

Intellectual property

We already understand that the known universe of the internet has caused a great number of models that take advantage of intellectual property rights to converge – challenging owners and users of protected content in the areas of authorization, monetization, and enforcement. The metaverse and web3, conversely, will likely continue to challenge the relevance of some of our core IP mechanisms, put others – like interoperability - under the spotlight and redefine the proprietary nature of technology, virtual worlds, virtual assets and our “things” in the metaverse.

Software interoperability

The purpose of interoperability is to enable different systems to “talk” and “understand” the information they pass to one another. Although it is valuable in any field, interoperability is especially relevant for the metaverse, where no single software will be used to build it.

In legal terms, interoperability is a concept that limits the rights of computer program rights holders, which are protected by copyright. In effect, their authorization is not required where copyright-relevant acts pertaining to the code are “indispensable” to obtaining the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that certain conditions are met (legitimate access to the software, necessary acts only, etc.).

Today, the concept is increasingly coming to the fore, with the creation of the Metaverse Standards Forum by several big tech names (Meta, Adobe, Microsoft, Epic Games, Ikea, Sony, Nvidia, etc.) to “foster the development of open standards for the metaverse.” “The Forum will explore where the lack of interoperability is holding back metaverse deployment and how the work of Standards Developing Organizations (SDOs) defining and evolving needed standards may be coordinated and accelerated,” the group said in its announcement.

At its core, a metaverse is code: ones and zeros, overlaid with unfathomably vast amounts of data. In such a world, everything comes from code. From the clothes our avatars wear to the car that we drive in, our “things” can only exist in the metaverse after being coded.

Khronos, one of the groups promoting standards behind the MSF hopes that MSF’s standards will make much of that data as easily interoperable as JPEG is today. This is particularly relevant in relation to 3D objects for which no Standard currently applies.

The creation of the MSF – just a year after we first published this guide – highlights the importance of interoperable, nonproprietary data exchange formats and can result in a fundamental shift with how we interact with the internet.

In a moment where the mere idea of proprietary technology is being challenged by the advent of web3, all eyes are turning to the architects of the metaverse as the decisions they will make in the forthcoming months will likely impact IP rights for years to come.

Copyrights

Copyrights and their use in the metaverse

Beyond software, copyright protection extends to “original works of authorship fixed in any tangible medium of expression.” As is evidenced by the colorful and content-full metaverses developed by Decentraland, The Sandbox or Second Life, there is seemingly no rock in the metaverse under which no copyright exists.

Collaboration and decentralization

There are many different aspects of the metaverse that will be impacted by copyright laws and this guide already touches on a number of them (see section on *Artificial intelligence* and on *Games* etc.). One aspect however deserves special attention as it is probably one of most significant challenges that we see emerging from the adoption of web3. It lies in shifting from a world of centralized and controlled servers to a decentralized internet, where content is hosted using peer-to-peer technology, like IPFS links and traded by online intermediaries, hosting other people’s content. Rare are the rightsholders in music and film having worked through the nineties who won’t shiver at the thought of all the effort, money and time invested in shutting down peer-to-peer platforms like Grokster, Kasaa, Limewire or The Pirate Bay. Assuming that blockchain, a technology that does not (yet) allow the storage of content, will cure the internet and vaccinate it against new copyright challenges would be naïve and short-sighted. The capacity of copyright to adapt and survive technological revolutions has been demonstrated time and time again, yet for all its transformations it has always been used to enforce a rightholder’s monopoly. How copyright will fare in a world governed by DAOs and decentralized storage is anyone’s guess but certainly something that we will be watching closely.

Trademarks

Trademarks and their use in the metaverse

A trademark is a word, phrase, slogan, design, or logo that operates as an indicator of source for goods or services. Trademark law protects against the unauthorized third-party use of a trademark in a manner that may dilute or disparage the trademark or in a manner that would cause a reasonable consumer to believe that the trademark owner either was the source of the goods or services or endorsed or sponsored such goods or services.

Trademarks are important features in the virtual landscape, and their use is prevalent in the metaverse. As people and companies continue to create and establish their presence online and in the world of virtual and augmented reality, this presents both opportunities and risks. Trademark owners who successfully leverage the metaverse to engage in cross-promotional branding can reach a wider audience, but they must be aware of the potential liability associated with that expanded reach.

Issues for owners and users of trademarks in the metaverse

While mixed and augmented reality have allowed brand owners to extend their reach to a growing new industry and consumer base, they have also created issues for both owners and users of trademarks, particularly in the gaming space. For example, a common issue with the intersection of the virtual and real worlds has been the use of real-world, third-party trademarks in video games that simulate the real world.

In the United States at least, trademark owners have not always fared well in their efforts to enforce trademarks used in virtual worlds. An early example of the potential pitfalls of using real-world trademarks in the virtual world played out in the case of *E.S.S. Entertainment 2000, Inc. v. Rock Star Videos, Inc.*, 547 F.3d 1095 (9th Cir. 2008). In *E.S.S.*, the issue was whether a virtual depiction of a real-world strip club in the popular game *Grand Theft Auto: San Andreas* infringed the real strip club’s logo and

exterior design trademark rights. The court ultimately held that the depiction of the strip club in the video game did not infringe the strip club owner's trademark and trade dress rights as the video game was an artistic expression protected by the First Amendment, and it was unlikely that consumers would be confused into believing that the strip club produced the sophisticated video game.

With the proliferation of user-generated content in the last few decades, as well as online "virtual world" games such as Pokémon Go, The Sims, and Second Life, a new set of issues has arisen involving the use of third-party trademarks in virtual worlds. For example, Second Life, a large multiplayer role-playing game that also operates as an online economy, allows users to create their own virtual worlds, develop and promote intellectual property, and even sell their own branded creations (or those of others – more on that below) for a profit. Users can even build an online business presence in Second Life to sell their products in the real world. Beauty and fashion brands can also engage in the metaverse by allowing avatars (virtual characters created by real users/players) to try on clothing or cosmetics or wear an article of clothing that real users or players may not be able to afford in real life. However, with these opportunities also come the risks of unauthorized use of third-party trademarks and possible brand dilution. For example, avatars can sell and purchase virtual goods bearing the trademarks of third parties. Thus, trademark owners should also be aware of the risks presented with the use of brands in these "virtual worlds." While case law surrounding the use of trademarks in the virtual space is unsettled and still developing, some issues that have arisen in recent cases include:

- *Nike, Inc. v. StockX LLC*, No. 1:22-cv-00983-VEC (S.D.N.Y. July 14, 2022): In this case, Nike alleges that StockX – the operator of an online resale platform for various brands of sneakers, apparel, luxury handbags, electronics, and other collectible goods – is "minting" digital assets or non-fungible tokens (NFTs) that prominently use Nike's trademarks. Nike further alleges that StockX is "marketing those NFTs using Nike's goodwill and selling those NFTs at heavily inflated prices to unsuspecting consumers who believe or are likely to believe that those "investible digital assets" (as StockX calls them) are, in fact, authorized by Nike when they are not." Nike alleges claims for trademark infringement, trademark dilution, and several other related claims in this closely watched case that is still in its early stages at the time of writing.
- *Hermès v. Mason Rothschild*, 22-CV-384 (JSR) (S.D.N.Y. May 18, 2022): In this case, the plaintiff – the fashion house Hermès – sued Mason Rothschild (an NFT creator) for trademark infringement as a result of NFTs created by Rothschild. Specifically, Rothschild created a virtual series of purses, coined "MetaBirkins," in a series of NFT images that depicted Hermès' BIRKIN bag design covered in various furs. Hermès' complaint, which was filed in January 2022, asserted that the MetaBirkin NFTs infringed upon and diluted its registered BIRKIN trademarks, as well as its trade dress rights in the BIRKIN bag form. Rothschild submitted a motion to dismiss in February 2022, arguing that the MetaBirkins are works of art that provide commentary on "animal cruelty" and that the NFTs "are not handbags." In May 2022, the Southern District of New York rejected this motion to dismiss and allowed the case to move forward, concluding that Hermès had made sufficient factual allegations to support a conclusion of explicit misleadingness and bad faith.

- *Pellegrino v. Epic Games, Inc.*, No. 19-1806 (E.D. Pa. Mar. 31, 2020): In this case, the plaintiff – a saxophonist who went viral on the internet for his dance moves – sued the developer of the popular video game Fortnite, alleging that the game featured a virtual saxophone-playing avatar that copied his dance moves. The court dismissed Pellegrino’s claim for violation of his right of publicity based on the First Amendment. The court also dismissed Pellegrino’s trademark claim, finding the allegations were better suited for copyright law. The court allowed Pellegrino’s claim for false endorsement to proceed, but after the court issued its order, Pellegrino withdrew his case.
- *AM General LLC v. Activision Blizzard, Inc.*, No. 17-cv-8644, slip op. 11 (S.D.N.Y. Mar. 31, 2020): In this case, AM General, the company behind the Humvee truck, sued Activision Blizzard, alleging trademark infringement for including the truck in Activision’s Call of Duty video game. The court found for Activision Blizzard on summary judgment under the First Amendment, explaining that (1) “Defendants’ uses of Humvees in Call of Duty games have artistic relevance,” and that (2) “[f]eaturing actual vehicles used by military operations around the world in video games about simulated modern warfare surely evokes a sense of realism and lifelikeness.”

These cases establish that the risks of liability for a user of a third-party trademark are greater when the unauthorized user is engaging in commercial activity using the trademark. But certainly, questions of dilution and disparagement will become more prevalent themes as beauty and fashion brands continue to be immersed in the metaverse.

Best practices for trademark owners

As the metaverse continues to grow and evolve, and the lines between the real world and the virtual world continue to blur, brand owners may need to enforce their trademarks not only in the real world but also in the virtual world. Below are steps that brand owners should consider to protect their valuable trademarks.

- Register the trademark. Brand owners are strongly encouraged to register their trademarks with the U.S. Patent and Trademark Office (USPTO) and foreign equivalents. In the United States, doing so creates a rebuttable presumption that the owner owns the exclusive right to use its trademark in connection with its goods or services, and it puts the owner in a much better position to rebut any unauthorized use of its mark in either the virtual world or the real world.
- Consider subscribing to a trademark watch service. It is impossible for a trademark owner to monitor and track every infringing use in the market, especially when the owner has a large trademark portfolio. As such, trademark watch services can assist trademark owners in monitoring relevant markets and internet content for possible infringing activity. Consider designating outside counsel to review these reports as they come in. By working with a watch service, owners can be notified of infringing activity sooner rather than later and can take swift action as these issues arise.
- Immediately notify the platform of infringing activity. Assuming the infringing activity is being conducted by a third-party platform user, brand owners should report this infringement to the platform. Many of these entities do not want to be liable for any contributory infringement and will have mechanisms in place to remove the infringing content when they become aware of it.

- Evaluate the nature of use and the possible claim. Once aware of possible infringing activity, consider the nature of the infringing use and how such use affects the overall brand and the market for the goods or services associated with the brand. As illustrated in the above case examples, not all trademark use in the metaverse is actionable. Outside counsel can assist with this analysis and can help to determine what obstacles, if any, may exist to the enforcement of the trademark. It is also important to note that in the United States, brand owners of nationally known brands are in a better position to enforce against unauthorized use since under the Federal Trademark Anti-Dilution Act, owners of nationally recognized or “famous” brands can sue if the unauthorized use of their trademark by others “tarnishes” or “blurs” the trademark. The Act applies regardless of whether consumers are confused as to the source of the goods.
- Establish a metaverse presence. Finally, brand owners should consider establishing a metaverse presence of their own. Aside from the benefits that come with leveraging the metaverse as an alternate means of reaching consumers and building brand awareness via a thriving and growing market, having a metaverse presence also provides an opportunity to monitor activity, and it may even help thwart trademark infringement by bad-faith actors.

Patents

Patents and their expanding use in the metaverse

A patent for an invention is the grant of a property right to the inventor, issued by USPTO. Generally, the term of a new patent is 20 years from the date on which the application for the patent is filed in the United States or, in special cases, from the date an earlier related application was filed, subject to the payment of maintenance fees. U.S. patent grants are effective only within the United States, U.S. territories, and U.S. possessions. Under certain circumstances, patent term extensions or adjustments may be available.

Companies developing metaverse-related technologies often use patents to protect their inventions. Most metaverse-related patents are in either the VR or AR space. The number of new patents filed related to AR/VR has increased globally at an annual rate of 33 percent since 2010. This exponential rise in the number of filings indicates the increased research and development spending on metaverse-related inventions.

That observation is accurate both with regard to the United States and Europe. The widespread myth according to which software solutions are not patent eligible in Europe is, in fact, wrong. Provided that an invention is computer-implemented, the subject matter may potentially be patented. Statistics show that every fourth patent application with the European Patent Office relates to a computer-related invention.

Additionally, research on and development of metaverse-related inventions are no longer restricted to entertainment and science fiction. AR/VR-related patents are now being used in a wide variety of industries, such as online shopping, workplace training, health care delivery, and real estate.

Issues for owners and users of patented inventions in the metaverse

As with other intellectual property, patent use in the metaverse presents opportunities and risks. A particularly lucrative benefit of owning a patent focused on AR/VR technology is potential licensing revenue. However, identifying potential licensees may present a challenge. In fact, owners of patented inventions used in the metaverse face even greater challenges in policing infringement than do owners of copyrights and trademarks. That is because the use of a software patent is not always visible in the metaverse. Indeed, proof of infringement of a software patent such as an AR/VR patent often turns on the analysis of source code, which is not available until the patent owner has filed a lawsuit and obtained the source code during discovery.

The risks to owners of metaverse-focused patents include potential invalidation of the patents during litigation to enforce the patent. U.S. courts increasingly have been invalidating software-focused patents as “abstract” and ineligible for patenting under section 101 of the U.S. Patent Code and also under the landmark U.S. Supreme Court decision in *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014). The law in this area is still developing and is murky at best. On June 30, 2022, the United States Supreme Court declined the opportunity to clarify the law in the closely watched case, *American Axle & Manufacturing v. Neapco Holdings LLC*. In that case, a fractured Federal Circuit (the U.S. appellate court dedicated to patent-focused appeals) found that patent claims for reducing vibration in automotive propeller shafts were patent ineligible under 35 U.S.C. section 101. The Supreme Court’s next term will present another opportunity for clarifying the law on patent eligibility – this time in connection with a metaverse-focused patent. Specifically, in *Worlds Inc. v. Activision Blizzard Inc.*, the Court will decide whether or not to weigh in on a decision invalidating a patent claiming a method of avatar crowd control in a virtual space, based on filtering avatar positioning information. In the meantime, the continued uncertainty in this area of the law creates uncertainty in the value of patented AR/VR inventions.

Best practices for owners of metaverse-related inventions

Because of the uncertainty surrounding patent eligibility for software inventions in the United States, owners of such inventions might consider not filing a patent at all, and instead protecting the invention as a trade secret. Furthermore, depending on the subject matter of an invention (for example, a process-related one), it may be preferable to opt for trade secret protection because patent enforcement against a competitor would prove to be difficult. Every invention starts as a secret. At some point, the inventors (or the owners of the invention) have to choose whether to keep their invention a secret or to file for patent protection. Keeping a software invention a trade secret avoids having to prove that the invention is not merely an “abstract idea” and that it is therefore eligible for patenting. In determining whether to patent a software invention or instead to treat it as a trade secret, the owner of the invention should consider:

- Whether the invention will be useful for more than 20 years. If so, it is worth exploring trade secret protection because trade secrets can last longer than the 20-year life of a patent, assuming the trade secret does not become stale due to advances in technology.
- How difficult it is for other companies to reverse engineer the invention. The easier it is to reverse engineer an invention, the less likely it will be to consider it a trade secret.
- How often their employees who have access to the invention change jobs. It becomes more difficult to protect trade secrets in industries with high turnover rates and in jurisdictions that do not view non-compete restrictions favorably.

The good news is that thanks to the EU Trade Secrets Directive, the level of protection afforded to trade secrets has significantly improved. Indeed, standards in the United States and Europe are converging.

Domain names

After some initial hiccups, the World Wide Web's domain name system has organized itself under ICANN with a finite number of Top Level Domains (TLDs) and has provided avenues for brand owners to defend their online turf with the Uniform Dispute Resolution Policy (UDRP). Web3 and the metaverse threaten to turn back that advancement. NFT-based domains using a new set of TLDs, independent from ICANN and the UDRP and operating on a registrar-free smart contract, will possibly bring us back to the dot-com era of domain name gold rushes. This means that for now, trademark and brand owners need to be proactive and consider registering the crypto and metaverse versions of their brand names as domain names. The blockchain-based domains often have decentralized governance models and atypical registration terms. These have to be carefully considered and understood, but it means that the old rules do not apply. In addition, it would be advisable to also register the new trademarks as a defensive measure to future domain name disputes.

Open source

The open-source movement rose to prominence in the web1 dot-com boom era. This new platform required a whole raft of tools (remember the browser wars?) in order to tap its full potential. Open source provided some of the answers with its online distribution model. In web2, the walled garden of social media giants meant that content, eyeballs, views, and followers were key performance indicators to the proprietary tools needed to run web2, and open-source software took a backseat. Web3 might herald back the open-source era – the decentralized applications are developed on open-source software and protocols and users can interact with each other through interoperable metaverse properties. The real value in the metaverse lies in the user interactions and the user data, and the fight will be over the ownership of these properties. The applications and software will not take a back seat this time; the data will be on the blockchain. Going open source will encourage the metaverse to be as open and interoperable as possible while leaving the monetization efforts to other features of distributed ledger technology. All the issues relating to jurisdiction and intellectual property with regard to the metaverse apply to open source as it is primarily based on copyright law, which is a jurisdiction-dependent statutory matter.

These choices are strategic and require owners of AR/VR and other metaverse-related inventions to think about the broader picture of intellectual property ownership and its associated benefits and risks.

Authors



Sohie Goossens
Partner
London
sgoossens@reedsmith.com



Dr. Anette Gärtner LL.M.
Partner
Frankfurt
agaertner@reedsmith.com



Christine Morgan
Partner
San Francisco
cmorgan@reedsmith.com



Bryan Tan
Partner
Singapore
bryan.tan@reedsmith.com



Fred Ji
Associate
San Francisco
fji@reedsmith.com



Sarah Bruno
Partner
San Francisco
sbruno@reedsmith.com