

# Intellectual Property for the Metaverse

Article By:

Frank L. Gerratana

---

How do you use the patent system to protect inventions related to the metaverse?

## ***What is the Metaverse?***

Merriam-Webster defines the metaverse as “a persistent virtual environment that allows access to and interoperability of multiple individual virtual realities.” The term “metaverse” originates from dystopian science fiction novels in which it referred to an immersive, computer-generated virtual world. Today’s “metaverse” is now firmly integrated into the technology sector and can be thought of as a common virtual world shared by all users across a plurality of platforms. Examples of metaverse-related technology includes the software that generates these virtual environments, as well as virtual reality (VR) and augmented reality (AR) headsets and other devices that enable human interaction with the environment and representations of other humans within it.

The adoption of metaverse-related technology is expanding. In 2021 the company then known as Facebook rebranded to “Meta” in an effort to emphasize the company’s commitment to developing a metaverse. In Fall of 2022, Apple announced the development of its own VR/AR headset. 2022 also saw the launch of the first Metaverse Fashion Week.

These events are indicative of the growing emphasis on the metaverse and the expectation amongst technology companies that the metaverse will be the eventual successor to the internet, smartphones, and/or social media. Applications of the metaverse are not limited to socialization and gaming—as the metaverse expands there is increased acknowledgment of the benefits it may provide in other settings, including in education, finance, and medicine.

As patent attorneys and innovators, we ask: How do you use the existing framework of the patent system to best protect inventions related to the metaverse?

## ***Using Patents to Protect Inventive Concepts in the Metaverse***

In this blog post, we explore considerations for protecting inventions in and related to the metaverse. Because many of these technologies are new and the industry surrounding the metaverse is in its infancy, inventions made today may prove to be quite valuable in the coming years. Protecting these inventions today is likely to be well worth the investment in the future. Inventive concepts in the

---

metaverse can be protected using both utility patents which focus on the functional benefits of an invention and design patents which focus on the ornamental aspects of an invention.

## ***Utility Applications for Metaverse***

Utility patents may be used to protect the functional aspects of hardware or software-based innovative technologies in the metaverse.

Innovators in the metaverse environment might pursue patent protection on technologies associated with headsets, displays, cameras, user control interfaces, networked storage and servers, processors, power components, interoperability, communication latency, and the like. These hardware-based inventions for the metaverse may be a natural expansion of those previously developed for augmented and virtual reality, video-game technology, or the internet. Accordingly, patent applicants may look to those fields for best practices in protecting their hardware-based inventions. As with any patent application, identifying a point of novelty early on in the process is essential to deciding whether and how to pursue patent protection.

Software-based inventions may include technologies associated with performing tasks in the metaverse, such as representation of virtual environments and avatars, speech/voice processing, and blockchain transactions (e.g., for purchasing virtual goods). These software-based inventions may face additional challenges at the U.S. Patent and Trademark Office (USPTO), where the patent eligibility bar under 35 U.S.C. §101 prohibits the patenting of “abstract ideas” which may include methods of organizing human activity, mental processes, and mathematical concepts. It is typical for software-related patent applications to receive a patent eligibility rejection during the examination process.

One challenge in patenting software-based applications for the metaverse includes the fact that software that merely implements a process that is equivalent to a known process outside of the metaverse environment is unlikely to be allowed by the USPTO. However, a software-based invention that accounts for the changes introduced by being in a metaverse environment and addresses what specific problems were unique to the metaverse may be found patentable by the USPTO. Thus, best practices for drafting patent applications related to the metaverse may be to include details surrounding the considerations taken to account for the change in operating in the metaverse environment as opposed to a non-metaverse environment in any patent applications.

Additionally, while patent applicants may draft patent applications with the USPTO in mind, applicants should also consider the intricacies of claiming patent protection for software related technologies on a global basis. For example, patent applicants should consider that patents for software processes are more difficult to acquire in Europe unless clear indications of how a software-based invention provides a technical solution to a technical problem are included in the application.

## ***Design Applications for Metaverse***

Innovators in the metaverse may also use design patents to protect ornamental aspects of their invention. For example, fashion companies may seek protection of their branded objects within the metaverse. Technology companies may try to protect the ornamental features of their headsets or user interfaces.

The protection of objects within the metaverse presents an interesting avenue for patent protection. Objects displayed within the metaverse may be protected similarly to how innovations in video-game

technology, web applications and graphical user interfaces are currently protected using design patents. For example, representations of physical items within a virtual environment can be considered computer-generated icons that can be protected so long as they are shown in an embodiment tying them to an article of manufacture such as a computer screen, monitor, other display panel, or any portion thereof in compliance with 35 U.S.C. 171. Similarly, movement of items within a multiverse environment can be protected similar to how changeable computer generated icons are protected today.

Again, while patent applicants may focus on the requirements of the USPTO, it is important to note that the metaverse is inherently global in its nature and that industrial design applications across the globe may have different requirements. For example, Europe does not require a display screen for industrial designs. Accordingly, comprehensive strategies for design protection of metaverse related technologies may consider the nuances of seeking industrial design protection in various jurisdictions.

### ***Other Methods for Protecting Inventive Concepts in the Metaverse***

As with any product or company, a comprehensive strategy for intellectual property protection includes not only patents but also trademarks and copyrights. As intellectual property attorneys consider the best ways to protect a client's product, they may often turn to trademarks and copyrights in connection with design and utility patent applications to provide more holistic protection of intellectual property assets. For example, fashion-based companies may utilize a combination of trademark protection and design patent protection for their brands and the innovative designs for which they are known in the metaverse. Software-based companies may turn to a combination of copyright and utility patents to protect innovative functionality for the metaverse.

### ***Concluding Thoughts***

The growth in use of utility and design patent applications to protect concepts related to the metaverse is immense. One study conducted by IALE Tecnología found that "over the past five years, metaverse-related patent applications have doubled to more than 2,000." This rapid expansion in patents for innovative concepts surrounding the metaverse is only expected to advance in the coming years.

Cohesive and comprehensive strategies involving utility patents, design patents, trademarks, copyrights and trade secrets are likely to provide the best protection to innovators operating in the metaverse.

©1994-2025 Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. All Rights Reserved.

---

National Law Review, Volume XIII, Number 145

Source URL: <https://natlawreview.com/article/intellectual-property-metaverse>