Virtual Worlds, Real World Issues
By Sean F. Kane and Benjamin T. Duranske

Today’s virtual worlds—sometimes also called digital or synthetic worlds or 3D networked environments—evolved from text-based role-playing games like Dungeons and Dragons. The predecessors of the “massively multiplayer online role-playing games” (MMOs) of today began for the most part in the late 1970s and early 1980s, when various individuals, like Richard A. Bartle, co-creator of MUD (the first multiuser dungeon), engaged in online role-playing game behavior. The online text-based commands and prompts allowed the players to act out various fantasies without the close proximity requirement that was inherent in the earlier written and oral role-playing gaming forms. As the online technology grew, so did the nature and complexity of the interactive games, including the addition of videogame graphics to the text-based game elements. In the 1990s, the current state of MMOs began offering a real-time socially interactive component that was not available on traditional offline console gaming. While the physical space and landscape are simulated in the virtual environment of today, the social interactions are for the most part real, since virtual characters or “avatars” in the digital world are generally controlled and operated by a real person and not just by strict computer code.

The original virtual worlds were built by private gaming companies for their subscribers and were fully controlled by the designers (the so-called game gods) and their all-encompassing End-User Licensing Agreements (EULAs). These agreements detailed the rights and obligations to which the players were subject if they wished to play in a particular virtual world. As discussed below, as new MMOs emerge, some of these licensing agreements are becoming less encompassing and the individual players are gaining more rights that will lead to some very interesting intellectual property issues and other legal issues as well.

In the last few years, MMOs have exploded in user-ship, with some reports stating that up to 100 million people worldwide may be logging on to play in one of the various digital worlds. Examples of some of these worlds include The Sims, Second Life, Entropia Universe, HiPHiH, Kaneva, Gaia Online, City of Heroes, There.com, World of Warcraft, and Everquest. These and other digital worlds can run the gamut from pseudo-Tolkien, medieval Arthurian, or sex fetish, to more realistic depictions of the modern everyday experience. What they all have in common is that they were designed and programmed to promote social interaction among various players. The application and use of real world physical laws by game designers to create a three-dimensional landscape that persists and develops whether or not any particular gamer is playing reinforces the sense that the virtual world is a dynamic real place. A vast majority of the players spend a considerable amount of time engaged in game play. In fact, some statistics state that between 20 and 30 million regular participants in the virtual world are so involved in game play that they spend more time in the digital society than they do at their job or engaged in other real world activities. A South Korean man, who quit his job to have more time to play games, actually died on August 6, 2005, of heart failure due to exhaustion after playing an online battle simulation game for 50 hours, only stopping for short respite to use the bathroom and take brief naps.

U.S. citizens make up about half of the subscribers in the virtual worlds, with Asian countries accounting for a majority of the remainder. In fact, differing reports claim that from ten to 40 percent of the South Korean population plays an online game with some frequency. The gamers work, play, and interact with other individuals from around the world without ever needing to leave the location of their computers. It is likely that the type of information discussed above was what led the Hon. Richard Posner to recently comment that legal scholars would do well to study the issues surrounding videogames. Interestingly, in December 2006, Judge Posner gave a talk via an avatar in the game Second Life.

Virtual Economy
The majority of online games do not have a distinct win or lose scenario. Instead, they are designed to allow for gamers to build up their avatars in the virtual society by earning virtual currency and developing skills, called “leveling up,” that make each character more powerful. Property, both real and personal, can be purchased or cre-

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ated in the virtual world and used by the avatars. As such, the virtual world society works much like that of a real world society. However, since certain gamers do not wish to invest the time and effort necessary to create a character and build up the level of wealth and status that the game makes available after many hundreds of hours of play, a secondary market has arisen to cater to these individuals. Many gamers have begun to sell their digital goods, property, or avatars for real world money on IGE, eBay, and other similar e-commerce Web sites. In certain cases these items have sold for significant sums, as demonstrated by a virtual island that sold in Project Entropia for $30,000, a virtual representation of Amsterdam in the game Second Life that sold for $50,000, and a virtual space station that also sold for $100,000 in Project Entropia. Some research has stated that last year alone, approximately one billion dollars traded hands as part of this secondary market. Moreover, the amount of IP value that exists within these virtual worlds that has not been offered for sale is quite vast and is continuing to grow. For those who dispute the value of online digital property, consider that in reality most players’ wealth is not in the physical form of hard currency, but is in digital form, existing within the servers of a bank, brokerage house, or other financial institution. With this in mind, the leap to virtual wealth is not a difficult one to make.

A few years ago the BBC published an article under the headline “Virtual Kingdom Richer than Bulgaria.” The basis for this article was that the per capita gross national product of avatars within a realm in the game Everquest was higher than the average income of a citizen in certain Eastern European countries. Virtual entrepreneurs have noted this and attempted to cash in on it in various ways, including by setting up digital sweatshops, where third-world laborers play online games around the clock obtaining and creating virtual avatars, properties, and goods that can then be sold for real world cash. The legality of such action has been challenged in Antonio Hernandez, Individually and on behalf of all others similarly situated v. Internet Gaming Entertainment and IGE U.S. LLC, a putative class action brought recently in the U.S. District Court for the Southern District of Florida. The argument being raised is that IGE and other gold farmers are acting against the terms and conditions specified in the EULA and terms of use from the game World of Warcraft, which specify that the user may not sell items for real money outside of the virtual world. The plaintiff claims that IGE has sold virtual gold for millions of dollars; that the amount of gold on sale is such that it creates a tangible economic damage to so-called honest players because it devalues their currency and their own efforts; that it reduces the amount of virtual goods available to the honest players; and that it also places their characters at a disadvantage because they are not willing to purchase powerful items through the farming system.

Other individuals and entities have created what some may consider more respectable virtual businesses offering products or services to the digital community in exchange for payment in digital currency. Some examples of the most popular and successful businesses are avatar clothing designers and avatar entertainment complexes offering anything from games of chance to virtual skydiving to virtual sex. One such digital clothing designer was even asked to present her designs at an Italian fashion show. The show’s organizer was subsequently contacted by the designer and informed that her attendance would not be possible since her designs were merely for virtual clothes. From these humble origins, virtual world business has blossomed to include the virtual world presence of such blue chip companies as IBM, General Motors, Toyota, CBS, Dell, Cisco Systems, and Sun Microsystems. Moreover, American Apparel, Reebok, and Starwood Hotels have offered their products and services for sale to the virtual public. These virtual transactions are being covered by the Reuters Group as part of its virtual world news bureau.

As already stated, some individuals do not play games for their virtual opportunities, but do so as a way to make money in the real world. Individuals and virtual businesses in the past were able to convert their digital earning into real cash through Web sites like www.GamingOpenMarket.com, which allowed virtual currency arbitrage trading, converting digital currency to U.S. dollars at the prevailing rate in the same manner that an international currency exchange would. (As of the publication date, the Web site was not operative.) Additionally, certain virtual worlds like Second Life have in-game virtual monetary exchanges. Moreover, Web sites like www.ige.com allow players to trade in virtual goods and currency for real world money. The main issue that exists with these sites is that they are generally trading virtual assets that are barred from sale by the terms of the EULAs for the relevant games. While the validity of certain sites like www.ige.com is being tested by the courts, as discussed above, other sites have been created to fill the void. The recent launch of the site www.livegamer.com has eliminated the question of whether the transfer of virtual property was in violation of the EULA. This is due to the fact that Live Gamer partners up with virtual world development companies like Sony, GoPets, Acclaim, and others to create a secure system to sell virtual items from their games. Since Live Gamer only supports transactions for items from virtual worlds it is licensed to work with, there is no question as to the scope of its rights.

Real Law in the Virtual Space

Since intangible intellectual property of all kinds has real world value and can be relatively easily converted, the question arises as to what legal standard should be applied to the virtual world. The growing commercialization of such a world will inevitably subject it to actual laws and regulations as players seek protections for their valuable intellectual property. If virtual world currency and goods being traded have a real world value, is it not logical that the courts and government will eventually step in to protect and regulate these digital assets? Congress recently announced the intent to investigate whether virtual world property should be subject to taxation. At this time, no resolution on this issue has been announced. The answer to this and other issues will potentially depend on whether players are allowed ownership of items obtained or created in the virtual world. Certain proponents of ownership argue that allowing creator ownership of virtual property will foster creativity, which is the protectable
interest copyright laws were first enacted to promote. Others say that judicial determination of the ownership of a virtual “Bone Crusher Mace” is a waste of the court’s valuable time.

While U.S. courts have not yet provided a virtual property ownership standard to follow in this regard, a slew of recent lawsuits have been brought that are potentially opening the door to such a decision. The first such suit was filed against Second Life creator Linden Lab over a virtual property deal that went bad. Marc Bragg v. Linden Research, Inc.,27 venue in the U.S. District Court for the Eastern District of Pennsylvania, originally seemed like it might be the case that first determined the issues surrounding virtual property. While the facts of this case were disputed by the parties, as discussed below, the case itself led to the first U.S. precedent on virtual worlds before being settled on October 4, 2007. Other previous U.S. cases involving virtual worlds similarly settled or were abandoned prior to the creation of any new legal precedents. However, there is some international case law that has determined that individuals have rights in their virtual world possessions. By way of example, in 2003, a Chinese court ruled that a game developer had to compensate a player after a hacker broke into his virtual account and stole his digital currency and property.

**EULAs and the Closed World**

Every virtual world game comes with a EULA that players must endorse if they wish to play the game.28 These rules are drafted by the designers and their lawyers to control and curtail antisocial behavior from the players. By accepting the terms of the EULA, players may waive significant individual rights. The EULA acts like a system of laws for the virtual world, creating a “closed world.” This closed world is intended to differentiate the virtual world as a game space that is not subject to the real world laws and other requirements. If a player fails to comply with the obligations of the closed world, the “game gods” have the ability to shut down an account, which is tantamount to the death penalty for an avatar. This is the exact circumstance that surrounded the Marc Bragg v. Linden Research, Inc. lawsuit. This suit called into question the validity of the theory that EULAs control all. Linden Research Inc., known as Linden Lab, took the position that the EULA negated the relief that had been requested by the plaintiff, since the individual’s account was the property of Linden Lab and subject to its complete control, including termination of the account without cause or compensation to the player. Unfortunately, this position seems to be inconsistent with Linden Lab’s often advertised claim that its “residents” retain ownership of the intellectual property they create in Second Life.29 Ultimately, it may have been difficult for Linden Lab to argue that it should be given closed world protection for its open world system. The judge opined, in a written decision responding to a motion to dismiss, that the arbitration provision in the Second Life EULA was unconscionable and would not be the basis for granting a motion to dismiss.30 This initial salvo from the court may be the first chink in the EULA armor and may call into question the validity of some of the other general provisions.

Under the general terms of a closed world EULA, there is no sense of private property, since the virtual world is wholly owned by the designers and builders.31 Closed worlds generally share the same element: the entire world is created by the game designer and players are limited in what they can create, if anything. In some closed worlds players may only choose avatars from the options provided, they have some limited ability to modify (again with modification options being provided), and they may only communicate using certain prewritten responses. Other closed worlds do provide some additional freedoms or options for user creativity, but under strict conditions. The EULAs of closed worlds usually contain similar language providing that the game designer owns everything in that world, and the user merely has a limited, revocable license to play the game. Moreover, to the extent that a player may be able to create some item in the game that obtains any real world value, protection, or other rights, the EULA specifically dictates that any such rights are transferred to the game designer. Additionally, specific provisions expressly claim ownership of all content created using the game or virtual world engine. These are considered to be closed worlds, since the border between the real world and the virtual world is clearly defined by the EULA.32 Most EULAs insist that any intangible property or artifacts that exist in the game world are the property of the designers and not owned by the players.33 Therefore, if the computer code allows individuals to steal property or kill other players’ avatars, which the gamers ultimately do not own, are there any property rights that have been violated? For the most part the game designers advocate an interpretation of the law that determines the EULA to be controlling.

Game designers, through trade organizations like the International Game Developers Association, seek to limit governmental interference in the online and console-based virtual worlds by focusing on the EULA.34 Under this argument, if we cede legal control to virtual world property to the game designers and the EULA, we essentially negate the need to look to laws and governmental interference to protect players’ rights. Certain proponents of no virtual world ownership tout the EULA as the panacea to any issues of the need for real world law enforcement in the virtual world. Since the EULA controls what can and cannot be done and who is vested with ownership of virtual property, there is no reason to look past its terms and conditions. Included among the rights ceded to game designers under most EULAs is First Amendment free speech. The vast majority of EULAs allow for the game designers to limit what may be stated on their platforms, and they may outright ban religious, political, or other speech they consider objectionable. In the game The Sims Online, a player was banned from the game for publishing stories in the virtual newspaper, the Alphaville Herald, that the owners of the game designer, Electronic Arts, did not like.

There is a certain amount of historical validity in the argument that an agreement to act in accordance with a code of conduct should supersede the applicability of real world law. Individuals knowing that there is an inherent risk in playing a game play football, hockey, and other sports. However, the courts have generally considered there to be a “magic circle” around these sports that limits the liability for injury
unless the parties have acted outside the rules of the game. If the rules of liability have carved out magic circles in these games, it is possible that the law could consider the EULA to have acted in a similar manner relating to the rules of a virtual world. Users must agree to the terms of a EULA, though generally somewhat draconian, before they are allowed to access virtual worlds. Therefore, users specifically and contractually agree to limit their real world legal rights in order to register and use the virtual world.

Under this theory, then, there is the argument that no claim for theft, arson, or murder can be made if the game and the EULA actually allow for this type of play. Nonetheless, given the value of the virtual items involved, this would seem to be too easy an excuse to make. While a certain amount of physical punishment may be expected in sports, murder is not countenanced. Regardless of whether the rules for football specifically ban murder or omit any mention of it, no court could possibly say that it is allowable under a magic circle theory. Why then would the argument stand that a EULA should be able to decriminalize certain otherwise wrongful acts merely by allowing for them, omitting prohibitive mention of them, or just calling them all part of the game? The rights of the individual player ultimately are what a court may find important to protect, not merely what may be easy for the game designer. Stealing a football during play is very different from stealing goods worth thousands of dollars in a virtual world, since the football will be put back in play for all players to use, while virtual goods may be sold or otherwise never again seen by their previous owners. The game gods’ reliance on the EULA may ultimately be their undoing and may subject them to the type of remedy already adjudicated by the Chinese courts.

Closed vs. Open Worlds

“Open worlds,” on the other hand, like Second Life have been designed where the barrier between the real world and the virtual world is much more porous. The creation of these open worlds is making the questions of rights and obligations much more difficult to resolve in favor of EULA control. In an open world like Second Life, individual players retain ownership of certain real world rights to their creations in the virtual world. Open worlds are more sandbox platforms that allow users to create content than they are games that have any specific purpose or end point. Generally, open worlds allow users to engage in any activity they see fit and allow users to monetize their creations in any way that the market will bear. Players are considered the owners of certain of the intellectual property involved and created by them in the virtual world, and users can do with it what they will in the virtual world or real world, so to speak. Currently, in certain of the online realms, up to 80 percent of the content has been created by the users. If the open world trend continues and is adopted by more and more game designers, which seems to be the current trend, then there will be a significant need to regulate and protect IP ownership. Moreover, in these open worlds, individuals or virtual businesses are flourishing but generally not complying with the various real world legal obligations and requirements. Since people are channeling themselves via an avatar or online personality, the argument could be made that their actions have an effect in the real world. This argument might have been put to the test in the Eros LLC v. John Doe suit had the defendants not defaulted. Given that an electronic signature is a legally valid means of consent, then why not attach legal implications to the actions of one’s virtual alter ego?

Virtual IP Rights

The intersection of intellectual property laws and the virtual world raises a panoply of issues and concerns for a legal practitioner looking at this space. Indeed, mainstream articles about virtual worlds invariably note the extent to which certain of these spaces (particularly the virtual world Second Life) offer the ability for users to retain certain intellectual property rights in their creations. While intellectual property rights in virtual creations are somewhat controversial, they share a common basis with other IP rights, including copyright, trademark, patent, and trade secret law, which are more firmly grounded in established law.

It is a relatively uncontroversial concept that an MMO or virtual world developer should retain all IP rights to the content it includes in the platform. That will, in many instances, amount to the vast majority of the content, since player-created content is a relatively new aspect. However, given the emergence of Second Life and other MMOs and virtual worlds that rely on player-created content to build the scope of the world, these ideas of who should retain ownership of IP rights will likely soon be put to the test.

Enforcement of Intellectual Property Rights in a Virtual World

Most virtual world providers offer some mechanism for reporting copyright and trademark infringement. Typically, the mechanism for reporting copyright infringement is more robust, as it follows the structure for takedown notification set up by the Digital Millennium Copyright Act (DMCA). By complying with Section 512 of the DMCA, MMO and virtual world designers claim protection as online service providers. This “safe harbor” provision is designed to shelter service providers from the infringing activities of their customers. For example, Linden Lab provides a detailed procedure for reporting copyright claims, including seven steps for filing a notification and six separate steps for filing a counter-notification. Only written notifications are accepted. Reports vary regarding the effectiveness of sending such notices to providers.

There is no equivalent law regarding trademark infringement claims, so no provider offers as robust a mechanism for trademark enforcement. Instead, most providers invite users to submit notifications via online or offline means. Even if there is no formal procedure, most at least make reference to taking steps to prevent trademark infringement on their Web sites (though it is not always clear how one is supposed to report infringement).

To the extent that both the alleged infringer and the provider are unwilling to take the material down, users with trademark and copyright concerns may need to turn to the courts. Some lawsuits involving allegations of in-world copy-
Copyright Law and Virtual Worlds

There is widespread potential for copyright infringement in virtual worlds and, indeed, there is widespread infringement of copyrights. The issues come up in a variety of contexts. In one context, residents create objects, buildings, avatar shapes and skins, clothing, sounds, and more using copyrighted material that they do not own. For example, there are entire areas in Second Life that are built to represent the worlds of Star Wars, Star Trek, and Harry Potter. Users of these areas can don avatar shapes that turn them into perfect replicas of characters from the original material, visit locations that were originally depicted in the copyrighted movie or book, and purchase accessories used by their favorite characters. These builds are, in a sense, similar to “fan fiction” Web sites, where users write short stories that involve characters from popular books, movies, and television shows.

As with most areas of intellectual property law, there is some resistance in this area to enforcement of copyrights against people who appear to be simply fans expressing admiration of their favorite fantasy world. In regard to Web-based infringement, some creators have taken the position that they do not mind fan sites generally, but have expressed concern about fan fiction that takes their characters in entirely unanticipated (often sexual) directions. That possibility is particularly problematic in virtual worlds that allow unfettered scripting and building. While Second Life’s “Harry Potter build” may simply be a charming and respectful homage by a loving fan, other users can (and, in fact, do) use the available avatar shapes, buildings, and items to create sexual imagery involving the characters from the books and films.

Other potential instances of copyright infringement of major mainstream works include radio stations in virtual worlds that broadcast music, often without a license; in-world distribution of books as text documents; and in-world distribution of full-length copies of movies to watch in one’s virtual home. In the case of infringement for microtransactions in a virtual world where actual damages may be too minimal to support a suit, the availability of statutory damages is particularly important.

The potential for direct copying of objects and textures within virtual worlds, coupled with the fact that real money is changing hands, also creates the possibility of actionable infringement between users. Claims of alleged in-world copying abound, typically via bugs in the virtual world software.

Two of these claims have given rise to lawsuits between users. On July 3, 2007, Eros LLC v. John Doe was filed in the U.S. District Court in Tampa, Florida. This case was brought by the same party that sold the virtual Amsterdam simulation discussed above and involves a claim that a Second Life avatar known as “Volkov Catteneo” had infringed upon Eros’s copyright by copying and selling Eros’s virtual “sex bed” (which, as the name suggests, allows avatars to simulate sexual activity). The general allegations in the suit were that the copyrights and trademark rights in the “Sex-Gen” products were being infringed. After certain discovery was completed, Robert Leatherwood was named in the suit as the individual behind the avatar originally named. A default judgment was entered in this suit on November 16, 2007. On or about October 27, 2007, six Second Life content creators filed a suit in the Eastern District of New York, Eros LLC v. Thomas Simon, concerning the alleged infringement of their virtual property copyrights and trademarks. The defendant had allegedly exploited a flaw in the Second Life software to duplicate thousands of copies of the creators’ products and allegedly sold copies of the creators’ products to other Second Life users as avatar “Rase Kenzo.” The allegedly infringing items represented nearly every type of product for sale in Second Life, including avatar clothing, skins, and shapes, scripted objects, furniture, and more. Not long thereafter, on December 3, 2007, the matter was settled and a consent judgment was entered.

Trademark Law and Virtual Worlds

In virtual worlds that allow unfettered scripting and building, particularly when a major brand has not chosen to enter the space, unauthorized use of real world trademarks has proven too tempting for many designers to resist. Some worlds, such as There.com, have teams of employees that monitor all texture uploads, partly to prevent real world trademark and copyright infringement. Others, such as Second Life, take a relatively hands-off approach, only removing content that is alleged to violate trademarks when it is brought to their attention.

Therefore, immediate concern should arise for real world companies that their products or marks are being counterfeited in virtual worlds. Trademark law requires that companies holding trademarks actively enforce those trademarks in the event of infringement. Failure to actively enforce trademarks can ultimately result in loss of registration for the marks. Moreover, the more dilution of distinctive, famous trademarks is tolerated by a company, the harder it is to later argue that any particular infringer should be enjoined.

There is one particularly interesting issue that courts could be asked to resolve regarding trademarks in virtual worlds, and that is a question regarding the nature of the virtual goods themselves. The question is this: If a user who is not affiliated with Nike makes a pair of “Nike” shoes in Second Life and sells them, is he selling shoes, is he selling a picture of shoes, or is he selling something altogether new—virtual shoes? The question is important because lesser-known trademark holders’ ability to enforce their marks diminishes with a disconnect between the virtual product and an alleged infringing product. Although the question doesn’t mean much for Nike because the Nike mark is sufficiently famous that Nike can prevent people from entering even unrelated fields with products branded with the “Swoosh,” it is critical for smaller manufacturers, such as in-world companies that create their own in-world brands, who have no such protection.

Some companies have taken creative approaches to the problem. Herman Miller, which makes the high-quality real-life Aeron chairs, among other products, established a pres-
en in *Second Life* in the fall of 2007.\(^4\) Of course, as with most major brands, there were already *Second Life* users building and selling knockoff virtual Herman Miller chairs.\(^5\) The real Herman Miller hired a virtual world development company that produced licensed, extraordinarily attractive, virtual versions of its products, which Herman Miller then offered for sale in *Second Life*. Herman Miller also offered anyone who had previously purchased a knockoff virtual Herman Miller a free copy of one of the licensed Herman Miller virtual chairs in exchange for a promise to destroy the knockoff. Herman Miller widely publicized the offer using a “Get Real!” advertising campaign, and the number of infringing chairs for sale in the virtual world plummeted.\(^3\)

Some in-world brands are developing significant reputations in their own right, and a few are starting to apply to register their trademarks. In late 2007, Alyssa LaRoche became the first person to file a trademark application with the U.S. Patent and Trademark Office for a mark used in connection with an avatar. Her avatar, known as “Aimee Weber,” is a well-respected *Second Life* designer. Aimee Weber is also part of the name of LaRoche’s design studio. From the description of the mark:

> The color blue appears in the wings and the hair accessories. The color green appears in the skirt and shirt. The color black appears in the hair, eyes, eyebrows, lips, glasses, necklace, bra, waistband, in the striped pattern on the arms and stockings, as well as the toe and calf areas of the boots. All the elements of the drawing are also outlined in black. The color white appears in the eyes, the striped pattern on the arms and legs, as highlights on the black toes of the boots, on the front of the boots, and in the laces. The color peach appears in the skin.\(^5\)

One interesting note: the Aimee Weber avatar, once registered, is basically locked into a persistent image. Hopefully LaRoche is happy with “Weber’s” pig tails, butterfly wings, green tutu, zebra leggings, and stompy boots because that’s what she’s stuck with as long as she wants to keep the mark.

**Patent Law and Virtual Worlds**

Patents are inevitable in any new technological space, and the virtual world space is no different. Currently there are various pending relevant patent applications covering everything from group-to-group entertainment in virtual worlds, financial institutions and instruments in virtual environments, securing contracts in virtual worlds, advice-tracking in virtual worlds, and even providing counseling in virtual worlds.\(^5\) Since this is such a nascent industry, no patents specific to this space have issued yet.

**Trade Secret Law and Virtual Worlds**

The most important aspect of trade secret law from the standpoint of virtual worlds is the requirement that the information be treated in a way that can reasonably be expected to prevent its disclosure. There are a number of factors that courts will consider, including: (1) the extent to which the information is known outside the business, (2) the extent to which the information is known by employees and others involved in the business, (3) the extent of the measures undertaken by an employer to protect the secrecy of the information, (4) the value of the information to the employer, (5) the amount of effort or money expended by the employer in developing the information, and (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.\(^5\)

The current nature of virtual worlds renders them poor forums for maintaining secrecy. Although information could theoretically be communicated through a virtual world using third-party encryption software with a reasonable assurance that it would only be available to the sender and recipient, it rarely is. Nearly all communication in current virtual worlds is vulnerable to eavesdropping from the virtual world developer and other users, and is additionally stored on the servers of the provider for an indefinite period of time (theoretically available to any employee of the provider with sufficient security rights and interest). Moreover, it is protected only by a generic privacy policy, not a specific non-disclosure agreement.

**Passporting Virtual Property**

If a player leaves one virtual world to take up “residence” in another virtual world, the virtual property rights will be governed by two things, the EULAs of both virtual worlds and the code used to build the particular virtual worlds. Players leaving an “open world” are likely to have ownership of certain intellectual property that they may choose to bring along with them and utilize in another virtual world. This may take the form of copyright, trademark, or other rights. However, in the case of a player leaving a “closed world,” the developer theoretically retains ownership to all IP rights that exist in the game and the player’s license to use it would likely terminate. Therefore, any future use of intellectual property in the context of another virtual world, or elsewhere, would likely be an actionable infringement. In most jurisdictions the courts have not yet reached a determination as to any differences of ownership of virtual assets in open worlds or closed worlds; however, this will likely soon change.

Putting aside the above, even if a player does have ownership rights to virtual property, it may have little or no value or use outside of the particular virtual world. As some legal scholars have said, “code is law.” However, as of today, there is no one specific platform or code language that is being used to build all virtual worlds. Given this fact, there is not currently a way to ensure that virtual property could be taken out of a particular game and ported to another world. Without the specific platform that the virtual world was built upon, all the player has is arguably a string of meaningless code representing the asset which would not be accessible. This may change in the future as more and more companies like Multiverse, Icarus Studios, Prototerra, Forterra, and others are developing licensable virtual world platforms that would allow multiple worlds to be built sharing the same underlying framework. Moreover, companies like IBM and Cisco are working on a set of industry standards that may alleviate this concern. When code and standards become more mainstream, there may be a greater opportunity for virtual property from one world to be utilized in another world.
Conclusion
The foregoing is intended to be a non-exhaustive discussion of the current state of the law of the virtual world. There are various other potential problems and defenses that the individual players and virtual world creators may have for their actions or failures to act. As demonstrated, the problems and legal issues involved in the virtual world are very complicated and still in a nascent stage. They cover the gambit from IP issues and contract law to the First Amendment. Only time will tell as to how courts will adjudicate these issues. However, the impact of such decisions will need to be considered and taken seriously, for they will likely have wide-reaching ramifications. The virtual world is moving away from its strictly console-based videogame ancestors to a less structured realm. It is not merely made up of individual gamers without any impact on the non-gaming public. Many of the experts in the field believe that the current virtual world technology will soon merge with the search functions and capability of the Internet to create a three-dimensional World Wide Web. To some extent, if and when this comes to pass, the issues discussed herein will continue to play out. Therefore, it is important that the courts consider the full impact of any early virtual world precedent that is decided. For this to be properly considered, the courts must consult with those individuals who fully understand the implications of the virtual world. From all the above, it is clear that Judge Posner was correct in his assertion that studying virtual world issues is a worthwhile endeavor. ■

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Endnotes
31. Id. at 8.
33. Gimmelman, supra note 28, at 8.
34. www.idg.org.
35. Fitzgerald, supra note 29.
36. Cory Ondrejka, Escaping the Gilded Cage, User-Created Content and Building the Metaverse, in THE STATE OF PLAY LAW, GAMES, AND VIRTUAL WORLDS 160 (Jack M. Balkin & Beth Simone Noveck eds., 2006).
39. Id.
50. Id.
51. Id.
Abstract: A hardware and software platform for collaboratively reviewing prior group to group interactions while planning, producing and archiving new group to group interactions. The platform may be used to collaboratively create group to group interactions. The system may be used to link two or more stadia, movie theatres or homes so as to provide interaction between the groups at each location simultaneously as a game or other event takes place.
54. Application No. 20070087820: Financial Institutions and Instruments in a Virtual Environment
Abstract: A system and method to allow players of a video game to perform financial transactions in a virtual environment. According to some embodiments, real world financial instruments such as a credit card or other financial instrument may guarantee some or all of the virtual financial operations.
55. Application No. 20070117615: Securing Contracts in a Virtual World
Abstract: The disclosure provides novel video game methods and systems for enforcing contracts within video game environments. Methods and systems of the invention include virtual and real world penalties and remedies for entities that breach contracts or other obligations undertaken in the virtual world.
56. Application No. 20070087797: Video Game Environment That Tracks Help and Advice Provided to Other Player Characters
Abstract: A virtual game environment in which characters are allowed to give help to one another and in which the game tracks the amount of helpfulness of each character is provided. Characters may be rewarded or paid for giving help to each other. In some embodiments, help may be given in the form of advice.
Claim 1: A method comprising: providing a virtual video game environment wherein a plurality of characters interact with one another; determining the helpfulness of at least one of the characters.
57. Application No. 20070166690: Virtual Counseling Practice
Abstract: A virtual counseling practice. The practice enables a counselor trained to provide counseling to a patient to hold counseling sessions within a virtual reality world. A counseling server, a counseling application, and a counseling database, supplement the patient and counselor session in the virtual world. The counseling application provides communication tools. The communication tools supplement the counseling section through heightening of feelings, emotions, and other patient information during the session.
58. Restatement (Second) of Torts § 757 Liability for Disclosure or Use of Another’s Trade Secret (1977).