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Viewing Virtual Property Ownership
Through the Lens of Innovation

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by Ryan Vacca*

Abstract

Over the past several years scholars have wrestled with how property rights in items created in virtual worlds should be conceptualized. Regardless of how the property is conceptualized and what property theory best fits, most agree the law ought to recognize virtual property as property and vest someone with those rights.

This article moves beyond the conceptualization debate and asks two new questions from a new perspective. First, how ought virtual property rights be allocated so innovation and creativity can be maximized? Second, how can the law be changed to remove barriers that unnecessarily impede a regime that maximizes creativity and innovation in virtual worlds?

As to the first question, there is evidence supporting the notion that users creating virtual property should be the owners of the virtual property rights. However, strong counter-arguments exist showing that ownership by developers may best promote cumulative innovation and creativity. Nonetheless, what is clear is that there exists a potential for an innovation-maximizing regime that is different from what commonly exists today. This is where the second question comes into play.

As to the second question, the current state of the law causes virtual world developers to be unwilling to relinquish their hold over virtual property rights. Developers' reluctance to do so results from fears of liability, loss of control, and being forced to create at a more rapid pace so as to keep users interested. To relieve these concerns and open up the possibility for a regime that may put virtual property in the hands of those who will maximize innovation and creativity, this paper urges the creation of a safe harbor which provides enough incentive for developers to choose to hand over some control and explore property allocation regimes that may maximize innovation and creativity.

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I. INTRODUCTION

Imagine a world where 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 your software, and fine-tuning your program, you have finished. The program is ready. 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 web site. Hundreds of thousands of consumers go to your web site and pay you money 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 they own the copyright in the software you created and that they would like all of the profits you made from the sales of your software. The letter explains that as part of the license agreement you clicked on 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 to programmers all over the country demanding the same thing.

This has not happened. But if it did, you could imagine the outrage of programmers and the industries they provided software to. The number of programmers creating software would plummet. New programmers would not be incentivized to enter the market and create new software. Industries relying on innovative software would suffer from the lack of innovation.¹ This is not a happy story, but luckily it is not true.

¹ The immediate harm to the industries may not be as extreme depending on if Microsoft licensed the software and what those terms were. However, the long term harm to the industries from a lack of innovators would remain.

Now a second story, similar to the first. Imagine you are at home, sitting at your computer, and are logged into one of several virtual worlds – a world experienced on the computer screen and controlled by your keyboard and mouse. In this virtual world, you may have a house and a car and you chat and socialize with others who are logged in from all over the world. The virtual world was created by a software developer named ABC, Inc. You have been a user of the virtual world for a few months. To make this virtual world more interesting, 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 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 e-mail from ABC, Inc. The e-mail claims that ABC, Inc. owns the copyright in the virtual property you created. The letter 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 it. Identical e-mails have been sent not only to you, but to all users demanding the same thing.

Just as in the first story, users who create the virtual property will not have as much incentive to enter the market. The incentive to create will be diminished. Users who enjoy the virtual property will suffer as a result. This also is not a happy story, but unfortunately it is true.

Why we have tolerated the second story, but would not imagine tolerating the first is unclear. Perhaps it is the uncertainty we have with respect to how to treat virtual property. Nonetheless, innovation and creativity are still stifled in both stories, neither of which are good for society.

Over the past several years many scholars have wrestled with the idea of how property rights over items created in virtual worlds should be conceptualized. Some have discussed utilitarian models,² others have examined a natural rights theory,³ while some view virtual property merely as another form of intellectual property.⁴ Regardless of how the property is conceptualized and what theory it best fits under, most, if not all, commentators agree the law ought to recognize virtual property as property and vest someone with those rights.

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. This article first questions who ought to own the property rights in virtual property so innovation and creativity can be maximized. Should it be users who write the code and construct the property? Or should it be the developers – the companies that initially create the virtual world and provide access to it? Second, this article asks how the law can be changed to remove barriers that unnecessarily impede a regime that maximizes creativity and innovation in virtual worlds.

² See e.g. F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1, 44-46 (2004); Theodore J. Westbrook, *Owned: Finding a Place for Virtual World Property Rights*, 2006 MICH. ST. L. REV. 779, 795-97 (2006).

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

⁴ See generally Yochai Benkler, *There Is No Spoon*, in *STATE OF PLAY: LAW, GAMES, AND VIRTUAL WORLDS* 180 (Jack M. Balkin & Beth Simone Noveck eds. 2006) (New York University Press).

As to the first question, there is no clear answer. There is evidence supporting the notion that users creating virtual property should be the owners of the virtual property rights. Users are individuals who participate in the virtual world using their PCs. 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 counter-arguments exist to show that ownership by developers may best promote cumulative innovation and creativity. Regardless of what the answer is, what is clear is that there exists a potential for an innovation-maximizing regime that is different from what commonly exists today. This is where the second question comes into play.

As to the second question, I argue the current state of the law causes virtual world developers to be unwilling to relinquish their hold over virtual property rights. Again, developers are the corporate entities who initially create the virtual world and provide the software so users can participate. Developers' reluctance to allow users to own virtual property results from fears of liability, loss of control, and being forced to create at a more rapid pace so as to keep users interested in the virtual world. To relieve these concerns and open up the possibility for a regime that may put the virtual property in the hands of those who will maximize innovation and creativity, I urge the creation of a legislative safe harbor which provides enough incentive for developers to choose 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. It describes the different types of worlds, who participates, the huge amount of commercial activity involved, and explains the traditional and new models of property ownership currently used in virtual worlds.

Part III of this article examines the importance of innovation and creativity to both virtual worlds and real worlds. This section explores how virtual worlds are not spaces separate from the real world, but instead are complementary to it. Next, this section explores the arguments and counter-arguments concerning whether granting ownership over user-created virtual property to users or developers best maximizes innovation and creativity.

Part IV examines the problems facing virtual world developers (e.g. fears of liability, loss of control, and pressures to create) and demonstrates why the traditional model has been strongly adhered to by almost all developers.

Finally, in Part V, this article considers whether a legislatively-created safe harbor would incentivize developers to hand over ownership of user-created virtual property to the users. Such a safe harbor may maximize innovation and creativity which benefits not only users, but also has a positive impact on the real world. This section analyzes several different forms the safe harbor could take and suggests a proposed approach and other issues that should be further explored before implementation.

II. VIRTUAL WORLDS AND VIRTUAL PROPERTY

Although virtual worlds have been around for several 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. Each of these are discussed *infra*.

A. Virtual Worlds – What and Who is Involved?

Virtual worlds are, quite simply, artificial and imaginary online spaces where users interact with each other.⁵ Users exist and are represented in virtual worlds via a proxy known as an avatar.⁶ Avatars are graphical representations (or misrepresentations)⁷ of the real-world user.⁸ 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"⁹ and can further be individualized with clothing, weapons, or other accessories.¹⁰ Avatars communicate with one another through speech bubbles or chat windows in addition to facial expressions and other forms of body language.¹¹ Some virtual worlds require users to maintain their avatar. 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.¹² If the user fails to adequately address the avatar's needs, then the user's ability to control the avatar is affected.¹³

Some virtual worlds are considered "leveling worlds" where users develop their avatar's skills so they may be promoted to a higher level and engage in new activities.¹⁴ These worlds generally "emphasize problem-solving and adventuring [and] typically contain[] quests to complete and monsters to kill" to rise through the levels (called "leveling").¹⁵ Other ways of leveling include developing "nonviolent skills, such as blacksmithing or baking bread."¹⁶

Other virtual worlds are non-leveling and do not have an express goal in mind, but rather exist merely for the purpose of social interaction.¹⁷ However, like leveling worlds, avatars in non-leveling worlds can develop virtual skills and accumulate virtual wealth.¹⁸ Outside of the gaming context, virtual worlds can be and are used "for commerce, for professional, military, and vocational training, for medical consultation and psychotherapy, and even social and economic experimentation to test how social norms develop."¹⁹

⁵ Lastowka & Hunter, *supra* note 2, at 7. Virtual worlds have their origins in text-based role playing games such as Dungeons & Dragons. Andrew E. Jankowich, *Property and Democracy in Virtual Worlds*, 11 B.U. J. SCI. & TECH. L. 173, 174 (2005). For a thorough history of the development of virtual worlds see Lastowka & Hunter, *supra* note 2, at 16-29.

⁶ Lastowka & Hunter, *supra* note 2, at 6.

⁷ 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.").

⁸ Bobby Glushko, *Tales of the (Virtual) City: Governing Property Disputes in Virtual Worlds*, 22 BERKELEY TECH. L.J. 507, 509 (2007).

⁹ Shira Boss, *Even in a Virtual World, "Stuff" Matters*, N.Y. TIMES, Sept. 9, 2007, at 3(9), available at http://www.nytimes.com/2007/09/09/business/yourmoney/09second.html?_r=1.

¹⁰ Lastowka & Hunter, *supra* note 2, at 6.

¹¹ *Id.*

¹² See Sim Needs (Motives) – AKA "Greening," <http://sims.stratics.com/content/gameplay/needtoknow/needs/> (last visited Feb. 26, 2008).

¹³ *Id.*

¹⁴ Lastowka & Hunter, *supra* note 2, at 26-28; Michael Meehan, *Virtual Property: Protecting Bits in Context*, 13 RICH. J.L. & TECH. 7, 1 (2006).

¹⁵ Glushko, *supra* note 8, at 509; Lastowka & Hunter, *supra* note 2, at 26-27.

¹⁶ Lastowka & Hunter, *supra* note 2, at 27.

¹⁷ *Id.* at 28; Glushko, *supra* note 8, at 509-10.

¹⁸ Lastowka & Hunter, *supra* note 2, at 28.

¹⁹ Jack M. Balkin, *Virtual Liberty: Freedom to Design and Freedom to Play in Virtual Worlds*, 90 VA. L. REV. 2043, 2044 (2004); see also *Reality, Only Better*, 950 Economist 64 (Dec. 8, 2007) (describing how the Marine Corps is using virtual worlds to train soldiers for combat on the battlefield).

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."²⁰ When a user is not present in the virtual world, the virtual world continues on and continues to change.²¹ When a user returns, it will encounter a world that is not the identical to the world it left. This makes virtual worlds more similar to the real world. Just as the real world continues on and changes while you sleep, so too do virtual worlds.

The content and overall look and feel 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.²² *There.com* users can shop, go to parties, listen to music, and drive dune buggies around the islands.²³ Recently, *There.com* entered into an agreement with Capitol Music Group where real-world bands will play at virtual nightclubs and permit users to meet and talk to the musicians.²⁴ *EverQuest* and *World of Warcraft* are leveling worlds filled with characters such as knights, wizards, clerics, dwarves, trolls, and other mythical creatures.²⁵ In these virtual worlds, users generally spend their time slaying monsters, completing adventures, and developing skills such as blacksmithing, mining, or fishing.²⁶ Other virtual worlds are more hedonistic. *Red Light Center* is an adult-oriented virtual world where users can indulge in virtual sex and drug use.²⁷

Virtual world users are not merely composed of teenage boys as one might imagine. Instead, most users are adults.²⁸ For example, in *Second Life*, a non-leveling virtual world, users span in age from 18 to 85²⁹ and come from over 100 countries.³⁰ Sixty percent of those users are men and forty percent are women.³¹ And while more men have signed up for *Second Life* accounts, women spend more time logged in.³² In *EverQuest*, the average age of its users is 25 years old and women make up sixteen percent of the population.³³ One study found that two-thirds of virtual world users are employed, with half having full-time jobs.³⁴

²⁰ Lastowka & Hunter, *supra* note 2, at 5.

²¹ *Id.*

²² What is There?, <http://www.there.com/help.html> (last visited Feb. 26, 2008).

²³ Alorie Gilbert, *Online Game Envisions New Virtual Worlds*, http://www.news.com/2100-1041_3-5097219.html (Oct. 26, 2003).

²⁴ Dean Takahashi, *There.com Signs Deal with CMG for Band Appearances in Virtual Nightclubs*, SAN JOSE MERCURY NEWS, June 27, 2007, http://blogs.mercurynews.com/aei/2007/06/therecom_signs_deal_with_cmg_for_band_appearances_in_virtual_nightclubs.html (last visited Feb. 26, 2008).

²⁵ EverQuest Character Classes, <http://everquest.station.sony.com/> (last visited Feb. 26, 2008); World of Warcraft Races, <http://www.worldofwarcraft.com/info/races/index.html> (last visited Feb. 26, 2008).

²⁶ World of Warcraft Professions, <http://www.worldofwarcraft.com/info/professions/> (last visited Feb. 26, 2008).

²⁷ See Red Light Center, <http://www.redlightcenter.com/> (last visited Feb. 26, 2008); see also Paul R. La Monica, *Sex, Drugs, and Virtual Worlds*, <http://mediabiz.blogs.cnnmoney.com/2007/08/30/sex-drugs-and-virtual-worlds> (Aug. 30, 2007).

²⁸ Westbrook, *supra* note 2, at 785 (citing EDWARD CASTRONOVA, *SYNTHETIC WORLDS* 58 (2005)).

²⁹ Second Life has a separate world for teens called Teen Second Life. See <http://teen.secondlife.com>.

³⁰ Second Life F.A.Q., <http://secure-web9.secondlife.com/whatis/faq.php> (last visited on Feb. 25, 2008).

³¹ *Id.*

³² Cory Ondrejka, *Collapsing Geography*, 2 *Innovations* 27, 35 (2007).

³³ Westbrook, *supra* note 2, at 785; see also Nicholas Yee, *The Norrathian Scrolls: A Study of EverQuest*, <http://www.nickyee.com/report.pdf> (2001) (last visited Feb. 25, 2008).

³⁴ Westbrook, *supra* note 2, at 785 (citing Nicholas Yee, *Occupational Status, Marital Status, and Children, The Daedalus Gateway: The Psychology of MMORPGS*, <http://www.nickyee.com/daedalus/archives/000550.php> (last visited Feb. 25, 2008)).

The number of users is enormous. Today, *World of Warcraft* has 9.3 million subscribers.³⁵ In 2004, *EverQuest*, then the most popular virtual world in the United States, had over 440,000 subscribers.³⁶ At the same time, *Ultima Online* and *Dark Age of Camelot* had 250,000 and 200,000 subscribers, respectively.³⁷ In South Korea, there were roughly four million registered users of the virtual world *Lineage* and it was estimated that one in four teenagers in Korea were *Lineage* users.³⁸ One study estimates that there are approximately sixteen million virtual world users worldwide.³⁹ Another study found that users spend approximately twenty hours per week in virtual worlds.⁴⁰ In fact, some users spend more time in virtual worlds than they do working or participating in their own real communities.⁴¹

Because of the large number of users involved with virtual worlds, there is also a large amount of money generated by them. In short, "virtual worlds have developed into a serious economic force."⁴² While some virtual worlds provide basic membership for free,⁴³ many charge a subscription fee.⁴⁴ Virtual world developers including Sony and Electronic Arts have earned hundreds of millions of dollars in revenue.⁴⁵ Part of this revenue comes from real-world companies advertising their products in the virtual worlds. In 2002, McDonald's and Intel paid Electronic Arts, the developer of *The Sims Online*, two million dollars to include their logos in the game.⁴⁶ 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 2011.⁴⁷

³⁵ *World of Warcraft*, THE ECONOMIST 73, 73 (Dec. 8, 2007).

³⁶ Lastowka & Hunter, *supra* note 2, at 5.

³⁷ *Id.*

³⁸ *Id.*; Balkin, *supra* note 19, at 2043.

³⁹ Bruce Sterling Woodcock, *An Analysis of MMOG Subscription Growth – Version 22.0, Total MMOG Active Subscriptions*, <http://www.mmogchart.com/charts> (last visited Feb. 25, 2008).

⁴⁰ Westbrook, *supra* note 2, at 780 n.5 (citing Nicholas Yee, *Hours of Play Per Week, The Daedalus Project: The Psychology of MMORPGS*, <http://www.nickyee.com/daedalus/archives/000758.php> (last visited Feb. 26, 2008)).

⁴¹ Kevin W. Saunders, *Virtual Worlds – Real Courts*, 52 VILL. L. REV. 187, 191 (2007).

⁴² Glushko, *supra* note 8, at 507.

⁴³ Second Life and There.com both provide free basic membership. See Second Life's Membership, Land & Pricing, <http://secondlife.com/whatis/pricing.php> (last visited Feb. 26, 2008) and There.com's Membership Site, http://www.there.com/start_membership.html (last visited Feb. 26, 2008).

⁴⁴ The Sims Online provides a 14 day free trial and then charges a subscription of \$9.99 per month. See Sims Online – Beginner's Guide, http://sims.stratics.com/content/gameplay/starter_guides/beginner/ (last visited Feb. 26, 2008). Second Life offers a Premium Account for \$9.95 per month that allows users to own land. See Second Life's Membership, Land & Pricing, <http://secondlife.com/whatis/pricing.php> (last visited Feb. 26, 2008). Red Light Center, a hedonistic virtual world, also permits a free limited membership, but charges \$20 per month for VIP access. See Red Light Center Support and Billing Questions, <http://www.redlightcenter.com/faqs.asp> (last visited Feb. 26, 2008). World of Warcraft requires users to pay a monthly fee ranging from \$12.99 to \$14.99 per month. See World of Warcraft General F.A.Q., <http://www.worldofwarcraft.com/info/faq/general.html> (last visited Feb. 26, 2008).

⁴⁵ Lastowka & Hunter, *supra* note 2, at 8; see also *World of Warcraft*, *supra* note 35, at 73 ("Blizzard will have revenues of \$1.1 billion this year and operating profits of \$520 [million].").

⁴⁶ Lastowka & Hunter, *supra* note 2, at 8; Matt Ritchel, *Big Mac is Virtual, but Critics are Real*, N.Y. TIMES, Nov. 28, 2002, at G8.

⁴⁷ DFC Intelligence, *Online Game Market Forecasted To Reach \$13 Billion by 2011*, <http://www.dfcint.com/news/prjune62006.html> (June 6, 2006) (last visited Feb. 26, 2008).

B. Virtual Property – What Is It?

Now having a general sense of what virtual worlds are, the next item to understand is the concept of virtual property. Virtual property takes many forms and includes items such as clothing, cars, swords, shields, and artwork. Virtual property in some worlds is similar to its real-world counterpart.⁴⁸ Items "are subject to wear and tear" – toilets get clogged, houses need repair, and appliances need fixing.⁴⁹ However, it must be remembered that these items are nothing more than computer code.

Who creates this virtual property that populates these virtual worlds? Some virtual property is created by the developers.⁵⁰ Yet, most of the virtual property today is created by users. As explained by Professor Balkin, "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."⁵¹ In these situations, users create myriad types of virtual properties that play important roles in the virtual world.⁵²

For example, in *Second Life*, users can create virtual property by selecting from a palate of building blocks called "prims" and piecing together and modifying the prims to create a new object.⁵³ New textures and shapes can also be added to the prim palate by using various software applications.⁵⁴ Users can also write computer code, called a script, to give their objects the ability to be interacted with.⁵⁵ 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 do users do with virtual property? Just as in the real world, users sell their property. Markets have developed around these virtual properties with transactions taking place on online auction web sites such as eBay or via live virtual world exchanges using third party services such as PayPal to transfer funds.⁵⁶ Over the last couple years, trading of virtual property has totaled more than one billion dollars a year.⁵⁷ For example, in early 2007, someone purchased three virtual shopping malls for \$179,688 (real-world dollars) and in 2005 another user purchased a virtual space station for nearly \$100,000 (real-world dollars).⁵⁸ Less extreme examples include purchasing virtual clothing for \$0.33⁵⁹ or a virtual car for \$1 or \$2.⁶⁰ As

⁴⁸ Lastowka & Hunter, *supra* note 2, at 30.

⁴⁹ *Id.*

⁵⁰ Cory Ondrejka, *Escaping the Gilded Cage*, in *STATE OF PLAY: LAW, GAMES, AND VIRTUAL WORLDS* 158, 160 (Jack M. Balkin & Beth Simone Noveck eds. 2006) (New York University Press) (describing how 80% of the content in *The Sims* is user-created).

⁵¹ Balkin, *supra* note 19, at 2049.

⁵² *Id.*

⁵³ Todd David Marcus, *Fostering Creativity in Virtual Worlds: Easing the Restrictiveness of Copyright for User-Created Content*, 52 N.Y.L. SCH. L. REV. 67, 73 (2007).

⁵⁴ *Id.* at 75.

⁵⁵ *Id.* at 74.

⁵⁶ Glushko, *supra* note 8, at 510-11.

⁵⁷ *Getting Serious*, *THE ECONOMIST TECHNOLOGY QUARTERLY* 3, 4 (Dec. 8, 2007).

⁵⁸ Dean Irvine, *Virtual Worlds, Real Money*,

<http://www.cnn.com/2007/TECH/science/03/12/fs.virtualmoney/index.html?iref=newssearch> (March 12, 2007) (last visited Feb. 26, 2008).

⁵⁹ See e.g. Linden Lifestyles – Bottoms, <http://lindenlifestyles.com/?cat=4> (last visited Feb. 26, 2008). The prices are listed in Lindens, the official currency of *Second Life*. Although the exchange rate fluctuates somewhat, it has remained fairly stable at approximately 250 Linden dollars to the U.S. dollar. See *Second Life Current Exchange*, <http://secondlife.com/whatis/currency.php> (Last visited Feb. 26, 2008).

explained by Professors Lastowka and Hunter, the reason for creation of markets for virtual property is the same as the creation of markets in the real world.⁶¹ 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.⁶² It is important to understand that the virtual economy is directly linked to the real-world economy. Although virtual worlds such as *Second Life* have an in-game currency (called Lindens), this virtual currency can be exchanged for real-world money.⁶³ The current exchange rate between Lindens and U.S. dollars is roughly 270 to 1.⁶⁴ Users who create and sell their virtual products are not just amassing virtual wealth – they are amassing real wealth. Although it may seem crazy, there is a market for virtual goods and it is directly linked with the real-world economy.

This article does not discuss how or whether virtual property ought to be conceptualized in terms of property rights. This has been extensively discussed by others.⁶⁵ Instead, this article focuses on a particular class of property – intellectual property – that no one disputes is created in the computer code and graphics used to represent virtual property.⁶⁶

C. Existing Models of Virtual Property Ownership

Because of the large amounts of virtual property already in existence and constantly being created,⁶⁷ a system of property ownership is needed. Allocation of property rights in virtual property helps create stability and development in virtual worlds and the real-world interactions and transactions that result. In general, allocation of property rights largely depends on End User License Agreements (EULAs) of each virtual world.⁶⁸

The EULA is a software license between the developer and the user that governs the relationship between these two parties.⁶⁹ The EULA, drafted by the developer, "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."⁷⁰ The user is unable to enter the

⁶⁰ See e.g. Jason Striegel, *Brands in Second Life*, http://www.blogcadre.com/blog/jason_striegel/brands_in_second_life_2007_07_26_11_56_52 (July 26, 2007) (last visited Feb. 26, 2008).

⁶¹ See Lastowka & Hunter, *supra* note 2, at 37-38.

⁶² *Id.*

⁶³ Marcus, *supra* note 53, at 85.

⁶⁴ David Talbot, *The Fleecing of the Avatars*, TECHNOLOGY REVIEW, https://www.technologyreview.com/read_article.aspx?id=19844&ch=biztech (Jan. 2008).

⁶⁵ See generally Lastowka & Hunter, *supra* note 2; Balkin, *supra* note 19; Jankowich, *supra* note 5, at 174; Jamie J. Kayser, *The New New-World: Virtual Property and the End User License Agreement*, 27 LOY. L.A. ENT. L. REV. 59 (2006); Westbrook, *supra* note 2; and Meehan, *supra* note 14.

⁶⁶ See Marcus, *supra* note 53, at 76-77; Jankowich, *supra* note 5, at 181 ("Virtual world property can also be shown to fit into existing legal paradigms defining intellectual property."); Lastowka & Hunter, *supra* note 2, at 61 ("Virtual worlds, in all their visual, textual, spatial, coded, and theatrical aspects, are clearly expressive works of authorship."); and Balkin, *supra* note 19, at 2046-47 ("[V]irtual worlds are full of items that either are or will be protected by intellectual property laws.").

⁶⁷ See Ondrejka, *supra* note 32, at 35 (noting that as of June 2007, users were adding over 300 gigabytes of data to Second Life every day).

⁶⁸ Lastowka & Hunter, *supra* note 2, at 50.

⁶⁹ Glushko, *supra* note 8, at 515.

⁷⁰ *Id.*

virtual world unless the EULA is agreed to.⁷¹ Two models of EULAs have been developed to allocate rights in virtual property – the traditional model and the new model. Both are described *infra*.

1. The Traditional Model –Developers Owning the 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 the users' intellectual property rights to the developer.⁷² This model is, by far, the most common model of allocation of intellectual property rights in virtual worlds.⁷³

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

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.*⁷⁴

A EULA not expressly requiring assignment of intellectual property rights to the developer, but arguably asserting these rights as the initial author, is that used in *EverQuest*, which reads in relevant part:

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*

⁷¹ *Id.*

⁷² See *infra* notes 74-75 and accompanying text for examples of traditional model EULAs.

⁷³ Glushko, *supra* note 8, at 514 ("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 53, at 79-80.

⁷⁴ Entropia Universe: Apply for Account § 7, <https://account.entropiauniverse.com/pe/en/rich/107004.html> (last visited Feb. 26, 2008) (emphasis added); see also There.com Terms of Service (TOS): Member Agreement, <http://webapps.prod.there.com/help/74.xml> ("All materials you send to Company, . . . including, but not limited to, e-mail, postings, contest entries, Avatars, There Objects, creative suggestions, ideas, notes, drawings, concepts or other information . . . (collectively, 'Submissions'), shall be deemed the property of Company and *you hereby assign all of your rights, title and interest in and to such Submissions to [Company]* . . . 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.") (emphasis added).

*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.*⁷⁵

Regardless of how the ownership in the virtual property accrues, the scope of the ownership is generally broad, if not all encompassing.⁷⁶ Andrew Jankowich describes virtual worlds with these EULAs as "worlds where the [developers] enable the creation of intellectual property by participants but refuse to allow [the users] to claim ownership of it."⁷⁷ Jankowich further comments that:

EULAs stipulating that proprietors 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 proprietors begin to expire. There will be no possibility for participants to freely license or otherwise donate their virtual property to their fellow participants, and the proprietor is unlikely to do so for them.⁷⁸

2. The New Model – End Users Retaining Ownership

Despite the prevalence of the traditional model EULAs, a new model of virtual property ownership has emerged. The most 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 [developer's] servers in various forms. [Developer] 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.⁷⁹

Unlike the traditional model, users under this EULA are permitted to retain their intellectual property rights in the virtual property they create. The Founder and CEO of Linden Labs, described the adoption of this new model as "recognize[ing] the fact that persistent world users are making significant contributions to building these worlds and should be able to both

⁷⁵ EverQuest User Agreement and Software License at ¶ 8, http://help.station.sony.com/cgi-bin/soe.cfg/php/enduser/std_adp.php?p_faqid=16210 (last updated Aug. 21, 2006) (emphasis added).

⁷⁶ World of Warcraft End User License Agreement at § 3A, <http://www.worldofwarcraft.com/legal/eula.html> (last updated Feb. 2, 2007) (asserting that the developer owns "[a]ll title, ownership rights and intellectual property rights in and to the Game and all copies thereof (including without limitation any titles, computer code, themes, objects, characters, character names, stories, dialog, catch phrases, locations, concepts, artwork, character inventories, structural or landscape designs, animations, sounds, musical compositions and recordings, audio-visual effects, storylines, character likenesses, methods of operation, moral rights, and any related documentation).").

⁷⁷ Jankowich, *supra* note 5, at 189.

⁷⁸ *Id.* at 214.

⁷⁹ Second Life Terms of Service § 3.2, <http://secondlife.com/corporate/tos.php> (last visited Feb. 26, 2008).

own the content they create and share in the value that is created."⁸⁰ He further commented that "[t]he preservation of users' property rights is a necessary step toward the emergence of genuinely real online worlds."⁸¹ *Second Life* is the only virtual world allowing users to retain ownership of the intellectual property in virtual property they create.

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.⁸² They serve not only to entertain, but also to give creators a voice to express their grievances, communicate their thoughts to others,⁸³ and create "new social practices, sensibilities, [and] representations of the world."⁸⁴ As one commentator notes, innovators and artists "can intuit the future, create new models of communication, behavior, perception, urban planning, even morality and economy."⁸⁵

The creation of virtual property is yet another opportunity for innovators and artists to influence the cultural development of societies. Of course, within the virtual worlds, users creating virtual property certainly add to the richness of those worlds.⁸⁶ 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.⁸⁷ 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.⁸⁸ 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. It must be remembered that virtual worlds do not exist apart from the real world.⁸⁹ They are complementary and connected rather than separate spaces.⁹⁰ The virtual world and the property in it are not developed for the avatars, but instead are developed 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

⁸⁰ Press Release, Linden Lab, *Second Life Residents to Own Digital Creations*, http://lindenlab.com/pressroom/releases/03_11_14 (Nov. 14, 2003) (last visited Feb. 25, 2008).

⁸¹ *Id.*

⁸² HERVÉ FISCHER, *DIGITAL SHOCK* 110-11 (Rhonda Mullins trans., McGill-Queens University Press 2006).

⁸³ Balkin, *supra* note 19, at 2056.

⁸⁴ FISCHER, *supra* note 82, at 110-11.

⁸⁵ *Id.* at 112.

⁸⁶ Saunders, *supra* note 41, at 232.

⁸⁷ LAWRENCE LESSIG, *CODE VERSION 2.0* 13 (2006); Balkin, *supra* note 19, at 2056 ("If movies are media for the communication of ideas, so too are massively multiplayer games.").

⁸⁸ See JON FESTINGER, *VIDEO GAME LAW* 149-50 (Sunny Handa, ed. 2005).

⁸⁹ *Better Together*, *THE ECONOMIST* 14, 14 (Dec. 8, 2007).

⁹⁰ *Id.*

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."⁹¹

For example, one phenomenon springing forth from virtual worlds into the real world is machinima. Machinima are short movies made by users of their virtual world experiences.⁹² "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."⁹³ People outside the virtual worlds have the opportunity to view and enjoy these films.⁹⁴ This is just one example of innovation from within the virtual world reaching out and touching real-world culture. Virtual property, of course, facilitates this extension of innovation and creativity by enriching the experience and making them more entertaining.

Still, one might ask, "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.⁹⁵ But let us assume that no one viewed these films. The machinima may be put out on the Internet for everyone to enjoy, but no one ever watches it.⁹⁶ How can culture be advanced in this instance? The cultural benefit comes from the individual creator refining their skill and appreciation of other creations. As 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.⁹⁷

Therefore, although no one may watch the machinima the user produced, cultural advances have still been made because this user can now be a better viewer of other machinima and motion pictures and add their own take on cultural developments happening around them.

Just as machinima has positive real-world cultural implication, so too does virtual property. Although virtual property may be a prop or landmark in the film, it still has added to the created culture. In and of itself, virtual property may also touch the real world. Items created in virtual worlds might be technologically infeasible in the real world at the present time. However, innovation in virtual worlds may provide a basis for helping real-world inventors or artists overcome or design around the technological limitations they face. Moreover, innovation and creativity in virtual worlds will cause users to explore and think with a new perspective both within the virtual world and within the real world. For example, an institute at Coventry University in the United Kingdom, called the Serious Games Institute, is using virtual worlds as

⁹¹ PRAMOD K. NAYAR, VIRTUAL WORLDS 21 (2004).

⁹² YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM 295 (Yale Univ. Press 2006); see also Ondrejka, *supra* note 50, at 161.

⁹³ BENKLER, *supra* note 92, at 295.

⁹⁴ See e.g. *leroy jenkins*, <http://www.youtube.com/watch?v=LkCNJRfSZBU> (last visited Feb. 25, 2008).

⁹⁵ Ondrejka, *supra* note 50, at 161. As of February 25, 2008, the *leroy jenkins* video cited *supra* at note 94 had been viewed over four million times. See *leroy jenkins*, *supra* note 94.

⁹⁶ 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.

⁹⁷ BENKLER, *supra* note 92, at 295.

a tool for people to learn and work together to solve real-world business problems.⁹⁸ 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 the users' stories, promoting a further exchange of ideas between the real-world users behind the avatars, and adding to the collective real-world culture.

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

Having now established that innovation and creativity play vital roles in our cultures and that the development of virtual property contributes to that culture, the question now is how should rights in virtual property be allocated to maximize innovation and creativity. This question has not yet been answered. And although I do not propose a definitive answer, this section will explore the arguments and counter-arguments of allocating virtual property rights to users.

Some commentators have argued that granting property rights to users is innovation-maximizing.⁹⁹ 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."¹⁰⁰ This principle is, of course, enshrined in our Constitution regarding patents and copyrights, which grants Congress the power "To 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."¹⁰¹

This principle is best demonstrated by the virtual world *Second Life*, which grants its users rights in the virtual property they create. When *Second Life* first launched in June of 2003, it gave users the ability to create virtual property, but it claimed ownership of that property. However, *Second Life* "did not set the world on fire at launch."¹⁰² It saw modest growth, but the developer was worried about the number of users participating in *Second Life*.¹⁰³ To solve this problem, the developer asked a team of experts to examine the problem.¹⁰⁴ The experts concluded that allowing users to own the property they created might solve the problem.¹⁰⁵ The developer changed its EULA to allow users to own the virtual property they created.¹⁰⁶ As a result of this change, user participation exploded.¹⁰⁷ Not only did *Second Life* attract more users, the number of users creating virtual property increased as well.¹⁰⁸

One counter-argument to this theory is that if developers are granted all of the rights and either refuse to enforce the rights or grant a license to all users to do what they please with the property, then there will be no barriers to additional creativity because there will be no fear of

⁹⁸ *Getting Serious*, *supra* note 57, at 3.

⁹⁹ See generally Ondrejka, *supra* note 32, at 27.

¹⁰⁰ STATE OF PLAY: LAW, GAMES, AND VIRTUAL WORLDS 9 (Jack M. Balkin & Beth Simone Noveck eds. 2006) (New York University Press).

¹⁰¹ U.S. Const., art. I, § 8, cl. 8.

¹⁰² Ondrejka, *supra* note 32, at 31.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

infringement of users' rights.¹⁰⁹ In other words, granting the rights to the developers creates a truly collaborative state where innovators and artists can freely build upon each other's works and freely take a copy of what exists in the virtual world. By allowing all users to build upon the work of other users, this will maximize innovation because there are no barriers to innovation.

A second counter-argument to the notion that innovation is maximized by providing an economic incentive is that users create and innovate regardless of an economic incentive.¹¹⁰ As Professor Benkler questions:

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 co-creating story lines and pretty pictures of their own?¹¹¹

It is true that some users would create regardless of their ability to sell their creations.¹¹² This is experienced everyday when users create virtual property in virtual worlds where the EULAs grant all rights in virtual property to the developer¹¹³ or where the EULAs forbid commercialization of virtual property.¹¹⁴ However, as Professor Benkler also points out, different users are motivated by different incentives and some users may have mixed motivations.¹¹⁵

Without empirical research on this topic, it is impossible to definitively say that innovation and creativity are maximized if users own the virtual property they create. Until then, there is a possibility that this may be the case.¹¹⁶ Therefore, the question becomes what barriers interfere with exploring this possibility and what can be done to remove these barriers.

¹⁰⁹ Balkin, *supra* note 19, at 2065.

¹¹⁰ See JESSICA LITMAN, DIGITAL COPYRIGHT 104-05 (2001); Laura G. Lape, *A Balancing Act: Copyright in the Electronic Network Environment*, in SAFEGUARDING ELECTRONIC INFORMATION 37 (ed. Jana Varlejs McFarland & Co, Inc. 1996); Benkler, *supra* note 4, at 184.

¹¹¹ Benkler, *supra* note 4, at 184.

¹¹² See Lape, *supra* note 110, at 37 (citing Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 299-300 (1970) and Jessica Litman, *The Exclusive Right to Read*, 13 CARDOZO ARTS & ENT. L.J. 29, 46-48 (1994)).

¹¹³ See *supra* note 74 and accompanying text.

¹¹⁴ See e.g. There.com Terms of Service (TOS): Member Agreement, <http://webapps.prod.there.com/help/74.xml> ("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.") and EverQuest User Agreement and Software License at ¶ 8, http://help.station.sony.com/cgi-bin/soe.cfg/php/enduser/std_adp.php?p_faqid=16210 (last updated Aug. 21, 2006) (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).

¹¹⁵ Yochai Benkler, *Coase's Penguin, or Linux and the Nature of the Firm*, 112 YALE L.J. 369, 426-27 (2002).

¹¹⁶ For example, if users were granted the property rights, then any excess motivation could be disclaimed by users who wished to do so. This is the case in Second Life. Once users create an object, permissions can be set that allow other users to engage in certain activities such as modifying and copying. See Marcus, *supra* note 53, at 74. Thus, if a user creates a virtual airplane and wants to donate it to the public domain for all other users to freely copy or modify, then the user is free to do so. If the user only wants to donate a subset of these rights – say the right to copy the virtual property – then the user can choose to do so and retain the modification right and license it for a fee to those wishing to create derivative works. If it is true that most users do not have an interest in ownership of their virtual property and wish to donate it to the public domain, then the EULA could be fashioned so the default is to grant a license to everyone for all rights in the virtual property. If users wish to exercise their rights, they will need to opt-in and specify what rights they wish to keep.

IV. PROBLEMS FACING VIRTUAL PROPERTY OWNERS

Because there at least exists the possibility of maximizing innovation and creativity by granting users virtual property rights, it is useful to explore why developers are reluctant to break away from the traditional model and towards the new model. There are three main arguments developers posit for maintaining the traditional model. First, they wish to limit their liability. Developers fear that granting property rights to users may subject them to liability if the virtual property is compromised. Second, they fear losing control over the virtual world. In other words, if the developer no longer owns everything in the virtual world and must respect the property rights of others, then their ability to have complete control is weakened and their ability to design the virtual world is lessened. Third, developers complain that if users are granted property rights in the virtual property they create, then developers will be forced to create new features in their worlds to keep users interested and continuing their subscriptions. Each of these concerns perceived by developers is discussed *infra* in further detail.

A. Liability

One reason developers require users to assign their virtual property rights is the fear of liability for losses of virtual property.¹¹⁷ Losses may result from poorly designed software, hardware failures, hackers stealing virtual property,¹¹⁸ or viruses infiltrating the virtual world system. For example, when developers create and administer the virtual worlds, they may use inadequate or outdated technologies which inadvertently erases data.¹¹⁹ Alternatively, human error could erase or otherwise misplace virtual property data despite properly functioning software.¹²⁰ Theft of virtual property is another concern.¹²¹ As noted by one commentator, "incidents of theft or destruction of virtual property are being increasingly reported to police"¹²² A judge in South Korea estimates that sixty cases have been heard relating to hacking in virtual worlds.¹²³ The concerns of hackers and viruses can be included in the understanding of poorly designed software – i.e. software designed so poorly that hackers or a virus were able to infiltrate the system.

If users were not forced to assign their rights in the virtual property, the developers might be exposed to potential grounds for liability negligent design,¹²⁴ strict liability for defective

¹¹⁷ Westbrook, *supra* note 2, at 787; Kayser, *supra* note 65, 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.").

¹¹⁸ See Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047, 1081 (2005).

¹¹⁹ YOCHAI BENKLER, RULES OF THE ROAD FOR THE INFORMATION SUPERHIGHWAY 307 (1996) (discussing communications systems).

¹²⁰ *Id.*

¹²¹ 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. In such virtual worlds, developers ought not have fear of liability. See F. Gregory Lastowka & Dan Hunter, *Virtual Crimes*, 49 N.Y.L. SCH. L. REV. 293, 305 (2005).

¹²² See Fairfield, *supra* note 118, at 1081.

¹²³ *Getting Serious*, *supra* note 57, at 4.

¹²⁴ Vincent R. Johnson, *Cybersecurity, Identity Theft, and the Limits of Tort Liability*, 57 S.C. L. REV. 255, 275-76 (2005) (suggesting a common law duty to guard against intruders to databases ought to be imposed).

design,¹²⁵ or breach of express or implied warranties. This is certainly an understandable concern. But if developers are assigned all rights in user-created virtual property, then any losses are incurred by the developer, not the users who created the property. Because users have no rights in the virtual property, they have no cause of action against the developer.

One might argue that if users ought to have the property rights, but developers fear liability for losses to this property, then the solution to this problem would be for developers to allow users to retain their rights, but include an exculpatory clause in the EULA. This solution may not provide developers with enough certainty or protection though.

First, there is a lack of consistency across the states regarding the enforceability of exculpatory clauses.¹²⁶ Some states uphold these clauses,¹²⁷ while others strike them down as violative of public policy.¹²⁸ For example, a 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."¹²⁹ This California law 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.¹³⁰

Similarly, the Connecticut Supreme Court in *Hanks v. Powder Ridge Restaurant*¹³¹ held an exculpatory clause purporting to hold ski resort operators harmless for their own future negligence to be unenforceable.¹³² The Connecticut Supreme Court's rejection of the exculpatory clause on public policy grounds was based on the fact that the damage was a personal injury, rather than an economic injury.¹³³ In making its decision, the court noted that "the 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

¹²⁵ Frances E. Zollers et al., *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). *But see* Antel Oldsmobile-Cadillac, Inc. v. Sirus 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 their duty of care that the bailment creates. However, "the bailment concept [] is limited to tangible personal property and generally goes not extend to either real or intangible property." A. Darby Dickerson, *Bailor Beware: Limitations and Exclusions of Liability in Commercial Bailments*, 41 VAND. L. REV. 129, 131 (1988).

¹²⁶ Dickerson, *supra* note 125, at 132 n.22.

¹²⁷ *See e.g.* Yang v. Voyageaire 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 benefitted party from liability for intentional, willful or wanton acts, or contravenes public policy.").

¹²⁸ Dickerson, *supra* note 125, at 132 n.22.

¹²⁹ CAL. CIV. CODE § 1668. However, there is much confusion over what types of exculpatory clauses the statute prohibits. *See* Health Net of Cal., Inc. v. Dep't of Health Servs., 113 Cal. App. 4th 224, 232-41 6 Cal. Rptr. 3d 235, 242-49 (Cal. Ct. App. 2003).

¹³⁰ *Pelletier v. Alameda Yacht Harbor*, 188 Cal. App. 3d 1551, 1553, 230 Cal. Rptr. 253, 253 (Cal. Ct. App. 1986).

¹³¹ *Hanks v. Powder Ridge Rest. Corp.*, 885 A.2d 734 (Conn. 2005).

¹³² *Id.* at 747.

¹³³ *Id.* at 741.

expectations."¹³⁴ With users and developers in different states and even different countries, it could be difficult for developers to have any consistency with respect to limiting their liability.¹³⁵

Second, in jurisdictions that do enforce them, exculpatory clauses are not favored and are strictly construed.¹³⁶ In enforcing these clauses, courts have emphasized that the language used must be unmistakable, unambiguous, and understandable.¹³⁷ For example, in *Audley v. Melton*, a model was bitten in the head by a tiger during a photo shoot.¹³⁸ The model sued the owner of the photography studio alleging negligence for failing to take precautionary measures to protect the model from the tiger.¹³⁹ The defendant submitted two documents signed by the model which contained exculpatory clauses.¹⁴⁰ The exculpatory clauses stated, in relevant part, "I further release the photographer, his/her agents or assigns from any and all liability whatsoever," and "I hold [defendant] or any of [his] agents free of any or all liability."¹⁴¹ The New Hampshire Supreme Court did not hold that the exculpatory clauses violated public policy.¹⁴² Instead, the court held the exculpatory clauses did not prohibit the model from recovering for the defendant's own negligence because the exculpatory clauses only referred to liability generally and did not specifically refer to the defendant's own negligence.¹⁴³ The general language used 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]."¹⁴⁴ Although developers might be able to draft unmistakable and unambiguous exculpatory clauses that are applicable even when strictly construed against them, these forces work against easing any concern the developers may have about avoiding liability.

Third, and probably the most problematic for developers, is that the EULA containing the exculpatory clause may be unconscionable. The Restatement (Second) of Contracts recognizes that "a party's attempt to exempt himself from liability for negligent conduct may fail as unconscionable."¹⁴⁵ Generally, click-through or shrink-wrap agreements are enforceable unless they are unconscionable.¹⁴⁶ Despite (or perhaps because of) their sweeping scale, the traditional model EULAs have been scrutinized by commentators who are concerned with unconscionability.¹⁴⁷ As Professor Lederman points out:

[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

¹³⁴ *Id.* at 744 (quoting *Wolf v. Ford*, 335 Md. 525, 535, 644 A.2d 522, 527 (Md. 1994)).

¹³⁵ To help this problem, the EULA could have a choice of law clause which selects a state that enforces exculpatory clauses.

¹³⁶ *Cumberland Valley Contractors, Inc. v. Bell County Coal Corp.*, 238 S.W.3d 664, 649 (Ky. 2007); *Alack v. Vic Tanny Intern. of Missouri, Inc.*, 923 S.W.2d 330, 334 (Mo. 1996).

¹³⁷ *Alack v. Vic Tanny Int'l of Mo., Inc.*, 923 S.W.2d 330, 334 (Mo. 1996) (citing *Gross v. Sweet*, 424 N.Y.S. 365, 367-8, 400 N.E.2d 306, 309 (1979)).

¹³⁸ *Audley v. Melton*, 640 A.2d 777, 778 (N.H. 1994).

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.* at 779.

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ RESTATEMENT (SECOND) OF CONTRACTS § 195 cmt. b (1981).

¹⁴⁶ *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 148-49 (7th Cir. 1996).

¹⁴⁷ *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 14, at 14 ("Whether the EULAs in online games, such as MindArk's EULA for Project Entropia, are unconscionable is debatable.").

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.¹⁴⁸

The developers, as discussed, are "usually multinational corporations such as Microsoft, Sony, and Electronic Arts."¹⁴⁹ Users, in contrast, are typically individuals – sometimes teenagers – who oftentimes have not read the EULA before clicking on it.¹⁵⁰

In *Brower v. Gateway 2000, Inc.*,¹⁵¹ the New York Appellate Division held an arbitration clause between a consumer and a software and hardware merchant was unconscionable.¹⁵² In *Brower*, the arbitration clause required that the arbitration be governed 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, which made contacting it even more difficult.¹⁵³ Moreover, the ICC rules required the complaining party to submit advance fees of \$4,000, of which \$2,000 was nonrefundable and which generally exceeded the cost of the computer systems in dispute.¹⁵⁴ The Appellate Division held these terms were "egregiously oppressive" and rendered the arbitration clause unconscionable and unenforceable.¹⁵⁵

Analogizing to *Brower*, it is possible that a court could find an exculpatory clause in EULAs 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 rest assured that using an exculpatory clause in the EULA will protect it from liability.¹⁵⁶

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 developers wanting to avoid liability for harm to users' virtual property.

B. Loss of Control

Another reason developers require users to assign their virtual property rights to developers is the developers' fear of losing control over their worlds.¹⁵⁷ Developers fear not being able to change the worlds and property characteristics, kick out users who do not follow or abuse the rules, and otherwise modify the world to keep users interested. In essence, they argue

¹⁴⁸ Lederman, *supra* note 147, at 1639.

¹⁴⁹ Lastowka & Hunter, *supra* note 2, at 54.

¹⁵⁰ Lederman, *supra* note 147, at 1635-36.

¹⁵¹ *Brower v. Gateway 2000, Inc.*, 676 N.Y.S.2d 569 (N.Y. App. Div. 1998).

¹⁵² *Id.* at 575.

¹⁵³ *Id.* at 571.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.* at 571-75.

¹⁵⁶ The closest a court has come to discussing EULAs in the virtual world context is *Davidson & Associates, Inc. v. Internet Gateway, Inc.*, 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 were not "unwitting members of the general public." *Id.* at 1179. However, the court did not address exculpatory clauses or assignment of rights provisions as they were not issues in the case.

¹⁵⁷ Westbrook, *supra* note 2, at 788-89.

that "their need to develop and expand the virtual environment necessitates locking out private property interests."¹⁵⁸ This argument is commonly expressed in a speculative form.¹⁵⁹ "What happens if the actions of the [developers] in some way damage or devalue the virtual object in which a user holds a property interest?"¹⁶⁰ 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?"¹⁶¹

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.¹⁶² He points out that speculation in land is not always a wise return as "new developments can devalue prior investments."¹⁶³ Similarly, manufacturers modify the supply of goods knowing "the resulting changes in value due to scarcity will affect prior purchasers."¹⁶⁴ 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 would deprive users of their property, but not in a way that is too different from the way "bankruptcy deprives equity holders of the value of their stock."¹⁶⁵ Just as we would not think private ownership of stock should be abolished because of the possibility of bankruptcy, user-owned virtual property should not be abolished because of a possibility of the virtual world disappearing.¹⁶⁶

Although ownership of virtual property by users might conceivably limit developers' control over the worlds they created, it is not nearly the parade of horrors that is anticipated. The threats to users' property interests may be harmed by developers' actions, but not in a way that is any different from the way real-world property interests are threatened. Just as a manufacturer of goods in the real world can increase output of the product without liability or otherwise feeling constrained, so too can developers operate and change their virtual worlds without constraint. To maintain an adequate amount of control over the virtual worlds, developers can specify in the EULAs what limitations on users' virtual property exist or the scope of the licenses the users must grant to developers.

Finally, any restrictions that developers may feel regarding locking out users from their system or terminating their accounts may be alleviated if virtual worlds become interoperable. There is currently a movement underway so property in one virtual world will be compatible with the software in another virtual world.¹⁶⁷ 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 could increase the amount of control developers exercised over their worlds because users who did not like the new rules or activities could take their property elsewhere.

¹⁵⁸ Fairfield, *supra* note 118, at 1097.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 1097-98.

¹⁶¹ *Id.* at 1098.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ See generally Virtual World Interoperability, <http://vwinterop.wikidot.com/start> (last visited Feb. 26, 2008); see also Daniel Terdiman, *Tech Titans Seek Virtual-World Interoperability*, http://www.news.com/Tech-titans-seek-virtual-world-interoperability/2100-1043_3-6213148.html (Oct. 12, 2007) (last visited Feb. 26, 2008).

C. Forced to Create

The final reason given for requiring users to assign their rights in virtual property to developers is related to the control reason. Developers claim that granting virtual property rights to users will not only encourage users to innovate and create, but it will force developers to innovate at a faster pace to keep their users' interests. The argument is that if users retain their rights in virtual property, they will have more of an incentive to create and sell new virtual property, which will increase the level of sophistication of all users. Because of the increased sophistication, users will become bored with the virtual world because of a lack of new challenges and other forms of in-world entertainment. When users become bored, they become dissatisfied with the virtual world and may turn their attention (and subscription fees) elsewhere.¹⁶⁸ Thus, to keep their users engaged in the virtual worlds, developers will be forced to create and update their virtual worlds at a faster pace than they would if less users created. This updating is difficult, expensive, and time consuming.¹⁶⁹

This perspective is backwards. Instead, developers should invite increased user innovation and creativity. Doing so may, in fact, make their jobs easier. In *Second Life*, where users retain their rights in virtual property, a large number of users participate in the creative process. 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."¹⁷⁰ Not only do users individually create virtual property, they also teach other users how to create by running classes online.¹⁷¹ Of course, when users create virtual property, the virtual world is enhanced, making it more enjoyable or challenging for other users. Users adding to the dynamics of the virtual world seems to be beneficial not only to users, but also to developers who do not have to spend resources creating what others have done for them.¹⁷² Users, in essence, become subdesigners.¹⁷³ Moreover, by permitting or encouraging users to develop their creative skills, they become more creative, develop better skills, and may eventually cross over to become developers themselves.¹⁷⁴ Such a transformation may lead to improvements in the development of virtual worlds generally.

In the end, the developers' concerns that promoting user innovation forces them to create at a faster pace than they would otherwise have to 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 the opposite were true – that letting users retain rights would force developers to be more creative – would this be so bad? Keeping an eye towards the goal of maximizing innovation and creativity suggests that such a result would be preferred.

¹⁶⁸ Lederman, *supra* note 147, at 1638.

¹⁶⁹ *Id.* at 1637-38.

¹⁷⁰ Ondrejka, *supra* note 50, at 163.

¹⁷¹ *Id.*

¹⁷² Saunders, *supra* note 41, at 232.

¹⁷³ Balkin, *supra* note 19, at 2049.

¹⁷⁴ Ondrejka, *supra* note 50, at 161.

D. Developers' Rational Choice and Market Failures

Because loss of control and being forced to create are not really 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 *supra*, exculpatory clauses do not sufficiently remedy this concern.¹⁷⁵ Thus, we are left with a situation where the only way to explore whether granting users rights maximizes innovation and creativity is to open developers up to liability in the event users' virtual property is compromised. This, of course, is not an enticing deal for developers.

Thus, there is a need to remove the unnecessary barriers that may inhibit choosing a regime that can maximize innovation and creativity. One such method is a legislatively created safe harbor. However, before discussing the safe harbor, it is 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 move towards and participate in virtual worlds that permit user ownership?¹⁷⁶ *Second Life* made this move in 2003 without the help of a safe harbor; why should other developers be provided an extra incentive for doing so? Won't new virtual worlds entering the market allow users to retain their rights?¹⁷⁷

Although letting the market take care of the issue sounds nice in theory, in practice it has failed. *Second Life* changed its EULA in 2003 to allow users to retain rights in their virtual creations.¹⁷⁸ Since then, there has not been a shift by other developers to follow suit. Other developers have stuck to the traditional model of ownership and have not shown an indication to change in the future. There are many possible reasons as to why the market has not caused 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. This 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. It could be that users are splitting their time between virtual worlds. There is no requirement that users can only participate in one virtual world at a time. It could be that some users are leaving to go to *Second Life*, but developers' fears of liability are so strong that they refuse to change their EULAs to be able to compete. However, 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 and see if the market can perform? Rather than speculating about and waiting for changing market conditions in the future, we have the opportunity to help solve the problem now with the creation of a safe harbor.

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

This article will not set forth the text for a proposed legislative safe harbor. I leave this task to Congress. The details of the safe harbor should be worked out after conferring with the appropriate stakeholders – namely the developers and users. Instead, this section will lay out some general thoughts and concerns that should be considered when creating the safe harbor.

¹⁷⁵ See *supra* Part IV(A).

¹⁷⁶ Marcus, *supra* note 53, at 86.

¹⁷⁷ *Id.*

¹⁷⁸ Ondrejka, *supra* note 50, at 169.

Again, the goal of the safe harbor is to resolve the conflict that currently exists between limiting developers' liability for losses to users' virtual property and wanting to grant users rights in the virtual property they create so as to open the door to a regime that may promote innovation and creativity.

Before delving into this safe harbor, it may be helpful to cursorily examine another 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.¹⁷⁹ In general, the DMCA safe harbor prevents monetary damages rather than injunctive relief.¹⁸⁰ The DMCA safe harbor only applies to certain classes of service providers, including conduit providers,¹⁸¹ "those who store or cache content hosted by another,"¹⁸² "those who host content posted by another,"¹⁸³ and search engines.¹⁸⁴ Furthermore, the DMCA safe harbor demands that the service providers "establish, publicize, and implement both a notice and takedown system for removing all content about which copyright owners complain"¹⁸⁵ and a system for identifying 'repeat infringers' and kicking them off the system,¹⁸⁶ and [that] they accommodate technical protection measures."¹⁸⁷

Importantly, Congress stressed that the DMCA safe harbor procedures were voluntary, but 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 providers] had actual or constructive knowledge that its facilities were being used to infringe."¹⁸⁸

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 could be liable for direct, contributory, and vicarious copyright infringement.¹⁸⁹ Although the view that service providers should generally not be held liable for user-posted infringing content was largely embraced by the majority of courts, other groups thought differently.¹⁹⁰ The Information Infrastructure Task Force Working Group recommended more rigid treatment of service providers and wanted to impose the burden of preventing infringement on service providers rather than copyright owners.¹⁹¹ Service providers objected and lobbied Congress.¹⁹² To design an approach to liability that would satisfy both service providers and copyright owners, Congress suggested negotiations between these groups, which eventually resulted in the DMCA safe harbor

¹⁷⁹ See generally 17 U.S.C. § 512 (2000); see also Mark A. Lemley, *Rationalizing Internet Safe Harbors*, 6 J. TELECOMM. & HIGH TECH. L. 101, 103-04 (2007).

¹⁸⁰ 17 U.S.C. § 512(j) (2000); see also Lemley, *supra* note 179, at 103-04.

¹⁸¹ 17 U.S.C. § 512(a) (2000); see also Lemley, *supra* note 179, at 104.

¹⁸² 17 U.S.C. § 512(b) (2000); see also Lemley, *supra* note 179, at 104.

¹⁸³ 17 U.S.C. § 512(c) (2000); see also Lemley, *supra* note 179, at 104.

¹⁸⁴ 17 U.S.C. § 512(d) (2000); see also Lemley, *supra* note 179, at 104.

¹⁸⁵ 17 U.S.C. § 512(c)(2)-(3) (2000).

¹⁸⁶ *Id.* at § 512(i)(1)(A).

¹⁸⁷ Lemley, *supra* note 179, at 104.

¹⁸⁸ Mike Scott, *Safe Harbors Under the Digital Millennium Copyright Act*, 9 N.Y.U. J. LEGIS. & PUB. POL'Y 99, 121 (2006).

¹⁸⁹ See *id.* at 110-13 (citing *Playboy Enter., Inc. v. Frena*, 839 F. Supp. 1552 (M.D. Fla. 1993) and *Religious Tech. Ctr. v. Netcom On-Line Comm'n Servs., Inc.*, 907 F. Supp. 1361 (N.D. Cal. 1995)).

¹⁹⁰ *Id.* at 113-15.

¹⁹¹ *Id.*

¹⁹² *Id.* at 116.

provisions.¹⁹³ For now, we will leave the DMCA safe harbor, but we will revisit it as we consider a safe harbor in the virtual world context.

The 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 question to address is what should the scope of the limitation of liability be. Should the limitation of liability extend to all conduct and all causes of action? Should it only cover certain causes of action? Should it still permit liability, but place a cap on the amount of damages that can be recovered? If a cap on damages is appropriate, what amount should the cap be?

The safe harbor should not simply absolve developers of all liability. It should certainly not protect developers who intentionally delete a user's virtual property. Intentional deletion of virtual property is not the type of activity the law should encourage. Although a limitation of liability may be necessary, we as a society do not want this type of conduct to be authorized nor do we want these types of actors to flourish.

A harder line to draw however is between negligence and gross negligence or recklessness.¹⁹⁴ At a minimum, the safe harbor should protect developers who negligently design their systems or who otherwise negligently take action that destroys virtual property. But should such a protection extend to gross negligence or recklessness? On the one hand, enough incentive needs to be provided so developers will opt to let users retain their rights. Without enough incentive, the status quo will remain. On the other hand, we do not want to encourage poorly designed software, especially when a large number of people and a large amount of money are invested into the software. Although this issue should be explored more in depth before creation of the safe harbor, it seems that market forces may help answer this question. Because developers compete with each other for subscribers and subscription fees and the companies running virtual worlds are generally large multi-national companies with many shareholders and their reputations at stake, it seems unlikely that a developer would risk its subscribers moving to the competition, losing out on the associated revenue, and the bad press involved by engaging in grossly negligent or reckless behavior. Imagine a developer who recklessly developed a virtual world that erased or otherwise compromised its users' virtual property. It would not take long before users flocked to a competing virtual world where their property is protected. Because virtual worlds primarily serve social functions, the network effects would be huge. Once the affected users leave the reckless virtual world because their virtual property was harmed, other users, whose property was unaffected, will also leave to be able to socially interact with their peers. This situation would instantaneously ruin a reckless developer. Thus, it probably does not matter much whether reckless or grossly negligent conduct is protected by the safe harbor. 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 line between negligence and recklessness or gross negligence is difficult to draw, it is administratively easier to protect all

¹⁹³ *Id.*

¹⁹⁴ The terms gross negligence and recklessness essentially have the same meaning. *See St. Onge v. Detroit & Mackinac Ry. Co.*, 116 Mich. App. 128, 321 N.W.2d 865 (1982); *Desnick v. Am. Broa. Cos., Inc.*, 233 F.3d 514, 517 (7th Cir. 2000) ("in tort cases the term [recklessness] sometimes denotes little more than gross negligence"). Recklessness and gross negligence have been described as "the want of even slight care and diligence." *Lenard v. Dillely*, 805 So. 2d 175, 180 (La. 2002). Ordinary negligence, on the other hand, "consists of mere inadvertence, incompetence, unskillfulness, or failure to take precautions." *Ickes v. Tille*, 110 Ohio App.3d 438, 441, 674 N.E.2d 738, 740 (Ohio App. 1996).

of the conduct in question. In addition, the threat of potential litigation or nuisance suits is reduced because a clear line is drawn.

The safe harbor should also extend to breach of implied warranty claims as well. However, it should not protect developers from breaches of an express warranty granted to users. This is because once the safe harbor is created, developers should be free to provide extra protection to their users and to provide warranties regarding the protection of virtual property as a means of competing with other developers. If developers choose to affirmatively extend such protections and subject themselves to liability notwithstanding the safe harbor, they should not be able to use the safe harbor as a tool to commit fraud on users.

Finally, the safe harbor should probably extend to circumstances where developers wish to close up shop and terminate the virtual world. As discussed *supra*, this is similar to the bankruptcy situation in the real world¹⁹⁵ and users should be aware that there is a risk of their property interests becoming worthless. There is no need to hold developers liable for losses to users' virtual property in this context as this is something users should understand going in. Also, as previously discussed, there is a movement underway to allow virtual property to be interoperable.¹⁹⁶ Thus, when a developer is considering terminating the virtual world, it might be wise to require developers to give notice to its users so they have the opportunity to make back-up copies of their virtual property that they can take 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, then the question becomes what amount should damages be capped at. A cap on damages is not advised. Because the value of virtual property is relatively small for most objects, we do not want to open the floodgates for several minor claims that are little more than nuisance suits. Moreover, unless the cap is a trivial amount, most destroyed virtual property will not reach the capped amount. For those virtual objects that have a large real-world value, such as the three virtual shopping malls for \$179,688 or the virtual space station worth nearly \$100,000,¹⁹⁷ the cap on damages may be useful to developers. This of course would have to be balanced with the potential increase of litigation costs associated with suits for less valuable virtual property. Because of these unknown and probably unknowable facts, it seems the safe harbor should be focused on the developers' conduct rather than the amount of damages recoverable.

It is important to note that the safe harbor should be voluntary. Developers should have the choice of whether to permit users to retain rights in their virtual property or whether they will continue to adhere to the traditional model where rights are assigned to the developers. But why make the safe harbor optional in the first place? Why not require all developers to change their EULAs so users retain their rights in their virtual property or simply state that notwithstanding EULAs to the contrary, rights in virtual property belong to users? The reason an optional safe harbor is preferred is that each virtual world is different and it may be that for some developers, control is highly valuable and without such control the developer will not be able to achieve its purpose in creating the virtual world – which may be in opposition to maximizing innovation and creativity. In other words, we recognize that maximizing innovation and creativity is not the end all and be all in the context of virtual worlds; there are other competing interests at stake and it

¹⁹⁵ See *supra* notes 165-66 and accompanying text.

¹⁹⁶ See *supra* note 167 and accompanying text.

¹⁹⁷ Dean Irvine, *Virtual Worlds, Real Money*,

<http://www.cnn.com/2007/TECH/science/03/12/fs.virtualmoney/index.html?iref=newssearch> (March 12, 2007) (last visited Feb. 28, 2008).

may be harmful to ignore these other interests. Moreover, as explained *supra*, it is not clear that users owning virtual property rights will necessarily lead to innovation-maximizing results.¹⁹⁸

This voluntary approach is similar to the approach taken by Congress in the DMCA safe harbor.¹⁹⁹ Presumably, Congress could have required service providers to comply with the notice and takedown provisions, but chose to avoid meddling too much with the operation of the service providers' businesses. The DMCA approach also incentivizes service providers to act and cooperate with the goal of minimizing copyright infringement occurrences.²⁰⁰ Similarly, the virtual world safe harbor would incentivize developers to act and permit users to maintain control over their virtual creations, which may have the effect of increasing innovation and creativity.

If an optional safe harbor were created, why, if given a choice, would a developer opt to use the safe harbor rather than keep the assignment provisions of the EULA? The answer is certainty. As discussed *supra*, there is some concern that the traditional EULAs may be unconscionable with regard to exculpatory clauses.²⁰¹ Likewise, there is a concern about the assignment provisions being unconscionable as well. Although there is a history of clickwrap agreements being enforceable,²⁰² there is uncertainty about the clickwrap agreements in general²⁰³ and as to whether the forced-assignment provisions in EULAs are unconscionable.

Most cases dealing with the unconscionability of assignment provisions in contracts arise in the employment context. In the copyright context, this arises under the works-made-for-hire doctrine which is set forth in the Copyright Act.²⁰⁴ Under the works-made-for-hire doctrine, "a work prepared by an employee within the scope of his or her employment,"²⁰⁵ is initially owned by the employer.²⁰⁶ In the patent context, "[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."²⁰⁷

Nonetheless, there may be reason to treat the assignment provisions in virtual world EULAs differently and to find them unconscionable. In the employment context, the employee/innovator is being compensated for their employment, part of which is to create. The validity of upholding assignment provisions of employment contracts and application of the works-made-for-hire doctrine make sense. There is an exchange – salary,²⁰⁸ lump sum

¹⁹⁸ See *supra* III(B).

¹⁹⁹ See Scott, *supra* note 188, at 121 (citing H.R. Rep. No. 105-551, pt. 2, at 54).

²⁰⁰ Sven Eric Skillrud, *An Umbrella or a Canopy?: Why the 17 U.S.C. Section 512(a) Safe Harbor Should be Read Broadly*, 9 MARQ. INTELL. PROP. L. REV. 91, 96 (2005).

²⁰¹ See *supra* Part IV(A).

²⁰² 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 (orig. pub. 2003) (highlighting cases where clickwrap and shrinkwrap licenses have been upheld as valid and struck down as invalid).

²⁰³ *Meridian Project Sys., Inc. v. Hardin Const. Co., LLC*, 426 F. Supp. 2d 1101, 1106 (E.D. Cal. 2006) ("Whether contracts such as [the plaintiffs'] EULA are valid is a much-disputed question.").

²⁰⁴ 17 U.S.C. § 201(b) (2000) ("In the case of a work made for hire, the employer . . . 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.").

²⁰⁵ *Id.* at § 101.

²⁰⁶ *Cnty. for Creative Non-Violence v. Reid*, 490 U.S. 730, 737 (1989).

²⁰⁷ *Patent & Licensing Corp. v. Olsen*, 188 F.2d 522 (2nd Cir. 1951).

²⁰⁸ See *Martha Graham School & Dance Found., Inc. v. Martha Graham Ctr. of Contemporary Dance, Inc.*, 380 F.3d 624, 641-42 (2nd Cir. 2004) (finding regular salary paid to artistic director to make dances weighed in favor of a finding of a work-made-for-hire).

payments, or royalties²⁰⁹ for creative efforts. But the virtual world context is different. In this context, the user is paying the developer a subscription fee for the ability to create.²¹⁰ Upholding the assignment provision in the EULA would not involve the same type of exchange as in the employment context. If the employment situation were the same as the virtual world situation, then the employee/innovator would pay his employer for the ability to work on a project and after the employee/innovator was done, the intellectual property would belong to the employer. In this situation, courts might be more willing to find such a contract to be unconscionable. Given the different dynamics involved in virtual worlds an uncertainty about unconscionability is created.

This uncertainty about unconscionability is the bargaining chip for both developers and users and is what makes the safe harbor resolution possible. Rather than take their chances with lawsuits arguing the EULAs are unconscionable and losing the ability to protect themselves from liability, developers may rather eliminate their fear of liability and allow users to retain their rights. However, if users successfully challenge the EULAs on unconscionability grounds, developers will be stuck without property rights and without protection from liability and have little power to protect themselves. 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 innovation-maximizing. For these reasons, if a safe harbor is to be created, it should be done quickly while uncertainty still exists. The push from uncertainty to enact a safe harbor that could be innovation-maximizing is similar to the uncertainty in the DMCA context. Although courts favored not holding service providers liable for copyright infringement for user-posted content, the split in the courts and the Information Infrastructure Task Force Working Group's recommendation cast doubt on that certainty and paved the way for the DMCA safe harbor provisions, which seem to benefit stakeholders on both sides of the issue.²¹¹

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 the copyright owners were not contracting with the service providers. However, as discussed *supra*, the contract options for developers and users are not perfect.²¹² Exculpatory and assignment clauses are vulnerable.²¹³ Moreover, the virtual world situation is not really a situation where two parties are fighting over the same rights. Although on the surface it appears as if developers and users are both vying for virtual property rights, what really is at issue is users wanting virtual property rights and developers wanting to avoid responsibility for this property. The problem arises because developers used the tools they had available, which also happened to be the rights users would normally have had. A safe harbor can resolve this conflict and remove the barrier that may unnecessarily deter developers, users, and the market from agreeing on the best regime for creativity and innovation to flourish.

²⁰⁹ See *Warren v. Fox Family Worldwide, Inc.*, 328 F.3d 1136, 1142 (9th Cir. 2003) (finding royalty and completion sum were sufficient to weigh in favor of a finding of a work-made-for-hire).

²¹⁰ See *supra* note 44 (describing subscription fees for various virtual worlds).

²¹¹ See *supra* notes 189-91 and accompanying text.

²¹² See *supra* Part IV(A) (describing uncertainty of exculpatory clauses) and text accompanying notes 209-14 (describing uncertainty of assignment clauses).

²¹³ *Id.*

VI. CONCLUSION

With the relatively new and exciting development of virtual worlds upon us, the rapid creative developments occurring each day within it, and the new sources of entertainment and cultural growth virtual worlds provide, we should seize the opportunity to build upon and maximize this creativity and innovation. As discussed, virtual property does not just enhance the virtual worlds; it adds to the expressions and cultural developments of the real world as well.²¹⁴

But holding us back from exploring regimes that maximize creativity and innovation in the context of virtual worlds are developers' fears of liability, losing control of their creations, and being forced to create at an increased rate.²¹⁵ The traditional model EULAs attempt to ease developers' fears by requiring users to assign all of their rights in their virtual property to developers.²¹⁶ This may inhibit user innovation.²¹⁷ However, as discussed *supra*, other than the fear of liability for losses to users' virtual property, these fears are not legitimate.²¹⁸ 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 created to limit developers' liability for conduct that destroys or otherwise harms users' virtual property.²¹⁹ The details of the safe harbor would need the input of the stakeholders – namely the developers and users – but it generally should protect against claims for negligence, gross negligence or recklessness, and breach of implied warranties.²²⁰ The safe harbor would not protect against intentional destruction of virtual property or breach of express warranties.²²¹

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.²²² It would be a shame to stifle innovation in these industries and others because virtual words have their genesis in the gaming industry.

²¹⁴ See *supra* Part III(A).

²¹⁵ See *supra* Parts IV(A)-(C).

²¹⁶ See *supra* Part II(C)(1).

²¹⁷ See *supra* Part III(B).

²¹⁸ See *supra* Part IV.

²¹⁹ See *supra* Part V.

²²⁰ *Id.*

²²¹ *Id.*

²²² See *supra* note 19 and accompanying text.