



## ПЛАТФОРМА 3 ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ ВІЗУАЛІЗАЦІЇ У ДИЗАЙНІ

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### THE IMPACT OF AIGC ON CHINESE ANIMATION CREATION: OPPORTUNITIES AND CHALLENGES

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*Artificial Intelligence Generated Content (AIGC) technology is a popular topic in the science and technology field. Its application in various fields has made significant progress. In the animation industry, AIGC technology presents new opportunities and challenges for design and creation. This paper analyses the impact of AIGC on current Chinese animation, using China's first literate video AI animation series 'Poems of Timeless Acclaim' as an example. It was determined that although AI enhances the efficiency of animation production and assists creators in generating ideas and enriching animation details, there are still limitations in practical application. Throughout the process of creating animations, human creativity and artistic understanding are always the irreplaceable core components.*

**Key words:** *artificial intelligence generated content, AI animation, artistic expression, design creation, innovation.*

#### INTRODUCTION

Contemporary cultural development is characterized by the fusion of sciences and humanities, as well as virtual and real elements. In July 2015, Google launched DeepDream, pioneering artificial intelligence models to generate images based on text. In January 2021, OpenAI released the DALL·E model, officially bringing text generated images into the public eye. In August 2022, game designer Jason M. Allen used the Midjourney image generation model to create an AI painting called "Space Opera Theater" and won first place in the digital art unit at the Colorado State Fair Art Competition, sparking global discussion[1]. At the same time, artificial intelligence models represented by Stable Diffusion have emerged and officially entered the industrial field with their amazing image rendering capabilities, marking the beginning of the AIGC animation era. CCTV has recently released 'Poems of Timeless Acclaim', which is China's first text-generated video AI animation series, globally. According to reports, a series of animated films based on



the CMG Media GPT have been created with the assistance of AI. The AI was involved in the art design, animation generation, and post-production of the films [2]. The organic integration of "spoken poetry and silent painting" has been achieved. The development and application of AIGC technology have brought profound impacts and challenges to the artistic creation and aesthetic practice of human society. It not only provides new possibilities for animation creation, but also triggers a profound reflection on the entire content industry ecosystem and even the future lifestyle of humanity.

### **PURPOSE**

The development and application of artificial intelligence, particularly AIGC technology, have brought significant changes to the traditional animation industry. This has led to a new approach to producing animation content and ushered in the era of 'human-machine co-creation' in the animation industry. Therefore, exploring the potential, applications, and challenges of AIGC technology has become an urgent research topic.

### **RESULTS AND DISCUSSION**

Six months prior to the release of Sora, CCTV collaborated with Shanghai AI Lab to introduce China's first AI grand model, CMG Media GPT, which focuses on audiovisual media content production. With the assistance of AI technology, characters and scenes from ancient Chinese poems were restored, leading to the release of China's first text-generated video AI animation, 'Poems of Timeless Acclaim.' This undoubtedly marks a significant milestone in the history of Chinese animation. This work demonstrates the potential of AI in animation creation at a technical level. However, it also presents a challenge to the innovation of the animation field at the artistic expression level.

AIGC technology presents significant opportunities for the production of traditional animation content. Currently, there are two primary applications of AIGC in the field of animation production. One is to address issues in the traditional animation production process and enhance the efficiency of animation content production. The animation work 'Poems of Timeless Acclaim' has a total length of 182 minutes. Under the same budget conditions, traditional animation production processes would require at least 8 months to produce the series of animation films. However, with the support of independent AIGC technology and the corpus of massive video and audio from the main station, the production cycle of the film was shortened to 4 months with the help of CMG Media GPT. Compared to traditional animation production, AI can free up a significant portion of the workforce and greatly improve production efficiency. It has been shown to increase efficiency by at least 50%. Additionally, AIGC tools have reduced the technical threshold of animation production, making it more accessible and cost-effective for ordinary people to produce animations. In the "Poems of Timeless Acclaim" work, the producer simply needs to upload a "reference style image" of a young man from the Tang Dynasty into the CMG Media GPT interface, and then enter "Chinese style, Tang Dynasty, middle-aged, delicate, male, light green clothes" into the "conceptual design description" text box. An animated character image that meets these requirements will appear on the screen, as shown in Figure 1. Other similar tools,



such as Stable Diffusion and Midjourney, allow users to input a description of an imagined image in natural language and add prompt elements to generate a new image. This lowers the threshold for image creation and provides opportunities for ordinary people to create animations. By using the AIGC tool, various types of motion design can be automatically generated by simply providing the creative needs to the tool. This has made animation creation accessible to non-professionals as well.



**Fig.1.** Text Generation Animation Character Image Design  
On CMG Media GPT

The use of AIGC in animation art practice may lead to the disappearance of the artistic 'aura'. While AI can replace creators in performing repetitive tasks, the widespread use of AIGC tools may also result in the loss of the 'soul' of animation works, leaving them devoid of meaning. The concept of 'aura' was first introduced by Benjamin, a renowned German scholar, who believed that it represented the authenticity and uniqueness of artworks. He argues that for a long period of history, works of art were more difficult to reproduce and the means of reproduction were more cumbersome, so the "aura" in works of art was always dominant. However, when mechanical reproduction techniques were widely used, "aura" inevitably disappeared, as the boundary between the original and the reproduction became more and more blurred and even lost its significance [2]. The creation of animation art during the AIGC era also faces the issue of 'aura' disappearing. In the traditional process of creating two-dimensional and three-dimensional animations, most of the artistic content is produced by human creators. These works already possess a unique quality, which is imbued with the creator's emotions and experiences. As the works change over time and space, this quality becomes even more distinct. On the contrary, the technical principle behind the content produced by AIGC tools is based on the arrangement and combination of specific data and rules, which can be described as a form of 'mechanical reproduction'.

The screen effect of *'Poems of Timeless Acclaim'* reveals that the ink and water landscape scene design, character movement smoothness, and key scene



light and shadow effects are not as precise as they should be. This failure to surpass the fineness and emotional expression ability of manually produced animation is evident. Although the AIGC tool improves the efficiency of content generation, the output content itself is the mechanical representation of the algorithm and the form of stacking, losing the human emotional "aura", it is difficult for people to feel the most genuine charm of artistic creation from such works.

### CONCLUSIONS

'*Poems of Timeless Acclaim*' explores the deep integration of AI technology and media creation through cross-border cooperation between scientists and artists, breaking through the boundaries between technology and art. However, the use of AIGC technology in animation creation is a double-edged sword. On one hand, AIGC technology improves the efficiency of traditional animation production to a certain extent and promotes the diversified development of animation production modes. This enables animation production teams to focus more energy on artistic creativity itself, bringing new opportunities for animation creation. However, excessive reliance on AI technology may lead to the disappearance of the 'aura' in animation art creation and the loss of its genuine charm. This presents new challenges for the development of the animation industry.

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### СПРОМОЖНОСТІ ТА ВИКЛИКИ: AIGC УМОЖЛИВЛЮЄ СТВОРЕННЯ КИТАЙСЬКОЇ АНІМАЦІЇ

Технологія створення контенту на основі штучного інтелекту (AIGC) є популярною темою в науково-технічній сфері. Її застосування в різних галузях досягло значного прогресу. В анімаційній індустрії технологія AIGC створює нові можливості та виклики для дизайну. У цій статті проаналізовано вплив AIGC на сучасну китайську анімацію на прикладі першого в Китаї анімаційного серіалу зі штучним інтелектом "Poems of Timeless Acclaim" ("Вірші, що мають вічне визнання"). Визначено, що хоча ШІ підвищує ефективність виробництва анімації та допомагає творцям генерувати ідеї та збагачувати деталі анімації, його практичне застосування все ще обмежене. У процесі створення анімації людська творчість і художнє розуміння завжди залишаються незамінними основними компонентами.

**Ключові слова:** контент створений штучним інтелектом, анімація зі штучним інтелектом, художнє вираження, створення дизайну, інновації.