the platform has created a podcast ecosystem and cultural circle based on user interests. As AIGC evolves and infuses, podcast software can improve creativity in three areas--divergent thinking, emotional diversity, and analogies [7]. Brings potential in content summary generation, voice merging, user interaction, and more. At present, the "XiaoYuZhou" app combines AI to launch the "Ask the "XiaoYuZhou" function, through which users can efficiently retrieve the latest podcast topics and content of interest.

3. AIGC's specific empowerment path for podcast platform operation

3.1. Upgrade the AIGC-powered personalized experience

AIGC technology can monitor and record user preferences in real time in the background, so as to intelligently recommend relevant audio content and improve accurate user response. The recommendation algorithm not only considers the popularity and freshness of the content but also takes into account the user's preferences. With the help of AIGC, users can quickly find the content they are interested in; Secondly, focus on user participation, users can generate audio and formulate timbre with the help of AIGC. Give ordinary people the opportunity to experience podcast production as well. enhance users' sense of belonging and participation; Personalized recommendation systems effectively improve user satisfaction and allow users to find content that aligns with their interests faster, thereby increasing user stickiness and retention.

3.2. AIGC assists in content production and theme mining

AIGC can efficiently analyze users' preferences from the background, build an interest model, and predict potential hot topics; for example, the content data report indicates that most users prefer listening to character interviews, particularly dialogues. As a result, AIGC can assist creators in selecting people with high topics as interview subjects, thereby improving ratings and creative efficiency. In addition to focusing on the most popular podcast content at the moment, AIGC can also provide diversified content such as movie recommendations, emotional counseling, and character introductions, so that the needs of niche groups can also be met.

3.3. AIGC lowers the threshold for long-tail content production

Chris Anderson proposed the long-tail theory, affirming the great value of tail products in the long-tail market. With the continuous development of the Internet, the storage cost of data products has been greatly reduced, and the diversified knowledge products in the long-tail market have also greatly met the rich personalized needs of the audience [8].

The group of the "XiaoYuZhou" app is mainly aimed at people who need to listen to podcasts, and a few years ago, compared with other groups, this group was smaller and belonged to niche interest needs. And he retained the group and created podcast content focused on social hotspots, which refreshed users and created a wide range of niche content for niche groups. The emergence of AIGC gives people with low specialization the opportunity to enter the podcast production market, intelligent audio software can repair sound quality, eliminate noise, so that ordinary mobile phones can achieve the role of microphones, reduce entry costs, and lower the threshold; The content can also be automatically summarized, providing preliminary copywriting ideas, which can stabilize the production efficiency of the work. Since then, it has further enhanced its attractiveness and provided a carrier for long-tail users to gather.

In the era of video as the mainstream, we do not choose the economic group at the head but see the economic group in the middle and tail and create a special group platform for this, which continues to grow, and at the same time drives its own platform revenue.

3.4. AIGC activates user interaction scenarios

XiaoYuZhou is not only a podcast software, it is designed to create a community built by users and creators. American sociologist Mark Granovitz proposed that interpersonal networks can be divided

into two types: "strong relationship networks" and "weak relationship networks". To build a strong relationship network, it is necessary to effectively meet the needs of the audience and achieve the direct ratio of use and satisfaction.

The origin of use and satisfaction theory can be traced back to the 40s of the 20th century, mainly to conduct an in-depth analysis of the psychological state and behavior patterns of the target audience. Under this theoretical framework, the audience is considered to be an individual with specific needs, and their contact with the media is considered to be the process of using media resources based on some specific needs and ultimately meeting these needs. This theory argues that the needs of the audience are not only related to their personality and psychological state, but are also influenced by the social environment in which they live [9].

The traditional podcast content model is for creators to publish - listeners to listen - and post comments, and the user's experience is generally limited, and the interactive scene is relatively simple. The emergence of AIGC has broken this single communication model. The most significant change is the human-machine dialogue mode, where users can quickly answer questions or profiles after listening to podcast content and directly chatting with AI, achieving timely interactive dialogue. At the same time, AIGC-powered virtual hosts can create an environment for real conversations, simulating real conversations, as if the audience were there. Turn "one-person podcast" into "a podcast for a group of people." "Provide a more three-dimensional auditory element for the development of podcasts in the future.

3.5. AIGC empowers creators and users in both directions

AIGC technology provides a two-way empowerment mechanism for the podcast field--- which not only provides creators with efficient production tools, but also brings users a good usage environment and efficient and fast information summary. This two-way value flow is constructing an active, stable and long-term ecological model.

For creators, the application for creation system is not too strict and does not have too many restrictions. AIGC can reduce the requirements of professional equipment and environment, so more people will choose radio anchors as their main business or side business, and more high-quality content will be produced from this. For example, the performance of the talk show actor SiWen did not attract too many fans, but last year she created her own podcast "SiWen, Scum" on the "Xiao YuZhou" App and gained a large number of listeners, discovering a more suitable track for herself; Investor Meng Yan established his own podcast "Nobody Knows" on the platform, and in addition to videos and WeChat public accounts, he also used new methods to spread his views and knowledge.

For users, AIGC can directly retrieve their favorite podcast topics and works, summarize the podcast content in advance, and provide overall ideas and opinions. Contrast with traditional media, flexible listening methods, immersive auditory interaction, and use fragmented time as a companion tool to kill time. This is not only a platform for users, but also an important way for creators to open up new paths and spread new content.

4. Challenges and optimization suggestions for ecosystem empowered by AIGC

4.1. "Gatekeepers" to screen massive information

There exists a "gatekeeper" in the process of group communication in the book of Channels of Group Life. Only content that aligns with the current social values or moral standards can enter the communication channels and be received by the general public Today's society is flooded with

amounts of information, and most platforms are paying more and more attention to the number of users but lacking quality control. In addition, AIGC injects new energy, so that more people have the opportunity to enter the field of podcasting, and it is inevitable that the selection of topics mixed with water will enter. In the era of increasingly mature media development, it is more important to measure the effective coordination between "gatekeeping" and creative freedom, not only to protect the freedom of creators, but also to pay attention to the output of the platform.

4.2. The institutional mechanism of intellectual property rights

In the "Xiao YuZhou" app community, users have identities that resemble independent nodes; however, their connections, which are based on a shared focus on knowledge content, are weak and characterized by high uncertainty in terms of timeliness and stability. When creators use AIGC to produce content, it is inevitable that they can be accurately traced back to the creator, which may raise legal and liability issues. Most users prefer to choose free programs, and creators will also rely on easier production models, which is not a good process in the long run.

4.3. The business model and the monetization

At present, the profit methods of the XiaoYuZhou APP mainly include the sale of peripheral goods and the oral broadcasting of advertisements. Compared with short videos, the monetization model is relatively simple. At present, a small part of the content is paid and membership, but for most listeners, they will choose to listen to free content, and with the help of AIGC, the efficiency of generating text and audio has become higher, the threshold has become lower, and monetization has become more of a problem. For the platform, to be bigger and stronger can improve the popularity and quality of the content generated by AIGC in the software, from the willingness of the audience to pay for knowledge, and enhance the dependence on the content; AIGC plans different product advertisements with high content relevance, focuses on customized advertising, develops vertical business models, and customizes advertising orals that match their own content for different radio anchors, such as adding makeup brands for women's topics, and adding red wine advertisements for commercial types.

4.4. Future development path and optimization suggestions

In terms of technology, AIGC-generated content is still lacking in emotional expression and personalized generation, and most users can distinguish whether the content comes from AI or real humans. In the future, AIGC can develop a variety of content creative production models, and modify and improve them through creators' feedback. Improve the human-computer interaction experience, so that "people first, machine as auxiliary" and adhere to the creator as the ultimate control. At the same time, it can be combined with other high-tech devices, such as the integration of generative AI with other emerging technologies, such as virtual reality, augmented reality, and the Internet of Things, promising an even richer landscape of interactive, context-aware, and personalized multimedia experiences, transforming how businesses and individuals engage with digital content. For the platform, it is necessary to establish a multi-dimensional evaluation system to check the quality of the generated content, creativity, emotional expression, real-time popularity and other dimensions. And submit the revision to AIGC again for secondary creation.

Creators need to improve their awareness of self-judgment while using AIGC, and break the homogeneity and patterning of content brought about by technology. It is still necessary to

continuously absorb new culture and new knowledge, pay attention to current hot topics, improve thinking and observation skills, and write unique and innovative views and topics.

5. Conclusion

Nowadays, professional social media applications such as Weibo, WeChat, and Douyin are rich in functions, with strong social attributes and high visualization, which has expanded the breadth of virtual social networking. Compared with visual media, hearing feels more inclusive and deep. As a communication medium, podcasts are a carrier of disseminating audio, and the "XiaoYuZhou" is the current leading podcast software and the Chinese podcast represented by the "Xiao YuZhou" APP uses sound media to establish a connection between the anchor, the listener and the communication content, and gradually evolves into a utopia for young people to listen and share their opinions. At the same time, the addition of AIGC also brings new experiences and upgrades to podcast software, although there are still some problems, but it can be gradually improved through human-machine collaboration, improving emotional expression, optimizing content and business models, etc. In the future, platforms, creators, users, and technology need to work together to build a healthy ecological model that can give full play to the advantages of AIGC and retain the natural and real nature of human creation, promote the development of podcast software, penetrate into people's lives, and spread more full and high-quality content, expand the group, and create more complete auditory communication media.

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