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From the Selected Works of Ryan G. Vacca

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Viewing Virtual Property Ownership Through the Lens of Innovation

Ryan G. Vacca
VIEWING VIRTUAL PROPERTY OWNERSHIP THROUGH THE LENS OF INNOVATION

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I. INTRODUCTION

Imagine a world in which you design software. Maybe you are an entrepreneurial programmer working at night in your basement to create amazing software that will revolutionize a particular industry or entertain the masses. After months of slaving away at the computer, writing code, debugging software, and fine-tuning your work, the program is complete. Because most consumers use a version of Microsoft Windows, you write your software to be Windows-compatible. The software is advertised nationwide, and consumers can purchase the software from your website. Hundreds of thousands of consumers go to your website and pay to download a copy of the software. Your software is a commercial success, and you can now retire early.

With your new fortune in hand, you head out the door to take a much needed vacation. On the way out, you see a letter addressed to you from Microsoft. You quickly open the letter and are shocked by what you read. Microsoft claims that it owns the copyright in the software you created and demands all of the profits you made from the sales of your software. The letter explains that, as part of the license agreement you accepted when you installed Microsoft Windows on your computer, you agreed that any copyrights in software you created that was used in Microsoft Windows would be assigned to Microsoft. Because Microsoft owns the copyright in your software, you do not have the right to sell it. Identical letters have been sent not only to you, but also to programmers all over the country.

This situation has not happened, but if it did, you could imagine the outrage of programmers and the industries for which they produce software. The number of programmers creating software would plummet, and new programmers would not be incentivized to enter the market. Industries that rely on new software would suffer from a lack of innovation.¹

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¹ The immediate harm to such industries might be lessened depending on whether Microsoft licensed the software and what the terms of use were. However, the long-term harm to the industries from a lack of innovators would persist.

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Now consider a second story, similar to the first. Imagine you are sitting in front of your computer at home logged into a virtual world—a world experienced on the computer screen and negotiated with your keyboard and mouse. In this virtual world, you have a house and a car, and you socialize with others who are logged in from all over the world. The virtual world was created by a software developer named ABC, Inc. To make this virtual world more interesting after several months of use, you stay up late in the evenings designing a small piece of software that will be represented as a new house in the virtual world (a virtual house) that has a design never before seen in the virtual world (or the real world for that matter). After several weeks of hard work and late nights, you finish designing the virtual house. You place the new virtual house in the virtual world and put up a "for sale" sign. Within minutes, several other users offer to buy a copy of your virtual house. Over the next several months, you sell hundreds of virtual houses. Inspired by your recent success, you go on to develop other virtual items, all of which are coveted by your fellow users.

Then one day you receive an email from ABC, Inc., which claims that it owns the copyright in the virtual property you created. The email explains that as part of the license agreement you clicked on when you entered the virtual world, you agreed that any copyrights in virtual property you created would be assigned to ABC, Inc. Because ABC, Inc., owns the copyright in your virtual property, you do not have the right to sell that property. Identical emails have been sent to all users who developed their own virtual property in ABC, Inc.'s virtual world.

Just as in the first story, users who create virtual property will not have as much incentive to enter the market, and users who enjoy the virtual property will suffer as a result. However, unlike the first purely hypothetical scenario, this second scenario has become reality. However, why we have tolerated the second story, but would not imagine tolerating the first is unclear. Perhaps this tolerance is attributable to uncertainty about how to treat virtual property; nonetheless, innovation and creativity are stifled under both scenarios.

Over the past several years, many scholars have wrestled with the idea of how property rights for items created in virtual worlds should be conceptualized. Some have discussed utilitarian models, others have examined a Lockean natural rights theory, and still others view virtual property merely as another form of intellectual property. Regardless of how virtual property is conceptualized and which theory it best fits, most, if not all, commentators agree that the law ought to recognize virtual property as property and vest someone with those rights.


3. See, e.g., Lastowka & Hunter, supra note 2, at 46–48; Westbrook, supra note 2, at 791–95.


5. See, e.g., Andrew E. Jankowich, Property and Democracy in Virtual Worlds, 11 B.U. J.
This Article moves beyond the initial debate about how property rights in virtual property should be viewed and asks two new questions from a new perspective. First, who ought to own the property rights in virtual property so that innovation and creativity can be maximized? The question is whether it should be the users who write the code and create the property or the developer-companies that initially create the virtual world and provide access to it. Second, how can the law be modified to remove barriers that unnecessarily impede creation of a regime that maximizes creativity and innovation in virtual worlds?

There is no clear answer to the first question. Evidence supports the notion that the users who participate in these virtual worlds and create the virtual property should be the owners of the virtual property rights. The economic incentives associated with property ownership may be important to maximize innovation and creativity in the virtual world context. On the other hand, strong counterarguments and alternatives suggest that ownership by the original software developers may best promote cumulative innovation and creativity. Regardless of the answer, it is clear that there exists the potential for an innovation-maximizing system different from what exists presently.

As to the second question, I argue that the current state of the law causes virtual-world developers to be unwilling to relinquish their hold over virtual property rights. Developers’ reluctance to allow users to own virtual property rights results from fears of liability, loss of control, and being forced to create at a more rapid pace to keep users interested in the virtual world. To relieve these concerns and allow the possibility for a regime that may put virtual property in the hands of those who will maximize innovation and creativity, I urge the creation of a legislative safe harbor that would provide an incentive for developers to hand over some control and explore property allocation regimes that may maximize innovation and creativity.

Part II of this Article introduces the concepts of virtual worlds and virtual property—the types of worlds, who participates, the commercial impact, and the traditional and new models of property ownership currently used in virtual worlds. Part III explores how virtual worlds are not spaces separate from the real world, but are instead complementary to it. Additionally, Part III examines whether granting ownership of user-created virtual property to users or to developers would best maximize innovation and creativity. Part IV examines the problems facing virtual world developers and explains why the traditional model has been strongly adhered to by almost all developers. Finally, Part V considers

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6. See infra Part III.B.
7. See infra Part III.B.
8. See infra Parts IV.A–C.
9. See infra Part V.

Sci. & Tech. L. 173, 176 (2005) (“[E]mbracing property rights is a prerequisite to resolving governance issues in virtual worlds and necessary to allow further evolution of communities in virtual worlds and increase the autonomy of game participants.”); Lastowka & Hunter, supra note 2, at 13 (“[T]he primary theories of property are consistent with the concept of property rights in virtual assets.”).
whether a legislatively created safe harbor would incentivize developers to hand over ownership of user-created virtual property to users. Such a provision has the potential to benefit both virtual world users and the real world. This Part analyzes several different forms that the safe harbor could take, suggests an approach, and discusses other issues that should be further explored before implementation.

II. VIRTUAL WORLDS AND VIRTUAL PROPERTY

Although virtual worlds have existed for a number of years, their introduction into legal scholarship has been rather recent. To put this Article in context, it is necessary to have a solid understanding of virtual worlds generally, the role of virtual property specifically, and how ownership of virtual property is currently addressed.

A. Virtual Worlds – What and Who is Involved?

Virtual worlds are, quite simply, artificial and imaginary online spaces where users interact with each other.\(^{10}\) Users exist and are represented in virtual worlds via a proxy known as an avatar.\(^{11}\) Avatars are graphical representations (or misrepresentations)\(^{12}\) of the real-world user.\(^{13}\) Depending on the virtual world, avatars can be customized to appear as humans, aliens, monsters, or even a rubber duck or “a fruit salad encased in gelatin"\(^{14}\) and can further be individualized with clothing, weapons, or other accessories.\(^{15}\) Avatars communicate with one another through speech bubbles or chat windows in addition to facial expressions and body language.\(^{16}\) Some virtual worlds require users to maintain their avatars. For example, in The Sims Online, avatars have needs that must be continually addressed by users, including the need to eat, rest, shower, use the restroom, and be entertained.\(^{17}\) If the user fails to adequately address the avatar’s needs, then the user’s ability to control the avatar is affected.\(^{18}\)

\(^{10}\) See Lastowka & Hunter, supra note 2, at 7. Virtual worlds have their origins in text-based role-playing games such as Dungeons & Dragons. Id. at 16. For a thorough history of the development of virtual worlds, see id. at 16–29.

\(^{11}\) See, e.g., id. at 6.

\(^{12}\) See id. at 65 (“Virtual worlds are often like an elaborate masquerade ball, and as in most masquerades, the least popular mask is the one that you wear in real life.”).

\(^{13}\) Bobby Glushko, Tales of the (Virtual) City: Governing Property Disputes in Virtual Worlds, 22 BERKELEY TECH. L.J. 507, 509 (2007).


\(^{15}\) See Lastowka & Hunter, supra note 2, at 6.

\(^{16}\) Id.


\(^{18}\) Id.
In some virtual worlds, called “leveling worlds,” users develop their avatars’ skills so that they may be promoted to a higher level and engage in new activities. Some worlds emphasize problem-solving and adventuring, typically containing quests to complete and monsters to kill. Users may also “level” by developing “nonviolent skills, such as blacksmithing or baking bread.” Non-leveling virtual worlds, on the other hand, do not have an express goal, but rather exist merely for the purpose of social interaction. However, just as in leveling worlds, avatars in non-leveling worlds can develop virtual skills and accumulate virtual wealth.

Virtual worlds also have relevance beyond the gaming context. They have the potential to be used “for commerce, for education, for professional, military, and vocational training, for medical consultation and psychotherapy; and even social and economic experimentation to test how social norms develop.” Regardless of whether a virtual world is leveling or merely a social network, a distinguishing feature of virtual worlds from non-networked computer games is that they are “both persistent and dynamic.” When users are not present in the virtual world, the virtual world continues without them and continues to change. When users return, they will encounter a world that is not identical to the one they left. In this way, virtual worlds are analogous to the real world: just as the real world continues and changes while you sleep, so too do virtual worlds.

The content and overall look and feel of each world varies from world to world. There.com, a non-leveling social-networking virtual world, holds itself out as a place where users can meet friends, play games, and explore and build the world. There.com users can shop, go to parties, listen to music, and drive dune buggies around islands. Recently, There.com entered into an agreement with Capitol Music Group allowing real-world bands to play at virtual nightclubs and

20. Glushko, supra note 13, at 509 (footnote omitted). See also Lastowka & Hunter, supra note 2, at 26–27 (mentioning various examples of “leveling” in virtual worlds).
21. Lastowka & Hunter, supra note 2, at 27.
22. See Glushko, supra note 13, at 509–10; Lastowka & Hunter, supra note 2, at 28.
23. See Lastowka & Hunter, supra note 2, at 28.
25. Lastowka & Hunter, supra note 2, at 5.
26. Id. at 5–6.
27. See id. at 6.
permitting users to meet and talk to the musicians in their avatar forms. EverQuest and World of Warcraft are leveling worlds filled with characters such as knights, wizards, clerics, dwarves, trolls, and other mythical creatures. In these virtual worlds, users generally spend their time slaying monsters, completing adventures, and developing skills such as mining, or fishing, or leatherworking. Other virtual worlds are more hedonistic. Red Light Center, for example, is an adult-oriented virtual world where users can indulge in virtual sex and drug use.

Virtual-world users are not solely composed of teenage boys as one might imagine. In fact, most users are adults. For example, in Second Life, a non-leveling virtual world, users range in age from eighteen to eighty-five and come from over one hundred countries. Sixty percent of those users are men, and forty percent are women. And while more men have signed up for Second Life accounts, women spend more time logged in. EverQuest users are, on average, twenty-six years old, and women make up sixteen percent of the population.

One study found that two-thirds of virtual world users are employed and half have full-time jobs.

The number of users worldwide is enormous. In 2007, World of Warcraft had 9.3 million subscribers, and one study estimates that figure to be 10 million

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34. Westbrook, supra note 2, at 785 (citing EDWARD CASTRONOVA, SYNTHETIC WORLDS 58 (University of Chicago Press) (2005)).


38. Westbrook, supra note 2, at 785 (citing EDWARD CASTRONOVA, SYNTHETIC WORLDS 58 (2005)).


today. The largest portion of those users were from Asia, followed by North America. During that same period, RuneScape, Lineage, and Lineage II had between 1 and 1.5 million subscribers. One study estimates that there are currently sixteen million virtual-world users worldwide. Another study found that users spend approximately twenty-two hours per week in virtual worlds. In fact, some users seem to spend more time in virtual worlds than they do working or participating in their own real communities.

The many users involved with virtual worlds generate a large amount of money. In short, “[v]irtual worlds have developed into a serious economic force.” A report by DFC Intelligence found that the online game market was valued at $3.4 billion in 2005 and was expected to grow to over $13 billion by 2011. While some virtual worlds provide basic membership for free, many charge a subscription fee. Virtual world developers including Sony and Electronic Arts have earned hundreds of millions of dollars in revenue. Part of...
this revenue comes from real-world companies advertising their products in the virtual worlds. For example, in 2002, McDonald’s and Intel paid Electronic Arts, the developer of The Sims Online, $2 million to include their logos in the game. 53

B. Virtual Property – What Is It?

Within these various virtual worlds are many forms of virtual property, including items such as clothing, cars, swords, shields, and artwork. Virtual property in some worlds is similar to its real-world counterpart. 54 Items “are subject to wear and tear”—toilets get clogged, houses require repair, and appliances need fixing. 55 These items, of course, are nothing more than computer code.

Who creates the virtual property that populates these virtual worlds? Some virtual property is created by developers, but most is created by users. 56 As Professor Balkin explains, “many game spaces give players considerable freedom to add new things to the game space, so that they, in effect, become subdesigners of the virtual world.” 57 In these situations, users create myriad types of virtual properties that play important roles in the virtual world. 58 For example, in Second Life, users can create virtual property by selecting from a palate of building blocks called “prims” and then piecing together and modifying the prims to create a new object. 59 New textures and shapes can also be added to the prim palate by using various software applications. 60 Users can write computer code, called “script,” to give their objects the ability to interact. 61 A user can, for example, write a script to enable a virtual airplane to fly, spin upside down, and land.

Other than enriching virtual worlds by providing avatars with something to wear, drive, or wield, what use does virtual property serve for users? Just as in the

53. Matt Richtel, Big Mac is Virtual, But Critics Are Real, N.Y. TIMES, Nov. 28, 2002, at G8.
54. See Lastowka & Hunter, supra note 2, at 30.
55. Id.
57. Balkin, supra note 24, at 2049.
58. See id.
61. Marcus, supra note 59, at 74 (citing Cory Ondrejka, Escaping the Gilded Age: User Created Content and Building the Metaverse, 49 N.Y.L. SCH. L. REV. 19, 92-93 (2004)).
real world, users sell their property. Markets have developed around these virtual properties, and transactions take place on online auction websites such as eBay or via live virtual-world exchanges using third-party services such as PayPal to transfer funds. In 2006, trading of virtual property was estimated at more than $1 billion a year. For instance, in 2005, a user purchased a virtual space station for nearly $100,000, and in early 2007, three virtual shopping malls were sold for $179,688. Less extreme examples include purchasing virtual clothing for a few cents or a virtual car for $1–2. The reason for the creation of markets for virtual property is the same as the creation of markets in the real world: rather than spending the time laboring to produce your own property, you can simply purchase it from someone else who was willing to invest the time and effort. It is important to understand that the virtual economy is directly linked to the real-world economy. Although virtual worlds like Second Life use “Lindens” as in-game currency, this virtual currency can be exchanged for real-world money. Thus, users who create and sell their virtual products are not just amassing virtual wealth; they are also amassing real wealth. In this way, the market for virtual goods is directly linked to the real-world economy.

This Article does not discuss whether or how virtual property ought to be conceptualized in terms of property rights. That issue has been extensively discussed by others. Instead, this Article focuses on a particular class of

67. See Lastowka & Hunter, supra note 2, at 37-38.
69. See generally Balkin, supra note 24 (analyzing how real-world law is used to regulate freedom in virtual worlds); Jankowich, supra note 10 (considering the implications of virtual property on governance in virtual worlds); Jamie J. Kayser, The New New-World: Virtual Property and the End User License Agreement, 27 LOY. L.A. ENT. L. REV. 59 (2007) (addressing the need for a legal presence in the online virtual-world game space); Lastowka & Hunter, supra note 2 (discussing whether virtual objects ought to be understood as property); Meehan, supra note 19 (examining how virtual property should be conceptualized and proposing default legal rules); Westbrook, supra note 2 (exploring the applicability of existing property jurisprudence to virtual-world property).
property, intellectual property, which no one disputes is created in the computer code and graphics used to represent virtual property.\textsuperscript{70}

\textbf{C. Existing Models of Virtual Property Ownership}

Because of the large amounts of virtual property already in existence and constantly being created,\textsuperscript{71} a system of property ownership is needed. Allocation of property rights in virtual property creates stability and promotes development in virtual worlds as well as in the real-world interactions and transactions that result. In general, allocation of property rights largely depends on the End-User License Agreements (EULAs) of each virtual world.\textsuperscript{72}

The EULA is a software license between the developer and the user (and generally drafted by the developer) that governs the relationship between these two parties.\textsuperscript{73}

The EULA is generally presented as a graphical computer window that pops up when the [user] of the software begins running the program. The [user] is then presented with the terms of the license, and must click a button indicating that she has read and accepted those terms. The software will only begin running if the user agrees to the EULA.\textsuperscript{74}

Two models of EULAs have been developed to allocate rights in virtual property: the traditional model and the new model.

1. The Traditional Model – Developer-Owned Property

Under the traditional-model EULA, the developer claims ownership in all intellectual property associated with the virtual world either as the initial author or, alternatively, through an express assignment of users’ intellectual property rights to the developer.\textsuperscript{75} This model is, by far, the most common model of allocation of intellectual property rights in virtual worlds.\textsuperscript{76}

An example of the traditional model where the developer requires the user to assign all intellectual property rights to the developer is Entropia Universe. Its EULA reads in relevant part:

\begin{itemize}
  \item \textsuperscript{70} See, e.g., Balkin, supra note 24, at 2046–47; Jankowich, supra note 10, at 181; Lastowka & Hunter, supra note 2, at 61; Marcus, supra note 59, at 76–77.
  \item \textsuperscript{71} See Ondrejka, supra note 37, at 35 (“As of June 2007, [Second Life] residents were adding over 300 gigabytes of data to the world every day . . . .”).
  \item \textsuperscript{72} Lastowka & Hunter, supra note 2, at 50.
  \item \textsuperscript{73} Glushko, supra note 13, at 515.
  \item \textsuperscript{74} Id. (citations omitted).
  \item \textsuperscript{75} See id. at 514.
  \item \textsuperscript{76} Id. (“Nearly every virtual world has a clause in their EULA requiring that players assign the rights of all property created in-game to the developers of that world.”); see also Marcus, supra note 59, at 79–80.
\end{itemize}
Virtual items will often have names similar or identical to corresponding physical categories such as “people,” “real estate,” “possessions,” and the names of specific items in those categories such as “house,” “rifle,” “tools,” “armor,” etc. Despite the similar names, all virtual items are part of the System and MindArk [the developer] retains all rights, title, and interest in all parts including, but not limited to Avatars and Virtual Items; these retained rights include, without limitation, patent, copyright, trademark, trade secret and other proprietary rights throughout the world.

As part of your interactions with the System, you may acquire, create, design, or modify Virtual Items, but you agree that you will not gain any ownership interest whatsoever in any Virtual Item, and you hereby assign to MindArk all of your rights, title and interest in any such Virtual Item.\(^{77}\)

As a comparison, EverQuest’s EULA does not expressly require assignment of intellectual property rights to the developer, but it arguably asserts these rights as the initial author:

We and our suppliers shall retain all rights, title and interest, including, without limitation, ownership of all intellectual property rights relating to or residing in the Disc, the Software and the Game, all copies thereof, and all game character data in connection therewith. You acknowledge and agree that you have not and will not acquire or obtain any intellectual property or other rights, including any right of exploitation, of any kind in or to the Disc, the Software or the Game, including, without limitation, in any character(s), item(s), coin(s) or other material or property, and that all such property, material and items are exclusively owned by us.\(^{78}\)

Regardless of how the ownership in the virtual property accrues, the scope of developer ownership is generally broad, if not all encompassing.\(^{79}\)

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All materials you send to Company, whether or not at our request, including, but not limited to, e-mail, postings, contest entries, Avatars, There Objects, creative suggestions, ideas, notes, drawings, materials, concepts or other information . . . (collectively, “Submissions”), shall be the property of Company and you hereby assign all of your rights, title and interest in and to such Submissions to [the developer]. . . . Without limitation of the foregoing, Company shall exclusively own all now known or hereafter existing rights to the Submissions of every kind and nature, in perpetuity, throughout the world and shall be entitled to unrestricted use of the Submissions for any purpose whatsoever, commercial or otherwise, without compensation to the provider of the Submissions.


79. See, e.g., World of Warcraft End User License Agreement ¶ 3A (last updated Feb. 2, 2007), http://www.worldofwarcraft.com/legal/eula.html (“[A]ll title, ownership rights and intellectual property rights in and to the Game and all copies thereof (including without limitation..."
Jankowich describes virtual worlds with these types of EULAs as “worlds where the [developers] enable the creation of intellectual property by [users] but refuse to allow them to claim ownership of it.”\textsuperscript{80} Jankowich further explains:

EULAs stipulating that [developers] own all intellectual property rights in a virtual world create a situation in which a commons does not exist and cannot exist until the first copyright terms claimed by the [developer] begin to expire. There will be no possibility for [users] to freely license or otherwise donate their virtual property to their fellow [users], and the [developer] is unlikely to do so for them.\textsuperscript{81}

2. The New Model – User-Retained Ownership

Despite the prevalence of the traditional-model EULAs, a new model of virtual property ownership has emerged. The most often cited example of this new model is Linden Lab’s Second Life. Second Life’s Terms of Service provide:

Users of the Service can create Content on Linden Lab’s servers in various forms. Linden Lab acknowledges and agrees that, subject to the terms and conditions of this Agreement, you will retain any and all applicable copyright and other intellectual property rights with respect to any Content you create using the Service, to the extent you have such rights under applicable law.\textsuperscript{82}

Unlike the traditional model, users under this EULA are permitted to retain intellectual property rights in the virtual property they create. The Founder and CEO of Linden Labs stated that the adoption of this new model was intended to recognize[] the fact that persistent world users are making significant contributions to building these worlds and should be able to both own the content they create and share in the value that is created. The preservation of users’ property rights is a necessary step toward the emergence of genuinely real online worlds.\textsuperscript{83}

\textsuperscript{80} Jankowich, \textit{supra} note 5, at 189.
\textsuperscript{81} \textit{Id.} at 214 (footnote omitted).
Second Life is the only virtual world allowing users to retain ownership of the intellectual property in virtual property they create.84

III. INNOVATION AND THE ALLOCATION OF PROPERTY RIGHTS

A. The Importance of Innovation to Virtual Worlds and the Real World

Innovation and creativity are cultural foundations based in all civilizations.85 They serve not only to entertain, but also to give creators a voice to express their grievances, communicate their thoughts to others,86 and create “new social practices, sensibilities, [and] representations of the world.”87 As one commentator notes, innovators and artists “can intuit the future, create new models of communication, behavior, perception, urban planning, even morality and economy.”88

The creation of virtual property is yet another opportunity for innovators and artists to influence the cultural development of societies. Users who create virtual property within virtual worlds certainly add to the richness of those worlds.89 A virtual world consisting of a black screen with a handful of stick figures moving about is not as diverse or engaging as the virtual worlds experienced today. Beyond users’ abilities to view or otherwise interact with new virtual properties, the properties help construct stories. As several commentators have noted, virtual worlds are, in a sense, just like novels, movies, or plays.90 Virtual property in the virtual world is similar to the use of costumes and set designs in a play. The elements add richness to the show and make it more enjoyable to the theater patron. However, because virtual worlds are interactive, they are even stronger forms of storytelling.91 Just as we recognize the social benefits of content-rich movies, novels, and plays, we can recognize the social benefits provided by virtual worlds and the richness virtual property adds to these worlds.

The effects are not limited to the virtual world. They extend into the real world’s culture as well. Virtual worlds do not exist apart from the real world; indeed, they are complementary and connected.92 The virtual world and the

84. Id. (noting that content created by users in other virtual worlds has historically been the property of the developer and not the user).
86. Balkin, supra note 24, at 2056.
87. FISCHER, supra note 85, at 110.
88. Id. at 112.
89. See Saunders, supra note 47, at 232.
90. See LAWRENCE LESSIG, CODE VERSION 2.0 13 (Basic Books 2006); Balkin, supra note 24, at 2056 (“If movies are media for the communication of ideas, so too are massively multiplayer games.”).
91. See JON FESTINGER, VIDEO GAME LAW 149–50 (Sunny Handa ed., LexisNexis 2005).
property in it are not developed for the avatars but for the real world users behind
the avatars. The imagery is created for and perceived by people in the real world,
just as fine art, television, and film are aimed at reaching the museum patron,
couch potato, and film buff. As one commentator notes, "[t]he virtual world is
not, therefore, simply the world of cyberspace: it is the potential actualisation of
this world into the real."  

For example, one real-world phenomenon springing forth from virtual worlds
is machinima. Machinima are short movies made by users of their virtual-world
experiences. "Creators use the 3D rendering capabilities of an existing game,
but use the game to stage a movie scene or video presentation, which they record
as it is played out. This recording is then distributed on the Internet as a
standalone short film." People outside the virtual worlds have the opportunity to
view and enjoy these films. This phenomenon is just one example of virtual
world innovation reaching out and touching real world culture. Virtual property,
of course, facilitates this extension of innovation and creativity by enriching
experiences and making them more entertaining.

Still, one might wonder who would actually watch these films. In fact, there
are a large number of viewers, and a professional organization known as the
Academy of Machinima Arts and Science has been formed. But suppose that no
one ever viewed these machinima on the Internet. The cultural benefit in that
instance comes from the individual creators refining their skill and appreciation
of other creations. Professor Yochai Benkler explains:

[J]ust as learning how to read music and play an instrument can make one a
better-informed listener, so too a ubiquitous practice of making cultural artifacts
of all forms enables individuals in society to be better readers, listeners, and
viewers of professional produced culture, as well as contributors of our own
statements into this mix of collective culture.

Therefore, culture is enhanced even when the machinima are not watched
because the users who create them can be better viewers of other machinima and

93. PRAMOD K. NAYAR, VIRTUAL WORLDS: CULTURE AND POLITICS IN THE AGE OF
CYBERTECHNOLOGY 21 (Sage Publications 2004).
94. YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS
MARKETS AND FREEDOM 295 (Yale Univ. Press 2006); see also Ondrejka, supra note 56, at 161
(defining machinima as “the creation of movies within synthetic realities”).
95. BENKLER, supra note 94, at 295.
96. See, e.g., YouTube, leroy jenkins (Aug. 6, 2006), http://www.youtube.com/watch?v=LkCNJRfSZBU.
97. As of December 3, 2008, the “leroy jenkins” video had been viewed over 8.6 million
times. See YouTube, supra note 96.
98. Ondrejka, supra note 56, at 161.
99. This factual situation is not all that different from the patent system. Overwhelming
evidence shows that most patents are worthless to society. See Lastowka & Hunter, supra note 2, at
45 (citation omitted).
100. BENKLER, supra note 94, at 295.
motion pictures and can add their own take on cultural developments happening around them.

Like machinima, virtual property also has positive real-world cultural implications even though it may seemingly only serve as a prop or landmark in the machinima. Items created in virtual worlds might not be technologically feasible in the real world at the present time, but innovation in virtual worlds may provide a basis for helping real-world inventors or artists design around the technological limitations they currently face. Moreover, innovation and creativity in virtual worlds will afford users a new perspective that can be applied to the real world. For example, the Serious Games Institute at Coventry University in the United Kingdom is using virtual worlds as a tool for people to learn to work together to solve real-world business problems. Increased innovation and creativity within this context may aid in the development of solutions to existing business problems. Finally, and perhaps most importantly, virtual property helps tell users’ stories, promoting an exchange of ideas between real-world users behind the avatars and enriching real-world culture.

**B. Maximizing Innovation Via the Allocation of Virtual Property Rights?**

Having established that innovation and creativity play vital roles in our culture and that the development of virtual property contributes to that culture, the question now becomes how rights in virtual property should be allocated to maximize innovation and creativity. This question has not yet been answered. Although I do not propose a definitive answer, this Section will explore the arguments, counterarguments, and alternatives to allocating virtual property rights to users.

Some commentators have argued that granting property rights to users is innovation-maximizing. They argue that “[b]y safeguarding players’ intellectual property rights and giving them the right to make money from their creations, [developers] foster genuine creativity and the production of new objects and institutions, rather than mere crafting or tinkering.” This principle is, of course, enshrined in our Constitution, which grants Congress the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

The principle is embodied by the virtual world Second Life, which grants its users’ intellectual property rights. When Second Life first launched

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102. *See generally* Ondrjeka, *supra* note 37 (asserting that granting property rights to users of virtual worlds such as Second Life stimulates innovation in technology and commerce).
in June of 2003,\(^\text{106}\) it gave users the ability to create virtual property, but it claimed ownership of that property.\(^\text{107}\) At its inception, Second Life saw only modest growth.\(^\text{108}\) A team of experts assembled to investigate the problem concluded that allowing users to own the property they created might attract new participants.\(^\text{109}\) The developer changed its EULA to reflect this new model of user ownership, and as a result, participation exploded.\(^\text{110}\) Not only did Second Life attract more users, but the number of users creating virtual property also increased.\(^\text{111}\)

An alternate theory of innovation rejects the idea of user ownership. The premise is that restricting property ownership to the developer alone actually better promotes innovation because individual users are prevented from using intellectual property law as a means to obstruct development.\(^\text{112}\) In this way, granting ownership rights to developers creates a collaborative state where designers are free to take a copy of what exists in the virtual world and build upon one another’s work without barriers to innovation.\(^\text{113}\)

A counterargument to the notion that innovation is maximized by providing an economic incentive is that users create and innovate regardless of an economic incentive.\(^\text{114}\) Professor Benkler questions,

\begin{quote}
Do users pay $x per month in the expectation that they will create something that they can later license to others for a fee, or do they pay that sum in order to get access to a platform of creative tools and connections with creative others, so that they can collaborate on cocreating story lines and pretty pictures of their own?\(^\text{115}\)
\end{quote}

It is true that some users would create regardless of their ability to sell their creations.\(^\text{116}\) This sort of activity happens every day when users create virtual property in virtual worlds that restrict virtual property rights to the developer.\(^\text{117}\)

\begin{itemize}
\item \(^{106}\) Ondrejka, \textit{supra} note 37, at 30.
\item \(^{107}\) \textit{Id.} at 31.
\item \(^{108}\) \textit{Id.}
\item \(^{109}\) \textit{Id.}
\item \(^{110}\) \textit{Id.}
\item \(^{111}\) \textit{Id.}
\item \(^{112}\) Balkin, \textit{supra} note 24, at 2065.
\item \(^{113}\) \textit{Id.}
\item \(^{114}\) See Jessica Litman, \textit{Digital Copyright} 104-05 (Prometheus Books 2001); Benkler, \textit{supra} note 4, at 184; Laura G. Lape, \textit{A Balancing Act: Copyright in the Electronic Network Environment, in Safeguarding Electronic Information} 37 (Jana Varlejs ed., Rutgers 1996).
\item \(^{115}\) Benkler, \textit{supra} note 4, at 184.
\item \(^{117}\) See \textit{supra} note 77 and accompanying text.
\end{itemize}
or forbid commercialization of virtual property.\footnote{\textit{See, e.g.}, EverQuest User Agreement and Software License \S 8 (Aug. 21, 2006), \url{http://help.station.sony.com/cgi-bin/soc.cfg/php/enduser/std_adp.php?p_faqid=16210} (reserving all rights in virtual property to the developer and emphasizing that the user “will not acquire or obtain any intellectual property or other rights, including any right of exploitation” (emphasis added)); There.com Terms of Service: Member Agreement, \url{http://webapps.prod.there.com/help/74.xml} (last visited Dec. 3, 2008) (“It is against There policy for members to sell member accounts to another member for purposes of making a profit . . . . There Inc. can and will take action (which may include suspension or termination) on any accounts found to be violating this policy.”).} However, as Professor Benkler also points out, different users are motivated by different incentives and some users may have mixed motivations.\footnote{\textit{See Yochai Benkler, Coase’s Penguin, or, Linux and The Nature of the Firm}, 112 YALE L.J. 369, 426–27 (2002).}

Without empirical research on this topic, it is impossible to say definitively that innovation and creativity are maximized if users own the virtual property they create. But the possibility exists.\footnote{\textit{Id.}} Therefore, the task becomes identifying the barriers that interfere with exploring this possibility and attempting to remove them.

\section*{IV. PROBLEMS FACING VIRTUAL PROPERTY OWNERS}

Because there exists at least the possibility that innovation and creativity are maximized by granting users virtual property rights, it is useful to explore why developers are reluctant to break away from the traditional model. Developers assert three primary (and interrelated) arguments against adoption of the new model of user ownership: (1) they wish to limit their liability; (2) they fear losing control over the stylistic and administrative elements of the virtual world; and (3) they are wary of being forced to create new features in their worlds in order to maintain interest and subscribers.

\subsection*{A. Liability}

One reason developers require users to assign their virtual property rights is the fear of liability for losses of virtual property.\footnote{\textit{See Kayser, supra note 69, at 80–81 (“In an attempt to avoid liability for harm to players' virtual property, Sony strictly disclaims any right of a player to establish a virtual property interest . . . .”)).} Losses may result from poorly
designed software, hardware failures, hackers stealing virtual property,\textsuperscript{122} or viruses infiltrating the virtual-world system. For example, when developers create and administer the virtual worlds, they may use “inadequate or outdated” technologies that inadvertently erase data.\textsuperscript{123} Alternatively, human error could erase or otherwise misplace virtual property data despite properly functioning software.\textsuperscript{124} Theft of virtual property is another concern.\textsuperscript{125} As noted by one commentator, “incidents of theft or destruction of virtual property are being increasingly reported to police.”\textsuperscript{126} A judge in South Korea estimates that sixty cases have been heard in Korean courts relating to hacking in virtual worlds.\textsuperscript{127}

If users were not forced to assign their rights in virtual property, developers might be exposed to liability for negligent design,\textsuperscript{128} strict liability for defective design,\textsuperscript{129} or breach of express or implied warranties.\textsuperscript{130} This concern about liability is certainly understandable. But if developers are assigned all rights in user-created virtual property, then any losses are incurred by them, not the users who created the property.\textsuperscript{131} Because users have no rights in the virtual property, they have no cause of action against the developer.

\begin{footnotes}
\item[\textsuperscript{124}] Id.
\item[\textsuperscript{125}] See F. Gregory Lastowka & Dan Hunter, \textit{Virtual Crimes}, 49 N.Y.L. SCH. L. REV. 293, 304–05 (2004). It should be noted that the theft being addressed here is unauthorized theft. In some virtual worlds, theft is part of the game, and users expect their virtual property to be stolen and expect to be able to steal property from other users. \textit{Id}. In such virtual worlds, developers ought not have fear of liability.
\item[\textsuperscript{126}] Fairfield, \textit{supra} note 122, at 1081.
\item[\textsuperscript{127}] \textit{Getting Serious}, supra note 63, at 2.
\item[\textsuperscript{129}] See generally Frances E. Zollers, et al., \textit{No More Soft Landings For Software: Liability for Defects in an Industry that Has Come of Age}, 21 SANTA CLARA COMPUTER & HIGH TECH L.J. 745, 758–64 (2005) (discussing the precursor cases leading up to the inevitable imposition of negligence and strict liability to software developers). \textit{But see} Antel Oldsmobile-Cadillac, Inc. v. Sirius Leasing Co., 475 N.Y.S.2d 944, 945 (N.Y. App. Div. 1984) (rejecting negligence and strict liability claims against manufacturer of computer system for lost data because of the “economic damages” doctrine). An argument could be made that a bailment is created by users maintaining their virtual property on the developers’ hardware and that developers could be liable for violation of the duty of care that the bailment creates. “The bailment concept, however, is limited to tangible personal property and generally does not extend to either real or intangible property.” A. Darby Dickerson, \textit{Bailor Beware: Limitations and Exclusions of Liability in Commercial Bailments}, 41 VAND. L. REV. 129, 131 (1988) (citation omitted).
\item[\textsuperscript{130}] See Zollers et al., \textit{supra} note 129, at 764.
\item[\textsuperscript{131}] See Westbrook, \textit{supra} note 2, at 787 (discussing developers’ use of EULAs to shield themselves from liability).
\end{footnotes}
If users ought to maintain property rights, but developers fear liability for losses to the property, one solution would be for developers to allow users to retain their rights, but include an exculpatory clause in the EULA. This solution, however, may not provide developers with enough certainty or protection for three reasons.

First, there is a lack of consistency across states regarding the enforceability of exculpatory clauses. Some states uphold these clauses, while others strike them down as violative of public policy. For example, a California statute has been used to strike down an exculpatory clause attempting to protect a harbor owner from liability to a yacht owner when the harbor failed to provide adequate security, which resulted in the plaintiff’s yacht being vandalized. Similarly, the Connecticut Supreme Court found an exculpatory clause purporting to hold ski-resort operators harmless for their own future negligence unenforceable. The Connecticut Supreme Court’s rejection of the exculpatory clause on public policy grounds was based on the fact that the injury was personal rather than economic. Given the national and international nature of online gaming, it would be difficult for developers to have any confidence that their liability would be limited in the face of these inconsistencies.

Second, even in jurisdictions that enforce exculpatory clauses, these clauses are not favored and are strictly construed. In enforcing these clauses, courts have emphasized that the language used must be unmistakable, unambiguous, and understandable. For example, in Audley v. Melton, a model who was bitten

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132. See Dickerson, supra note 129, at 132–34 n.22 (outlining which states have enforced these clauses and which have held them invalid or strongly disfavored).

133. See, e.g., Yang v. Voyagaire Houseboats, Inc., 701 N.W.2d 783, 789 (Minn. 2005) (“An exculpatory clause is unenforceable if it is ambiguous in scope, purports to release the benefited party from liability for intentional, willful or wanton acts; or contravenes public policy.”).

134. See Dickerson, supra note 129, at 133–34 n.22 (listing the states that disfavor exculpatory clauses).

135. The California statute provides that “[a]ll contracts which have for their object, directly or indirectly, to exempt anyone from responsibility for his own fraud, or willful injury to the person or property of another, or violation of law, whether willful or negligent, are against the policy of the law.” CAL. CIV. CODE § 1668 (West 1985). However, much confusion exists over which types of exculpatory clauses the statute prohibits. See Health Net of Cal., Inc. v. Dep’t of Health Servs., 6 Cal. Rptr. 3d 235, 242–49 (Cal. Ct. App. 2003).


138. Id. at 741. The court noted that “[t]he ultimate determination of what constitutes the public interest must be made considering the totality of the circumstances of any given case against the backdrop of current societal expectations.” Id. at 744 (quoting Wolf v. Ford, 644 A.2d 522, 527 (Md. 1994)).

139. To mitigate this problem, the EULA could have a choice of law clause which selects a state that enforces exculpatory clauses.

140. See, e.g., Cumberland Valley Contractors, Inc. v. Bell County Coal Corp., 238 S.W.3d 644, 649 (Ky. 2007); Alack v. Vic Tanny Int’l of Missouri, Inc., 923 S.W.2d 330, 334 (Mo. 1996).

141. Alack, 923 S.W.2d at 334-35 (citing Gross v. Sweet, 400 N.E.2d 306, 309 (N.Y. 1979)).
in the head by a lion during a photo shoot sued the owner of the photography studio alleging negligence for failing to take precautionary measures to protect her from the lion. The defendant submitted two exculpatory clauses signed by the model stating that she agreed to release the defendant from any and all liability. The New Hampshire Supreme Court invalidated the exculpatory clauses not on public policy grounds, but because it only referred to liability generally and not specifically to the defendant’s own negligence. Although developers might be able to draft unmistakable and unambiguous exculpatory clauses that are applicable even when strictly construed against them, these forces do little to ease developers’ concerns about avoiding liability.

Third, and probably most problematic for developers, is that a EULA containing an exculpatory clause may be held unconscionable. Generally, click-through or shrink-wrap agreements are enforceable unless they are unconscionable, but the Restatement (Second) of Contracts recognizes that “a party’s attempt to exempt himself from liability for negligent conduct may fail as unconscionable.” It is not surprising then, that despite (or perhaps because of) their sweeping scope, traditional-model EULAs have been scrutinized by commentators who are concerned with unconscionability. Professor Lederman warns:

[W]here a single party with more information drafts an agreement and presents it to numerous parties, each with much less at stake, and in circumstances in which bargaining over the terms is not a realistic option, courts may be inclined to protect the group with less at stake. In particular, courts may deem provisions in these types of agreements to be unenforceable if they overly favor the drafter.

In fact, developers are “usually multinational corporations such as Microsoft, Sony, and Electronic Arts.” In contrast, users are typically individuals (sometimes teenagers) who often fail to read the EULA before clicking on it.

In Brower v. Gateway 2000, Inc., the New York Appellate Division held an arbitration clause between a consumer and a software/hardware merchant to be

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143. Id.
144. Id. at 779. The general language in the exculpatory clause “did not put the plaintiff on clear notice of such intent [to release the defendant from liability for his own negligence].” Id.
145. See, e.g., ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1448–49 (7th Cir. 1996).
147. See Lastowka & Hunter, supra note 2, at 50–51; Leandra Lederman, “Stranger Than Fiction”: Taxing Virtual Worlds, 82 N.Y.U. L. REV. 1620, 1635–36 (2007); Meehan, supra note 19, at 14 (“Whether the EULAs in online games, such as MindArk’s EULA for Project Entropia, are unconscionable is debatable.” (footnote omitted)).
148. Lederman, supra note 147, at 1639 (footnotes omitted).
149. Lastowka & Hunter, supra note 2, at 54.
150. Lederman, supra note 147, at 1635–36.
unconscionable. The arbitration clause mandated arbitration by International Chamber of Commerce ("ICC") rules, which were difficult to obtain because the ICC was located in France and had few contacts with the United States. Moreover, the ICC rules required the complaining party to advance fees of $4,000 ($2,000 of which was nonrefundable), which generally exceeded the cost of the computer systems in dispute. The court found these terms “egregiously oppressive” and rendered the arbitration clause unconscionable and unenforceable.

A court could likewise find an exculpatory clause in a EULA to be unconscionable. In Brower, although the arbitration clause required excessive fees and forced the parties to take burdensome actions before pursuing their claims, the plaintiffs were not wholly deprived of a forum. In the virtual world context, an exculpatory clause would render users’ claims against developers invalid. In essence, users would be left with a forum, but without claims. Because no court has yet addressed the enforceability of exculpatory clauses in EULAs in the virtual-world context, developers cannot be assured that such provisions will protect them from liability.

For these three reasons, exculpatory clauses are an insufficient solution to resolve the conflict between allowing users to retain their rights in virtual property and protecting developers from liability for harm to users’ virtual property.

B. Loss of Control

Another reason developers require users to assign their virtual property rights is the developers’ fear of losing control over their worlds. Developers fear not being able to change the worlds and their property characteristics, kick out users who do not follow rules, and otherwise modify the world to keep users interested. In essence, they “argue that their need to develop and expand the virtual environment necessitates locking out private property interests.” This argument is commonly expressed in a speculative form: “What happens if the actions of

152. Id. at 571.
153. Id.
154. Id. at 574–75.
155. Id. at 571.
156. The closest a court has come to discussing EULAs in the virtual-world context is Davidson & Assoc., Inc. v. Internet Gateway, 334 F. Supp. 2d 1164 (E.D. Mo. 2004). In Davidson, the court held that the EULA was not unconscionable under California law because the defendants, sophisticated computer programmers, were not “unwitting members of the general public” and had the option to disagree to the terms and return the software. Id. at 1179–80. However, the court did not address exculpatory clauses or assignment-of-rights provisions as they were not issues in the case.
157. See Westbrook, supra note 2, at 788–89.
158. Fairfield, supra note 122, at 1097.
159. Id.
the [developer] in some way damage or devalue the virtual object in which a user holds a property interest?" If the developer wanted to exit the market and shut down the virtual world, would it “be somehow required to maintain that virtual world in perpetuity because of still-existing property on its servers?"

But as Professor Fairfield points out, these questions are not new and the answers do not necessarily lead to liability or loss of control for developers. In fact, threats to users’ property interests in the virtual world are no different from those faced in the real world. For example, speculation in land is risky since “new developments can always devalue prior investments.” Similarly, manufacturers modify the supply of goods “knowing that the resulting changes in value due to scarcity will affect prior purchasers.” These threats to property interests do not justify a refusal to grant rights in the first place. These are simply risks associated with property ownership in general. With respect to developers wanting to shut down the virtual world, it is true that doing so “certainly deprives the [users] of the value of their [property], but in no greater fashion than bankruptcy deprives equity holders of the value of their stock.” I would not advocate the elimination of private-stock ownership because of the possibility of bankruptcy, and neither do I argue that we should eliminate user-owned virtual property because of the possibility of the virtual world disappearing. Thus, although ownership of virtual property by users might conceivably limit developers’ control over the worlds they create, it is not nearly the parade of horribles that developers anticipate. To maintain an adequate amount of control over virtual worlds, developers can always specify limitations in EULAs on users’ virtual property or the scope of the licenses the users must grant to developers.

Finally, developers’ concerns about locking out users or terminating their accounts may be alleviated if virtual worlds become interoperable. This term refers to the movement currently underway to make property in one virtual world compatible with the software in another virtual world. If interoperability is achieved, then users would be able to take their virtual property in one world that was shutting down or otherwise restricting their access and move it to another virtual world. Interoperability would allow developers to maintain control over

160. Id. at 1097–98.
161. Id. at 1098.
162. Id.
163. Id.
164. Id.
165. Id.
166. Id.
167. Id.
their worlds because users who did not like the new rules could take their property elsewhere.

C. Forced to Create

The final reason for requiring users to assign their rights in virtual property to developers is related to control. Developers claim that because user ownership in virtual property would incentivize users to create and sell their own virtual property, developers will be forced to innovate at a fast pace to keep users interested.169 Developers fear that these more sophisticated users will become bored with the virtual world and may turn their attention (and subscription fees) elsewhere.170 To retain subscribers, developers worry that they will continually have to make difficult, expensive, and time-consuming updates to the worlds.171

The developers’ perspective is backwards. Instead, developers should invite increased user innovation and creativity, which may actually make their jobs easier. For example, in Second Life, users retain their rights in virtual property and a large number of them participate in the creative process.172 Not only do users individually create virtual property, but they also teach other users how to create by running classes online.173 Of course, users benefit from user-created virtual property because the virtual world is enhanced, making it more enjoyable and challenging. But user contributions also benefit developers, who do not have to invest their own resources creating what others have done for them.174 Users, in essence, become subdesigners.175 Moreover, permitting or encouraging users to develop their own creative skills increases the possibility that they may eventually cross over to become developers themselves.176 Such a transformation may lead to improvements in the development of virtual worlds generally.

In the end, developers’ concerns that promoting user innovation would force them to create at a faster pace than they would otherwise create is not much of a concern at all. By allowing users to retain rights in the virtual property they create, more innovation and creativity may take place, permitting developers to sit back and let users create for them. But even if it were true that developers would be forced to be more creative under a user-ownership model, would that be so bad? Keeping an eye towards the goal of maximizing innovation and creativity suggests that such a result would be preferred.

169. See Lederman, supra note 147, at 1637.
170. See id. at 1637–38.
171. See id. at 1637.
172. As of 2006, “[s]ixty-six percent of Second Life users . . . created objects from scratch using the built-in modeling system . . . and more than 15 percent have even written script code from scratch.” Ondrejka, supra note 56, at 163.
173. Id.
174. See Saunders, supra note 47, at 232 (noting that user created content attracts more players).
175. Balkin, supra note 24, at 2049.
176. See Ondrejka, supra note 56, at 161.
D. Developers’ Rational Choice and Market Failures

Because loss of control and being forced to create are not necessarily valid justifications for developers requiring users to assign their rights in the virtual property they create, the only legitimate justification is the fear of liability for lost or stolen data composing the virtual property. As discussed, exculpatory clauses do not sufficiently remedy this concern.\(^\text{177}\) As a result, the only way to explore whether user ownership best maximizes innovation and creativity is to expose developers to liability in the event that users’ virtual property is compromised. This conclusion, of course, is not enticing to developers. Thus, there remains a need to remove the barriers that inhibit choosing a system that can maximize innovation and creativity.

One potential solution is a legislatively created safe harbor. However, it is first necessary to understand why we should not merely let the market control the issue. In other words, if ownership is important to users, will they not eventually choose to participate only in virtual worlds that permit user ownership?\(^\text{178}\) Second Life made this move in 2003 without the help of a safe harbor;\(^\text{179}\) why should other developers be provided an extra incentive for doing so? Won’t new virtual worlds entering the market seize upon this opportunity and allow users to retain their rights?\(^\text{180}\)

While allowing the market to take care of the issue sounds nice in theory, it has failed in practice. Since Second Life changed its EULA in 2003 to allow users to retain rights in their virtual creations,\(^\text{181}\) there has not been a shift by other developers to follow suit.\(^\text{182}\) Several possible reasons explain why the market has not dictated a change in EULA terms. Perhaps the market is simply slow to respond. Maybe users are not leaving their virtual world of choice to go to Second Life where they can enjoy the fruits of virtual property ownership.\(^\text{183}\) Perhaps users are splitting their time between virtual worlds; there is no requirement that users can only participate in one virtual world at a time. Or maybe users are, in fact, leaving to go to Second Life, but developers’ fears of liability are so strong that they refuse to change their EULAs to compete with Second Life. The reason why the market has failed to make these changes is not important. The real question is whether we should sacrifice potential innovation and creativity while we wait to see if the market can adjust. Rather than

\(^{177}\) See supra notes 132–156 and accompanying text.

\(^{178}\) Marcus, supra note 59, at 86.

\(^{179}\) See supra notes 106–111 and accompanying text.

\(^{180}\) Marcus, supra note 59, at 86 (“Creating a new virtual platform that allows users to retain copyrights for their creations becomes a safer investment for those seeking new avenues of financial opportunity.”).

\(^{181}\) See supra notes 106–111 and accompanying text.

\(^{182}\) See supra note 84 and accompanying text.

\(^{183}\) This lack of movement could be a result of lock-in effects, where users become so invested in their characters and social interactions in other worlds that it is difficult to leave.
speculating and waiting for a change that may not occur, we have the opportunity to solve the problem now with the creation of a legislative safe harbor.

V. AN ALTERNATIVE APPROACH—REMOVING BARRIERS THROUGH A SAFE HARBOR

This Article does not set forth the text for a proposed legislative safe harbor. That drafting is a task for Congress, which should finalize the details of the legislation after conferring with the appropriate stakeholders—namely, developers and users. Instead, this Section discusses general concerns that should be considered when creating the safe harbor, the goal of which should be to resolve the conflict that currently exists between limiting developers’ liability for losses to users’ virtual property and granting users rights in the virtual property they create to potentially maximize innovation and creativity.

Before delving into the proposed safe harbor, it may be helpful to examine cursorily another recent legislative safe harbor as a baseline for comparative purposes. The Digital Millennium Copyright Act (“DMCA”) provides a safe harbor for online service providers to protect them from copyright infringement claims provided certain conditions are met. In general, the DMCA safe harbor prevents monetary damages rather than injunctive relief. The DMCA safe harbor only applies to certain classes of service providers, including “conduit providers such as telephone companies, those who store or cache content hosted by another, those who host content posted by another, and search engines.” The legislation requires service providers to designate an agent to receive notifications of infringement claims and to adopt a policy that provides for the termination of repeat infringers. Importantly, Congress stressed that the DMCA safe harbor procedures were voluntary, but that any service provider “wishing to avail itself of one of the safe harbors . . . is effectively required to cooperate, since compliant notice from a copyright owner will be deemed legally sufficient to establish that the [service provider] had actual or constructive knowledge that its facilities were being used to infringe.”

But what was the purpose of the DMCA safe harbor? Why did Congress decide to act? Prior to enactment of the DMCA, cases were split over whether service providers, such as bulletin board operators and internet service providers,

184. See Digital Millennium Copyright Act, 17 U.S.C. § 512 (2000); Mark A. Lemley, Rationalizing Internet Safe Harbors, 6 J. ON TELECOMM. & HIGH TECH. L. 101, 103–04 (2007) (noting that the Digital Millennium Copyright Act of 1998 “creates immunity from monetary liability for copyright infringing material” and is “subject to a number of requirements and limitations”).
186. Lemley, supra note 184, at 104 (citing 17 U.S.C. § 512(a)–(d)).
188. Id. § 512(i)(1)(A).
could be liable for direct, contributory, and vicarious copyright infringement.\textsuperscript{190} Although the view that service providers generally should not be held liable for user-posted infringing content was largely embraced by a majority of courts,\textsuperscript{191} other groups thought differently.\textsuperscript{192} One such group was the Information Infrastructure Task Force Working Group, which recommended more rigid treatment of service providers and wanted to impose the burden of preventing copyright infringement on service providers rather than copyright owners.\textsuperscript{193} Of course, service providers objected and lobbied Congress.\textsuperscript{194} To design an approach to liability that would satisfy both service providers and copyright owners, Congress pushed negotiations between these groups, which resulted in the DMCA safe harbor provisions.\textsuperscript{195}

One purpose of introducing a safe harbor into the realm of virtual worlds is to limit the potential liability of developers so they will be willing to relinquish control over virtual property created by their users. Thus, the first issue to address is the scope of the limitation on developers’ liability. Should the limitation of liability extend to all conduct and causes of action, or should it apply only to specific causes of action? Should it permit liability but place a cap on the amount of damages that can be recovered? If a cap on damages is appropriate, at what amount should the cap be set?

At a minimum, the safe harbor should protect developers who negligently design their systems or negligently act in a way that destroys virtual property.\textsuperscript{196} But should such a protection extend to gross negligence and recklessness?\textsuperscript{197} On

\textsuperscript{190} See generally Scott, supra note 189, at 110–113 (discussing different approaches to liability of service providers illustrated by two federal court decisions) (citing Playboy Enter., Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993); Religious Tech. Ctr. v. Netcom On-Line Commc’n Servs., Inc., 907 F. Supp. 1361 (N.D. Cal. 1995)).

\textsuperscript{191} See, e.g., Lemley, supra note 184, at 101 n.2 (referencing federal and state court decisions holding that service providers are not liable for a wide range of content posted or sent through their system or another).

\textsuperscript{192} See generally Scott, supra note 189, at 113–15 (discussing opposition to service provider safe harbor rules by a presidential task force).

\textsuperscript{193} Id.

\textsuperscript{194} See id. at 116 (quoting JESSICA LITMAN, supra note 114, at 122).

\textsuperscript{195} Scott, supra note 189, at 116.

\textsuperscript{196} This protection is an effective way to ensure that innovation and creativity are maximized under the new model of user ownership. A primary reason developers cite for maintaining the traditional model of ownership is fear of liability if virtual property is compromised. See discussion supra Part IV.A.

\textsuperscript{197} The terms gross negligence and recklessness essentially have the same meaning. See, e.g., Desnick v. Am. Broad. Cos., 233 F.3d 514, 517 (7th Cir. 2000) (“[I]n tort cases [recklessness] sometimes denotes little more than gross negligence.”); St. Onge v. Detroit & Mackinac Ry. Co., 321 N.W.2d 865, 867 (Mich. Ct. App. 1982). Recklessness and gross negligence have been described as “the want of even slight care and diligence.” Lenard v. Dilley, 805 So.2d 175, 180 (La. 2002) (quoting State v. Vinzant, 7 So.2d 917, 922 (La. 1942)). Ordinary negligence, on the other hand, “consists of mere inadvertence, incompetence, unskillfulness, or failure to take precautions.” Ickes v. Tille, 674 N.E.2d 738, 740 (Ohio Ct. App. 1996) (quoting Marchetti v. Kalish, 559 N.E.2d
the one hand, developers must have enough incentive to allow users to retain their property rights. Otherwise, the status quo will persist, and creativity will not be maximized. On the other hand, we do not want to encourage poorly designed software, especially considering the number of users and amount of money invested in the software.

Although this issue should be examined in more depth before creation of the safe harbor, it seems that market forces may help answer the question. In fact, consider the competitive effects of the market as it currently operates. The companies that run virtual worlds are generally large multinational companies with many shareholders. They compete with one another for subscribers and have their reputations at stake. It is unlikely that a developer would risk losing its subscribers to competitors and subjecting itself to bad press for engaging in grossly negligent or reckless behavior. For example, imagine a developer that recklessly designed a virtual world that erased or otherwise compromised its users’ virtual property. It would not take long for users to flock to a competing virtual world where their property would be protected. Because virtual worlds serve substantially social functions, the network effects would be huge. Once the negatively affected users left the reckless virtual world, unaffected users would also leave to interact with their peers. This scenario would instantaneously ruin a reckless developer. In this way, whether reckless or grossly negligent conduct is protected by the safe harbor is probably not important; it seems unlikely that such conduct will take place, and if it does, the developer will be put out of business by the market. But because the distinction between negligence on the one hand and recklessness or gross negligence on the other may be difficult to determine, it is administratively easier to protect all developer conduct. In addition, the threat of potential litigation or nuisance suits would be reduced because of the establishment of a clear limitation on liability.

Probably more important is the need to protect developers from liability for their intentional conduct in maintaining or developing virtual worlds in ways that adversely affect users’ virtual property. For example, a developer might decide to limit the speed at which virtual cars can be driven because higher speeds use too much of the system’s computational resources. This change to user-developed virtual cars would arguably harm the value of the users’ property (assuming users prefer the ability to drive faster cars). The developer’s choice to make this modification was clearly intentional and would negatively impact some users, but the modification was necessary for the good of the virtual world. Developers’ actions with respect to administering and changing the virtual world are almost always intentional, but they should not be subject to liability each time they make a change affecting users’ virtual property. If the safe harbor does not protect against developers’ intentional acts, it would be too easy for users to plead around the safe harbor by alleging intentional misconduct. And although developers can specify some limitations on users’ virtual property in EULAs,

699, 703 n.3 (Ohio 1990)).

198. See supra note 22 and accompanying text.
additional protection via a safe harbor strengthens this understanding on both sides and ensures that developers have flexibility to conduct business without the disruption of litigation. Not only would a safe harbor assuage developers’ fear of liability, but it would also alleviate concerns about losing control of virtual worlds.

Although intentional conduct covers rogue developers who maliciously delete or otherwise harm users’ virtual property, this type of conduct should also be protected by the safe harbor. Even though malicious harm to virtual property is not the type of activity the law should encourage, this type of conduct is not a major concern. The same market forces that restrain developers from reckless conduct will also discourage intentional harms.

The safe harbor should further extend to breaches of implied warranty claims. However, it should not protect developers from breaches of express warranties. Once the safe harbor is created, developers may provide extra protection to their users in the form of express warranties as a means of competing with other developers. Developers that choose to extend these additional protections and subject themselves to liability notwithstanding the safe harbor should not be able to use the safe harbor as a tool to commit fraud on users.

Finally, the safe harbor should also extend to circumstances where developers wish to terminate the virtual world. This extension is analogous to bankruptcy in the real world; users should be aware of the risk that their property interests could become worthless. Because users should understand this risk going in, there is no need to hold developers liable for losses to users’ virtual property. Also, as previously discussed, there is a movement underway to make virtual property interoperable. If this goal is achieved, developers should be required to give notice to their users before terminating a virtual world so that the users can back up their property and take it to another virtual world.

An alternative to limiting the type of conduct that is protected is to place a cap on the amount of damages that can be recovered from a developer. If a cap is used, a second issue becomes the amount at which to cap damages. However, a cap on damages is not advisable. Because the value of virtual property is relatively small for most objects, it would be unwise to open the floodgates for several minor claims that are little more than nuisance suits. This scenario is particularly true if the developer would be subject to liability for intentional conduct. Unless the cap is a trivial amount, most destroyed virtual property will not reach the capped amount. On the other hand, for virtual objects that have significant real world value, such as the three virtual shopping malls for $179,688 or the virtual space station worth nearly $100,000, a cap on damages may be useful to protect developers. This protection for costlier property, of course, would have to be balanced against the potential increases in litigation costs associated with suits for less valuable virtual property. Because of these

199.  See supra notes 166–67 and accompanying text.
200.  See supra note 168 and accompanying text.
201.  See Irvine, supra note 64.
unknown and likely unknowable facts, the safe harbor should focus on the developers’ conduct rather than on the amount of damages recoverable.

It is important to note that the safe harbor should be voluntary. Developers should have the choice whether to permit users to retain rights in their virtual property or instead to adhere to the traditional model of developer ownership. Why make the safe harbor optional? Why not require developers to change their EULAs so that users retain rights in their virtual property or state that, notwithstanding EULAs to the contrary, rights in virtual property belong to users? An optional safe harbor is preferable because of the differences in each virtual world. For some developers, complete control and property ownership might be so important that they are not able to achieve their purpose in creating the virtual world without it. An optional safe harbor recognizes that maximizing innovation and creativity is not the primary goal for all developers. There are competing interests at stake, and it may be harmful to developers to ignore them. In fact, it is not clear that user ownership of virtual property rights will necessarily maximize innovation.\(^{202}\) If the safe harbor were mandatory and users owned rights in their virtual property, developers with no interest in marketing user-created virtual property would be unaffected because they would be shielded from liability and would have the power to regulate the virtual world as they saw fit. However, users wanting to improve or modify existing property may be restrained in that pursuit if the property owner refuses to license the copyright in the virtual property. This result may not maximize innovation, however, and developers committed to that goal may be interested in freely licensing virtual property to anyone willing to innovate. Again, the question of which regime best maximizes innovation is debatable, but a voluntary approach allows a level of flexibility for developers to structure the operation of their virtual worlds and plan for unforeseen events.

This voluntary approach is similar to the approach taken by Congress in the DMCA safe harbor.\(^ {203}\) Presumably, Congress could have required service providers to comply with the notice and takedown provisions but instead chose to avoid meddling too much with the operation of the service providers’ businesses. The DMCA approach also incentivizes service providers to act in ways that minimize copyright-infringement occurrences.\(^ {204}\) Similarly, a virtual-world safe harbor would incentivize developers to permit users to maintain control over their virtual creations, which may have the effect of increasing innovation and creativity.

Why would a developer choose to use an optional safe harbor rather than keep the assignment provisions of the EULA? The answer is certainty. There is some concern that assignment and exculpatory provisions in traditional EULAs

\(^{202}\) See supra Part III.B.

\(^{203}\) See Scott, supra note 189, at 121 (citing H.R. REP. NO. 105-551, pt. 2, at 54 (1998)).

may be unconscionable. Also, the courts have not been uniform in the debate on the en formeability of clickwrap and shrinkwrap agreements. Most cases dealing with the unconscionability of assignment provisions in contracts arise in the employment context. Regarding copyrights, the issue arises under the "works made for hire" doctrine, which is set forth in the Copyright Act. Under this provision, "a work prepared by an employee within the scope of his or her employment" is initially owned by the employer. Regarding patents, "[i]t is well settled that an agreement on the part of an inventor to assign inventions developed while in the employ of another is not inequitable, or unconscionable."

Nonetheless, there may be reason to treat assignment provisions in virtual-world EULAs differently and find them unconscionable. In the employment context, the employee/innovator is compensated to create, so it makes sense to uphold the validity of assignment provisions and apply the works made for hire doctrine. There is an exchange of salary, lump sum payments, or royalties for creative efforts. But the virtual world is different; in this context, the user/innovator pays the developer a subscription fee for the ability to create, not the other way around. Upholding the assignment provision in the EULA would not involve the same type of exchange as in the employment context. An analogous scenario in the employment context would consist of an employee/innovator paying the employer for the ability to work on projects, and once complete, the intellectual property would belong to the employer. In the virtual world context, courts might be more willing to find such an assignment provision unconscionable.

205. See supra Part IV.A. See also Meridian Project Sys., Inc. v. Hardin Constr. Co., 426 F. Supp. 2d 1101, 1106 (E.D. Cal. 2006) ("Whether contracts such as [the plaintiff]'s EULA are valid is a much-disputed question.").

206. See generally Kevin W. Grierson, Annotation, Enforceability of "Clickwrap" or "Shrinkwrap" Agreements Common in Computer Software, Hardware, and Internet Transactions, 106 A.L.R.5th 309 (2003) (highlighting cases in which clickwrap and shrinkwrap licenses have been upheld and struck down).

207. 17 U.S.C. § 201(b) (2000) ("In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright.").

208. Id. § 101.


211. See Martha Graham Sch. & Dance Found., Inc. v. Martha Graham Ctr. of Contemporary Dance, Inc., 380 F.3d 624, 641-42 (2d Cir. 2004) (finding that a regular salary paid to an artistic director to make dances weighed in favor of finding an employment relationship and applying the work made for hire doctrine).

212. See Warren v. Fox Family Worldwide, Inc., 328 F.3d 1136, 1142 (9th Cir. 2003) (finding a work-for-hire relationship despite the payment of mere royalties).

213. See supra note 51 (describing subscription fees for various virtual worlds).
This uncertainty about unconscionability serves as a bargaining chip for both developers and users and makes a safe harbor resolution possible. Developers would rather eliminate fears of liability upfront and allow users to retain their rights than risk lawsuits arguing the unconscionability of EULAs. If users successfully challenge EULAs on unconscionability grounds, developers will be stuck without property rights and will have little power to protect themselves from liability. On the other hand, if users are unsuccessful in their unconscionability challenges, developers will have little need for a safe harbor, and users would again be left without rights in their virtual property. As illustrated, this situation may not be innovation-maximizing. For these reasons, if a safe harbor is to be created, it should be done quickly while uncertainty still exists. Uncertainty also existed in the DMCA context and was the impetus for a safe harbor.\footnote{214} Although courts favored not holding service providers liable for copyright infringement for user-posted content, there was no consensus.\footnote{215} The Information Infrastructure Task Force Working Group’s recommendation cast doubt on that certainty and paved the way for the DMCA safe harbor, which benefited stakeholders on both sides of the issue.\footnote{216}

Of course, the DMCA safe harbor is not completely analogous to the virtual-world safe harbor. In the virtual-world context, the possibility of governance by private contract law is available. In the service-provider setting, private contract law was not an option because copyright owners were not contracting with service providers. But even the options available to users and developers under contract law are imperfect; exculpatory\footnote{217} and assignment clauses\footnote{218} are vulnerable. Moreover, parties in virtual worlds are not really fighting over the same rights. Although it may appear that both developers and users want virtual property rights, users want virtual property rights, and developers want to avoid responsibility for this property. A safe harbor can resolve this conflict and remove barriers that unnecessarily deter developers, users, and the market from agreeing on a scheme that best allows creativity and innovation to flourish.

\section*{VI. CONCLUSION}

Considering the relatively new and exciting development of virtual worlds that is upon us, the creative developments occurring each day within the worlds, and the new sources of entertainment and cultural growth available from them, we should seize the opportunity to maximize this creativity and innovation. Virtual property does not only enhance virtual worlds; it adds to the cultural development of the real world as well.\footnote{219}

\begin{footnotes}
\footnotetext[214]{See supra notes 184–95 and accompanying text.}
\footnotetext[215]{See supra notes 191–92 and accompanying text.}
\footnotetext[216]{See supra note 193 and accompanying text.}
\footnotetext[217]{See supra notes 132–156 and accompanying text.}
\footnotetext[218]{See supra notes 205–14 and accompanying text.}
\footnotetext[219]{See supra Part III.A.}
\end{footnotes}
Unfortunately, developers’ fears of liability, loss of control, and being forced to create at an increased rate are preventing us from exploring systems that maximize creativity and innovation.\(^{220}\) Traditional-model EULAs attempt to ease developers’ fears by requiring users to assign all of their rights in their virtual property to developers,\(^ {221}\) but this plan may inhibit user innovation.\(^ {222}\) However, aside from the fear of liability for losses to users’ virtual property, these fears are either overstated or illegitimate.\(^ {223}\) The fear of liability is a valid concern, and unless a change is made to the status quo, there is no indication that we will be able to take full advantage of the creativity and innovation waiting in the wings.

To help resolve this tension, a legislatively created safe harbor should be passed to limit developers’ liability for conduct that destroys or otherwise harms users’ virtual property.\(^ {224}\) Drafting such a safe harbor would require input from the stakeholders, namely the developers and users, but it generally should protect against claims for negligence, gross negligence or recklessness, intentional conduct, and breach of implied warranties.\(^ {225}\)

Although the idea of congressional intervention into the realm of virtual property largely used in video games may seem like a strange proposal, it must be remembered that although virtual worlds began as video games, their use has already expanded beyond this context and into other areas such as medicine, military, and athletics.\(^ {226}\) It would be a shame to stifle innovation in these industries and others because virtual worlds had their genesis in the gaming industry.

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\(^ {220}\) See supra Part IV.A-C.
\(^ {221}\) See supra Part II.C.1.
\(^ {222}\) See supra Part III.B.
\(^ {223}\) See supra Part IV.
\(^ {224}\) See supra Part V.
\(^ {225}\) See supra Part V.
\(^ {226}\) See supra note 24 and accompanying text.