science editing
pISSN 2288-8063
eISSN 2288-7474
Sci Ed 2022;9(1):1-2
https://doi.org/10.6087/kcse.256

Editorial

Metaverse in journal publishing

Kihong Kim

Department of Physics, Ajou University, Suwon, Korea

Recently, the word metaverse has appeared more and more frequently in media reports and public discourses. Most of them are predictions of the future in the science fiction style that a new kind of world will come when the metaverse technology is successfully implemented and they do not give a sense of reality yet. Lectures on metaverse are frequently held in many academic disciplines. At the annual general meeting of the Korean Council of Science Editors held last month, an introductory talk on metaverse was given as a plenary lecture. According to the Amazon site, there are 821 books published after January 2020 with "metaverse" in their titles. According to the Kyobo Books website, there are 238 Korean books that contain the word metaverse in Korean in their titles. That such a tremendous amount of interest is being given to a technology that has not yet been realized is a very unusual and unprecedented phenomenon. The rapid development of information technology over the past few decades is thought to convince people that the metaverse can be implemented in a short period.

Virtual reality (VR), augmented reality (AR), spatial web, and non-fungible token (NFT) are some of the basic concepts associated with the metaverse. The main idea of the metaverse is to create a virtual three-dimensional (3D) space that appears and feels similar to the real world with the help of special wearable devices and to allow many people to interact in it. Due to the impact of the recent COVID-19 pandemic, many people have limitations to travel and rely on online activities to work extensively. They naturally desire that online activities will evolve to be more realistic. Due to this necessity, the development of metaverse is expected to accelerate further. In the metaverse, many activities in the real world can be performed virtually, so the concept can be applied to all fields. Academic research and journal publication are no exceptions and various applications of metaverse can be expected. In the metaverse of academic journals, all processes of launching and operating journals will be possible. The submission and review of papers, editing, publication, and the subscription to journals can all take place in this space. Metaverse has the characteristic of a 3D space that allows for closer interaction than the existing internet and it is possible to imagine the development of new types of journals utilizing such characteristics.

Papers in academic journals are mainly consisted of written texts and figures. These contents can be viewed and read using a flat-panel display, so journals can be said to be two-dimensional (2D) contents. Recently, an increasing number of journals include videos in their contents, but they can also be viewed using a flat-panel display and are 2D. In the metaverse, one tries to realize a 3D space similar to the world we live in, so the activity of searching or reading papers can be developed to reflect 3D characteristics. For example, one can imagine that when read-

Received: Febuary 9, 2022
Accepted: Febuary 10, 2022

Correspondence to Kihong Kim
khkim@ajou.ac.kr

ORCID
Kihong Kim
http://orcid.org/0000-0001-9965-3535

ing a certain part of the text of a paper, the figures, videos, and references associated with the text pop up and are arranged three-dimensionally in the metaverse space. Furthermore, we can envision a new type of journal containing truly 3D contents that can be viewed only in the metaverse. An important part of scientific results in many fields is a numerical simulation to understand the structure and behavior of 3D objects. Due to the intrinsic difficulty of presenting 3D results in a 2D medium, the results of such simulations have been explained in a limited way by selecting appropriate cross-sections and showing the behaviors occurring in the cross-sections in several figures. In the metaverse, the simulation result could be shown directly as a function of time as if a real 3D structure existed before our eyes. Readers will be able to understand this content more easily and more completely by observing the object from any direction they choose. Furthermore, it will be possible to view the structure and activity inside the 3D object at a chosen depth. I imagine that a new type of metaverse journals that publishes papers including these kinds of 3D contents can be created. I think the expansion of scientific contents in such a direction can make a great contribution to the development of science.

Since the metaverse is a virtual space, it does not have to obey the laws of physics that exist in the real world. For example, in the metaverse, it is possible to teleport over a long distance and it can be set so that gravity does not act on some objects. It is also conceivable to create a unique metaverse where the effects of relativity or quantum physics are strongly felt. It may be an interesting research topic to create new applications by realizing a metaverse space suitable for a specific purpose. I think it will still take a considerable amount of time before the metaverse technology is actually applied to journal publication. In order to develop a large-scale metaverse, it is necessary to develop technologies for much larger memory capacity, faster information transport, and more powerful processing capacity than now. Also, how people adapt to metaverse technology psychologically and socially is not a simple matter. However, I feel that the development and implementation of this technology is inevitable because of the great advantage of the metaverse that allows overcoming temporal and spatial limitations. The possibility that research results can be presented realistically through 3D contents will greatly contribute to the development of academic journals. It is worthwhile for researchers and editors to watch with keen interest as the metaverse technology evolves.

Conflict of Interest

Kihong Kim has been the editor of *Science Editing* since 2014.

Funding

The authors received no financial support for this editorial.