Retraction

Retraction: Opportunities and challenges of digital media art in the era of big data (J. Phys.: Conf. Ser. 1856 012030)

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This article has been retracted by IOP Publishing following an allegation that raises concerns this article may have been created, manipulated, and/or sold by a commercial entity. In addition, IOP Publishing has seen no evidence that reliable peer review was conducted on this article, despite the clear standards expected of and communicated to conference organisers.

The authors of the article have been given opportunity to present evidence that they were the original and genuine creators of the work, however at the time of publication of this notice, IOP Publishing has not received any response. IOP Publishing has analysed the article and agrees there are enough indicators to cause serious doubts over the legitimacy of the work and agree this article should be retracted. The authors are encouraged to contact IOP Publishing Limited if they have any comments on this retraction.

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Opportunities and challenges of digital media art in the era of big data

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Abstract. In the era of big data, science and technology continue to infiltrate into art, providing more new means of expression for art, and expanding the performance space for digital media art. The statistics and analysis of big data can also more clearly analyze the needs of users, which is both an opportunity and a challenge for the development of digital media art.

1. Introduction
Digital media, in its traditional sense, refers to the digital forms of various media. With the continuous development of digital technology, it integrates traditional broadcasting, computer and communication fields. Marshall McLuhan said that media is information, and the progress of media technology plays an important role in promoting social development. With the development of media technology, from the single communication with mouth, ear and body as the media to the rapid replacement and development of new media in the 5G era, digital media will turn from the communicator centered to the audience centered, and become a multimedia information terminal integrating public communication, information, service, cultural entertainment and communication. Its development is no longer a matter of the Internet and it industry, but will become the driving force and indispensable energy for the future development of the whole industry. The development of digital media has a profound impact on the development of various fields by affecting consumer behavior. The consumer industry, manufacturing industry and so on are strongly impacted by digital media.

2. Introduction to big data technology
With the advent of 5G era, including the faster development of semiconductor, communication, artificial intelligence and other new technologies, faster computing speed, 5G technology's many advantages make it in the field of digital media art will also get a broader development space.

2.1. Overview of big data
Big data, represented by cloud computing technology and data analysis technology, decomposes huge data processing program into numerous small programs through network "cloud", and then processes them by using the system composed of massive servers. At the same time, small programs are analyzed to get the results and merge them. Through this technology, tens of thousands of data can be...
processed in a short time to achieve powerful network services. The implementation of big data is inseparable from cloud computing technology. From a technical point of view, the implementation of big data cannot be processed by a single computer, so it must adopt a distributed architecture. Its feature is distributed data mining for massive data. But it must rely on cloud computing distributed processing, distributed database and cloud storage, virtualization technology.

2.2. Characteristics of big data
Big data analysis generally includes visualization analysis, data mining, predictive analysis, semantic engine and data quality management. In his book the age of big data, Viktor Mayer Schonberger and Kenneth Cukier mentioned the 5V characteristics of big data: volume, velocity, variety, value and veracity. The strategic significance of big data technology is not to master huge data information, but to professionally process these meaningful data. Through the processing and analysis of a large number of complex data, it is conducive to quickly extract the value contained in the data, master the basic laws of data, and more conducive to the development of information technology of related industries.

3. New opportunities for digital media industry in the era of big data
With the advent of 5G network era, science and technology continue to infiltrate into art, providing more new means of expression for art, but also expanding the performance space for digital media art. Tiktok Kwai, for example, has provided a good user experience for the rapid development of live streaming and short video. These digital media platforms have become a pastime for mass entertainment, such as 5G, which is familiar with the self media software. In the era of big data, larger scale data and information storage can be realized, which not only reduces the loss of mobile devices, but also promotes more interactive needs of users, and provides more possibilities for artistic creation.

Figure 1. 5V features of big data.
In the context of artificial intelligence, the society has gradually entered a new era of digital media art and technology.

![Diagram]

**Figure 2.** The development of digital media under the background of data driven.

For the digital media industry, taking film and television production as an example, if we can record, analyze and predict the massive viewing behavior of the audience based on the analysis of big data in the script creation stage of a film, interpret the audience structure, clearly understand the audience's preferences, and satisfy the audience in their favor, the film and television script can be transferred from "one-way output" to "one-way output" in the creation stage "Market oriented" change.

In terms of its communication mode, its operation mode has also changed from the traditional single and fixed network operator to the multi-terminal service operator. With the convenience and popularization of mobile phones and other mobile terminals, users' appreciation or viewing of films is not limited to the original terminal, but more diversified and fragmented, which requires that the production mode in the communication process of the film and television industry should be changed from the original one from producer centered to user centered, a large number of scattered users play a leading role. By using the statistical and forecasting functions of big data, we can mine users' media consumption behavior data, and analyze a large number of users' browsing behavior and reading data, so as to form products that users are interested in, which can be more conducive for our art creators to combine with users' needs in the process of artistic creation, operators can provide personalized services based on this, optimize communication content and maintain user stickiness.

In the era of big data, it also provides more possibilities for the display of art. The rapid development of VR virtual reality in recent years can bring new sensory experience to users. It enriches people's sense world and spreads more artistic inspiration to people. For example, traditional art exhibitions and high-cost art scene construction can be realized with the help of virtual reality technology. On the one hand, it can break the geographical restrictions, and on the other hand, it will bring different sensory expression to users. At present, many museums have adopted VR virtual reality technology, and the exhibition functions cover the complete virtual roaming, human-computer interaction, exhibition system and post exhibition. In the future, getting experience is the main development direction of digital media art. On the one hand, it is to improve users' real emotional experience through intimate interactive devices.
4. Challenges faced by digital media industry in the era of big data

There is no doubt that digital media art will usher in faster and more diversified development in the era of big data, but there is no doubt that it also puts forward higher requirements for us, which are mainly reflected in the following two aspects:

First, in the era of big data, users put forward higher requirements. With more data and resources, users will have higher requirements for the sense of experience. Obtaining the sense of experience will be the main development direction of digital media art, which undoubtedly puts forward higher requirements for practitioners of digital media art. On the one hand, they need to continuously improve the level of new technology, data processing and analysis ability; on the other hand, they need to improve the quality of digital media art. In the era of big data, we need to change the form of artistic expression, from the traditional single sensory communication to multi-dimensional immersion experience.

Second, the rapid development of science and technology has broadened our media and accelerated our communication speed. The whole fast-paced life has made the creation of art, news and works of art more and more fast-paced. However, tracing back to the source, the reason why works of art can be spread is inseparable from the power of culture. The expression of art needs the accumulation of culture and needs to draw digital media art from culture. The traditional culture with national characteristics is combined with digital media art to make the digital media art develop healthily.

5. Conclusion

The arrival of the era of big data will bring many changes to our life and study. For the digital media art industry, there are both opportunities and challenges. However, it is undeniable that we should seize the opportunities, conform to the characteristics of the era of big data, and better develop the digital media art.

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