

VIRTUAL PROPERTY, REAL CONCERNS

Nelson DaCunha

I. Introduction	35
II. What are Virtual Worlds?.....	37
A. A Brief History	37
B. Modern Virtual Worlds.....	39
III. Virtual Property	41
A. What is Virtual Property?	41
B. Who Needs Property Rights Anyway?	43
C. The EULA and Its Role in Property Rights.....	45
D. Player Rights.....	48
IV. Popular Property Rights Theories.....	51
A. The Lockean Labor Theory	51
B. Personality Theory	53
C. Utilitarianism	54
V. Current Proposals For Property Protection and Laws	58
A. Code as Law	58
B. Virtual Property as Intangible Real Property.....	59
C. Current Legal Protection.....	60
D. Foreign Legal History	62
VI. What is the Answer?.....	63
A. Practical Considerations	64
B. Protecting Players' Rights	69
VII. Conclusion.....	72

I. INTRODUCTION

On a bright sunny day, Mr. Jenson woke up and went online to check his banking balances. Despite repeated attempts, the website's response was always the same: "Your username or password is not valid." He was sure that he didn't remember changing his username or password, but the system was unrelenting. A quick glance at the clock and Mr. Jenson quickly realized that if he didn't get moving soon he would be late for work. On the way to work he stopped at an ATM to

get cash and again attempted to retrieve his balance. The ATM machine “ate” his card. Shocked but undeterred, he drove to work and stopped by the local bakery to pick up breakfast. As he ran his credit card through the card slot he realized that things were even worse than they seemed. His credit card transaction was denied. When he got to the office he called his bank and that is when the shock *really* kicked in.

The person on the other end of the line told him politely that his accounts had been closed. The manager joined the call and let Mr. Jenson know that the bank had discovered that, as a result of an error in the code of the online banking application, Mr. Jenson was able to open an account at a much higher rate than typically offered by the bank. To Mr. Jenson’s horror, the manager went on to explain that the bank’s policy was to close accounts for customers that took advantage of system exploits. After all, it is not fair to other customers. Mr. Jenson’s system access had been locked out, his banking and credit accounts had been closed, and all of his assets had been confiscated. Mr. Jenson was penniless and confused.

This is the situation that Marc Bragg found himself in when, as a response to an exploit that allowed him to purchase property at an extreme discount, Linden Labs—the makers of a virtual world called Second Life—closed his account and confiscated his virtual property, including the balance of virtual world dollars that he had purchased with his own money.¹ In the real world, Mr. Jenson can turn to Federal banking regulators and local officials for relief, but Mr. Bragg had no regulatory agency to turn to in Second Life. The status of digital property protection, especially in virtual worlds, is uncertain to say the least.² These are the issues that I will review in this note.

In section II, I will discuss the foundations of virtual worlds and their growth from pre-computer roots to present day sprawling universes. This background will provide a foundation for novices in the virtual world realm and an anchor for the important role that these games play in the lives of not only young Americans, but people of all ages and nationalities around the world.

Part III will discuss the critical characteristics of virtual property. The conjunction between virtual property and physical property—such as exclusivity, persistence, transferability and transformative properties—create the value in virtual property that makes protection of

1. See also Dan E. Lawrence, Note, *It Really Is Just A Game: The Impracticability of Common Law Property Rights in Virtual Property*, 47 WASHBURN L.J. 505, 528-30 (2008).

2. See also Lawrence, *supra* note 1, at 506-07.

the property important. With virtual property characteristics described, I will discuss various examples of just how critical this virtual property has become, not only to the lives of individuals, but to society in general, and what protections are currently in place, such as licensing agreements. This will set the stage for the remainder of the note.

Part IV will describe several common theories on virtual property rights, including the Lockean Labor Theory, Personality Theory, Utilitarianism, and the idea of treating virtual property as intangible real property. The merits and shortcomings of these various theories will be discussed.

Part V will discuss current implementations of virtual property protection, including “physical” protection through code and some actual and current legal frameworks—both within the United States and abroad—that are currently available to gamers and virtual world developers.

Finally, Part VI will discuss some practical considerations of any system that intends to extend protection to virtual property and the inherent dangers of applying virtual property protection with a broad brush. I propose a new solution to protecting user rights in property through a hybrid of natural protection. The protection is layered and built on the extension of an existing framework that is made up of the same software code that already controls virtual worlds. The software creates a high-level boundary of allowable behavior. In areas where software cannot properly protect, such as in areas of fraud or theft, the current legal-property regime takes over—much as it does with tangible property. Courts can apply standard property law while overlaying the virtual world rules and the social norms within virtual world. In this way, property can be protected even in virtual worlds where certain kinds of theft are part of the game play.

II. WHAT ARE VIRTUAL WORLDS?

A. *A Brief History*

The concept of virtual worlds has been around since long before computers.³ We have all been exposed to fictional literature from authors—like J.R.R. Tolkien—that have taken us into imaginary worlds

3. F. Gregory Lastowka & Dan Hunter, *Virtual Worlds: A Primer*, in *THE STATE OF PLAY: LAWS, GAMES, AND VIRTUAL WORLDS* 17-18 (Jack M. Balkin & Beth Simone Noveck eds., 2006) (relating the detailed immersive lands created in J.R.R. Tolkien’s books “The Hobbit” and the “Lord of the Rings” trilogy to early “imagined” virtual worlds).

of their creation. These worlds capture our imagination, and their power is in their ability to take us away from our everyday trials. The next logical evolution of these fictional worlds was seen at the dawn of the computer age. A.S. Douglas is credited with creating the first computer game, a version of Tic-Tac-Toe in 1952.⁴ It would be years before computers would be powerful enough to recreate the Tolkien-esque worlds, but in 1974, Gary Gygax and Dave Arneson created a role playing game called Dungeons and Dragons (DnD).⁵ The game was played by people who made up and then portrayed characters in imaginary settings and situations put together by a “dungeon master.”⁶ Although these games were played in person and on paper, they are credited with inspiring computerized versions of virtual worlds.⁷

The first such computerized role-playing world was ADVENT, a game created by Will Crowther in 1976.⁸ ADVENT was a text based DnD type game.⁹ Because ADVENT was a single player game, one of its major missing components was the ability to interact with other users.¹⁰ Three years later, in 1979, a new game called MUD was developed by Roy Tubshaw and Richard Bartle.¹¹ The key distinction between MUD and ADVENT was the ability to interact with other users.¹² MUD’s creation coincided with the beginning of the affordable personal computer and, more importantly, the common availability of the computer modem.¹³ Modems allowed a person at a computer in one part of the world to connect to other disparate computers.¹⁴ The

4. Mary Bellis, *Computer and Video Game History*, About.com, http://inventors.about.com/library/inventors/blcomputer_videogames.htm (last visited July 16, 2008); Gregory K. Laughlin, *Playing Games with the First Amendment: Are Video Games Speech and May Minors' Access to Graphically Violent Video Games be Restricted?*, 40 U. RICH. L. REV. 481, 487 (2006).

5. See Lastowka & Hunter, *supra* note 3, at 18.

6. *Id.*

7. *Id.* at 18-19.

8. *Id.* at 18.

9. *Id.* at 18-19.

10. *Id.* at 19.

11. *Id.*

12. *Id.*

13. Wikipedia, *MUD*, <http://en.wikipedia.org/wiki/MUD#History> (last visited July 17, 2008). See Computer History Museum – Exhibits – Internet History – 1970’s, http://www.computerhistory.org/internet_history/internet_history_70s.shtml (last visited July 17, 2008) (stating that during the 1970s computers, such as the Apple II, and modems began to emerge).

14. Michael Lee et al., Comment, *Electronic Commerce, Hackers, and the Search for Legitimacy: A Regulatory Proposal*, 14 BERKELEY TECH. L.J. 839, 857 (1999); Wikipedia, *Bulletin Board System*, http://en.wikipedia.org/wiki/Bulletin_board_system#History (last visited July 17, 2008).

popularization of Bulletin Board Systems (BBS) in the 1980s¹⁵ allowed more people to play games such as MUD and its derivatives in groups.¹⁶ The driving force, even at the embryonic stages of computerized virtual worlds, was the quest for ever more realism and interactivity. Moving from ADVENT to MUD was a quantum leap. Of course, the next leap in technology was to move from text-based worlds to the graphical virtual worlds that are so popular today.¹⁷

B. *Modern Virtual Worlds*

Modern virtual worlds use a graphical representation of the user called an avatar.¹⁸ These avatars may look human, but most virtual world game software allows avatars to take on any number of non-human appearances.¹⁹ These avatars traverse the virtual world interacting with other avatars and creatures in rich 3-D environments.²⁰ These worlds are created by video game companies and are either sold or freely available online. There are currently more than 100 such worlds in various phases of implementation and development.²¹ Trying to create a general description of the typical world in such a large grouping is difficult. The primary genus of games that have become most popular are the Massively Multiplayer Online Games (MMOG). As the name suggests, the most significant characteristic is the large number of players who can play simultaneously. World of Warcraft, one of the most popular MMOG's, boasts more than 10 million users worldwide.²²

15. Greg Lastowka, *Google's Law*, 73 BROOK. L. REV. 1327, 1333 (2008).

16. See Susan W. Brenner, *Fantasy Crime: The Role of Criminal Law in Virtual Worlds*, 11 VAND. J. ENT. & TECH. L. 1, 20 (2008). See Wikipedia, *Bulletin Board System*, http://en.wikipedia.org/wiki/Bulletin_board_system#History (last visited July 17, 2008). See also Wikipedia, *MUD*, <http://en.wikipedia.org/wiki/MUD> (last visited July 17, 2008).

17. See Brenner, *supra* note 16, at 22. See also Wikipedia, *Virtual World*, http://en.wikipedia.org/wiki/Virtual_world#History (last visited Aug. 23, 2009).

18. See Lastowka & Hunter, *supra* note 3, at 15.

19. See, e.g., Bryan T. Camp, *The Play's the Thing: A Theory of Taxing Virtual Worlds*, 59 HASTINGS L.J. 1, 4 (2007).

20. See Jack M. Balkin & Beth Simone Noveck, *Introduction*, in THE STATE OF PLAY: LAWS, GAMES, AND VIRTUAL WORLDS 3 (Jack M. Balkin & Beth Simone Noveck eds., 2006).

21. Kristina Knight, *eMarketer: Virtual Worlds to Increase 55%*, BIZREPORT, May 26, 2009, http://www.bizreport.com/2009/05/emarketer_virtual_worlds_to_increase_55.html. See also Wikipedia, *List of Massively Multiplayer Online Role-playing Games*, http://en.wikipedia.org/wiki/List_of_MMORPGs (last visited July 19, 2008).

22. *Annual Report, 2007 VIVENDI 15*, available at <http://www.docstoc.com/docs/951811/Viviendi-Universal-2007-Annual-Report>.

There are two general classes of virtual worlds currently in use.²³ The first is what is considered the Massively Multiplayer Online Role Playing Game (MMORPG).²⁴ These games consist of worlds similar to their predecessor, Dungeons and Dragons.²⁵ Avatars take on roles in these worlds as anything from trolls, to warriors, to space ship commanders.²⁶ The games are mission-based with players trying to build “experience” or increase their avatar’s game level.²⁷ Most of these games are set in violent scenes where groups of avatars work together to take on either computer-generated enemies or each other in battle.²⁸ The victors will split the bounty and gain experience points. The losers will “respawn” somewhere else in game and run the risk of losing their possessions.²⁹

The other class of game is the non-mission based social online game.³⁰ Like their role-playing counterparts, thousands of people can play simultaneously. Unlike the role-playing games, the game environments in these worlds are not mission-based.³¹ Avatars are free to roam the world as they choose. Avatars can explore, socialize in groups, and, in some worlds, create various items like clothing, homes, and vehicles that they can trade or sell for game currency.³²

With such a large universe of possible virtual world permutations, it would be impossible to undertake a thorough analysis of the issues affecting all of them. This Article will be limited to worlds that fall within these criteria:

They must allow interaction between multiple human controlled avatars.

23. Todd David Marcus, *Fostering Creativity in Virtual Worlds: Easing the Restrictiveness of Copyright for User-Created Content*, 55 J. COPYRIGHT SOC’Y U.S.A. 469, 473 (2008).

24. *See id.* at 473-74. *See also* Wikipedia, *List of Massively Multiplayer Online Role-Playing Games*, http://en.wikipedia.org/wiki/List_of_MMORPGs (last visited July 19, 2008).

25. *See* Marcus, *supra* note 23, at 473-74 (noting that MMORPG games are generally fantasy based). *See also* Wikipedia, *List of Massively Multiplayer Online Role-playing Games*, <http://en.wikipedia.org/wiki/MMORPG#Themes> (last visited July 19, 2008).

26. *See, e.g.*, Camp, *supra* note 19, at 4 (2007).

27. Marcus, *supra* note 23, at 473-74.

28. *See* Camp, *supra* note 26, at 4-6.

29. Wikipedia, *Spawning (Computer Gaming)*, <http://en.wikipedia.org/wiki/Respawn> (last visited July 19, 2008).

30. Marcus, *supra* note 23, at 473-74. *See also* Wikipedia, *Massively Multiplayer Online Game*, http://en.wikipedia.org/wiki/Massively_Multiplayer_Online_Social_Game#MMO_social_game (last visited July 19, 2008).

31. Marcus, *supra* note 23, at 473-74.

32. *See* Camp, *supra* note 26, at 7.

They must allow the ownership of virtual property to the avatars within the rules of the game.

The property within the game must be alienable.

The property must have the ability to persist over time even when the owner is not online.

III. VIRTUAL PROPERTY

A. *What is Virtual Property?*

When considering the legal aspects of virtual worlds, virtual property and players' rights to such property are two of the most commonly debated topics. So what is virtual property? In 3D virtual worlds, property is everywhere you look. There are trees in the forests, buildings, vehicles, clothing, and innumerable other objects. Virtual property is described as "software code designed to behave like and have the qualities of a physical, real-world chattel or piece of realty."³³ In order for virtual property to require protection, there are several characteristics that these virtual items must possess. Not only must the software mimic the physical characteristics of real world property,³⁴ it must also mimic other intangible features that we take for granted in real property and which are indistinguishable from those of real property.³⁵

Virtual property must be exclusive.³⁶ For this instance, exclusivity means that in order for a piece of virtual property to persist in a meaningful way, there needs to be some mechanism that the virtual world developers provide for one user to exclude all other users from taking possession of their property.³⁷ This is a critical factor because, without this restriction, virtual property would be freely moved about from player to player thereby reducing inherent value. Imagine a real world where anyone could pick up your computer or desk and walk away without repercussions as a matter of course. Although those items would exist physically, they would not be property any more than the air that you breathe. In the real world, the term property connotes ownership. Without the ability to restrict other users, real world "property" loses much of its value.

33. See Lawrence, *supra* note 1, at 510.

34. *Id.*

35. See Theodore J. Westbrook, Note, *Owned: Finding a Place for Virtual World Property Rights*, 2006 MICH. ST. L. REV. 779, 782 (2006).

36. *Id.*

37. See *id.*

Virtual property must also be persistent.³⁸ Despite the philosophical debates about whether or not property exists when we leave the room, the fact is that when we leave our homes in the morning we expect that, barring any catastrophe, our property is still persisting in an undisturbed state as we go about our day.³⁹ The same is not always true in video games. Shutting down Nintendo's Super Mario Brother's® video game will not leave castles and dragons roaming Mario Land. Rather, the default video game behavior is to persist in the world only as long as the world is in use. Of course, in the case of a MMOG, the world is in use all of the time. Therefore, property in these worlds generally persists even when you shut off your computer.⁴⁰ There are two types of persistence with virtual property.

The first is where, upon returning to the virtual world, the object you have purchased or built still exists. This value of the property exists even if the property "leaves" with you when you shut down the game as long as it is there when you return. This is the type of persistence that exists in most games for items on your "person," such as clothing, weapons, etc. The second type of persistence is where your property exists within the virtual world even if you are not playing the game. The most common use of this persistence is where homes or vehicles are concerned. Examples of both of these types of persistence are clear in games like Second Life. When logging off of the virtual world, items in your "inventory" and the items on your avatar's body disappear with you but are there upon your return. Homes, trees, or any other object that you drop in your "land" remain there after you leave. These pieces of property maintain their state, allowing other users to interact with them even when you are not there.

Virtual property also requires transmutational characteristics.⁴¹ Property that can be altered by value-added means grows, by definition, more valuable.⁴² This increase in value results in an increase in economic gain to the property that the player has acquired. That gain can come in the form of a more powerful weapon to use in his quests, a more valuable vehicle that can go farther or faster, or simply a more valuable widget that can be sold for profit. A world where all of the content is created by the world developer, without the ability to add

38. *Id.*

39. *See id.*

40. *Id.*

41. Charles Blazer, Note, *The Five Indicia of Virtual Property*, 5 PIERCE L. REV. 137, 147 (2006).

42. *Id.*

personal value and then transform that good into something of more value, limits the importance of ownership rights in virtual property.

Finally, property must be transferable.⁴³ In a game where one can accumulate property but never transfer it, the importance of property rights diminishes.⁴⁴ Therefore, in order for a piece of virtual property to have value, there needs to be a market and the ability to trade the piece of property for some value.

Putting all of these characteristics together creates a world where property can be acquired or, in some cases, created. The property can be customized and improved. The property will persist after the player exits the game, and he can protect his ownership rights in it as against other players. Finally, the property is alienable, allowing the player to trade the property for value.⁴⁵

Once a virtual world has put all of these pieces together for players, the virtual world starts taking on more and more characteristics of the real world.⁴⁶ As we will see, these characteristics then create a tension between the developers of games and the players.

B. Who Needs Property Rights Anyway?

Why the focus on property rights? Many people view virtual worlds as test beds for new legal theories.⁴⁷ There are reasons, however, that may be deemed far more important than academic exercises. There is real money being spent on and in these virtual worlds.⁴⁸ Second Life recently posted its key economic indicators for 2009, and the results were staggering. The world of Second Life now makes up the equivalent of 1.85 billion square meters, which is equivalent to about 68 percent of the land mass of the state of Rhode Island.^{49,50} Second Life

43. Westbrook, *supra* note 35, at 783.

44. *Id.*

45. This definition of property is a bit myopic and leaves out other types of digital property, such as e-mail addresses and domain names, but ultimately suits our needs in terms of virtual property within the virtual world of MMOGs.

46. Andrew E. Jankowich, *Property and Democracy in Virtual Worlds*, 11 B.U. J. SCI. & TECH. L. 173, 181 (2005).

47. *See id.* at 176.

48. Lawrence, *supra* note 1, at 506 (“The total value of transactions within one of the more popular virtual environments exceeded twenty-million dollars in one month along.”).

49. T. Linden, 2009 End of Year Second Life Economy Wrap up (including Q4 Economy in Detail, <https://blogs.secondlife.com/community/features/blog/2010/01/19/2009-end-of-year-second-life-economy-wrap-up-including-q4-economy-in-detail>) (Jan 19, 2009, 9:00 AM) [hereinafter *Second Life*] (noting 1.85 billion square meters of virtual space).

also boasted \$567 million in user-to-user transactions in 2009.⁵¹ Finally, Second Life's inflow of U.S. dollars exchanged for in-world Linden dollars,⁵² or exchanged out for U.S. dollars, was \$115 million for 2009, leaving nearly \$26.5 million worth of Linden dollars in circulation.⁵³ Second Life is a small community compared to other mainstream MMOGs. There are 1.2 million active users of Second Life.⁵⁴ Comparing that with World of Warcraft, which boasts 10 million users,⁵⁵ it is easy to see that there is a substantial sum of money tied up in these games. Jullian Dibbell, an author with experience in virtual world economy, estimates that the worldwide virtual GDP in 2007 was \$28.2 billion.⁵⁶ That is on par with the GDP of countries like Panama and Yemen, and much more than countries like Cambodia and Nepal.⁵⁷ With that amount of real money at stake, the need for protection becomes clear.

50. See U.S. Census Bureau, Rhode Island QuickFacts, <http://quickfacts.census.gov/qfd/states/44000.html> (last visited July 8, 2008) (reporting that the land area of Rhode Island is 1,044.93 square miles or 2,706,356,275 square meters).

51. See *Second Life*, *supra* note 49.

52. Linden Dollars or Lindens are the currency used in the virtual world Second Life. See Second Life, The Marketplace, <http://secondlife.com/whatis/marketplace.php> (last visited Oct. 19, 2009). It can be used to purchase items or can be used to pay directly to other avatars. *Id.* Lindens have many of the same properties as real money in the real world and are purchased using U.S. dollars on an exchange. *Id.*

53. See *Second Life*, *supra* note 49. U.S. dollars can be exchanged for Lindens and vice versa using the LindeX a currency exchange created and managed by Linden Labs. *Id.*

54. The number of residents is debated because not all Second Life accounts are paid accounts. See Susan W. Brenner, *Fantasy Crime: The Role of Criminal Law in Virtual Worlds*, 11 VAND. J. ENT. & TECH. L. 1, 35 (2008). This allows people to create multiple accounts or abandon accounts, all of which will still be counted on the rolls. See *id.* Although Linden Labs, the creators of Second Life, lists the total number of "residents" as more than 14.5 million, a more accurate figure may be the number of logins, which would indicate active users. See *id.* Linden Labs lists users that have logged in over the last sixty days as roughly 1.2 million, which is the more likely indicator of actual users. Second Life, Economic Statistics, <http://secondlife.com/statistics/economy-data.php> (last visited July 26, 2008).

55. Ethan E. White, Comment, *Massively Multiplayer Online Fraud: Why the Introduction of Real World Law in a Virtual Context is Good for Everyone*, 6 NW. J. TECH. & INTELL. PROP. 228, at *40 (2008).

56. Dibbell used the amount of money available through real money traders, individuals or companies that deal in the exchange of in world currency for real dollars, and factored in money that remained in world to come up with his figures. *Terra Nova: Recalculating the Global Virtual GDP, Yet Again*, http://terranova.blogs.com/terra_nova/2007/06/recalculating-t.html (last visited June 26, 2007).

57. Panama: \$23.4 Billion; Yemen: \$27.6 Billion; Cambodia \$10.3 Billion; Nepal \$12.6 Billion. Central Intelligence Agency – The World Fact Book - GDP (official exchange rate), <https://www.cia.gov/library/publications/the-world-factbook/fields/2195.html> (last visited Sept. 6, 2009).

C. *The EULA and Its Role in Property Rights*

The state of property rights in virtual worlds varies from game to game. There are no mainstream worlds, however, that allow complete ownership of virtual property.⁵⁸ Despite the game developers providing people with the capabilities to own and transfer property, nearly all virtual worlds restrict ownership in that property either using an End User License Agreement (“EULA”) or by their Terms of Service (“ToS”).⁵⁹

All players must agree to the EULA before playing in these worlds.⁶⁰ There are several variations on the theme but most contain terms similar to these from World of Warcraft:

BY INSTALLING, COPYING, OR OTHERWISE USING THE GAME (DEFINED BELOW), YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, YOU ARE NOT PERMITTED TO INSTALL, COPY, OR USE THE GAME...All 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) are owned or licensed by Blizzard... NEITHER BLIZZARD NOR ITS PARENT, SUBSIDIARIES OR AFFILIATES SHALL BE *LIABLE IN ANY WAY FOR ANY LOSS OR DAMAGE OF ANY KIND ARISING OUT OF THE GAME OR ANY USE OF THE GAME, INCLUDING WITHOUT LIMITATION LOSS OF DATA, LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER DAMAGES OR LOSSES. FURTHER, NEITHER BLIZZARD NOR ITS PARENT, SUBSIDIARIES OR AFFILIATES SHALL BE LIABLE IN ANY WAY FOR ANY LOSS OR DAMAGE TO PLAYER CHARACTERS, VIRTUAL GOODS (E.G., ARMOR, POTIONS, WEAPONS, ETC.) OR*

58. Andrew Jankowich, *Eulaw: The Complex Web of Corporate Rule-making in Virtual Worlds*, 8 TUL. J. TECH. & INTELL. PROP. 1, 44 (2006) (“Second Life, whose policies are among the least restrictive, reserves broad restrictions on content.”). *See also* Allen Chein, Note, *A Practical Look at Virtual Property*, 80 ST. JOHN’S L. REV. 1059, 1083 (2006).

59. Michael Meehan, *Virtual Property: Protecting Bits in Context*, 13 RICH. J.L. & TECH. 7, 12 (2006).

60. *Id.* *See also* Jankowich, *supra* note 58, at 9.

*CURRENCY, ACCOUNTS, STATISTICS, OR USER STANDINGS, RANKS, OR PROFILE INFORMATION STORED BY THE GAME AND/OR THE SERVICE.*⁶¹

The EULA makes it clear that Blizzard, the maker of World of Warcraft,⁶² maintains all property rights to all property within the game. In addition, it is not to be held liable for any loss of “currency” or property for any cause. Entropia Universe is a hybrid type of virtual world which is mission-based like World of Warcraft but also lets people create and purchase content.⁶³ Surely a game that allows users to create content would have less restrictive rules. However, Entropia, in fact, has a very similar EULA to that of World of Warcraft.⁶⁴ In addition, it states:

As part of Your interactions with the Entropia Universe, You may also, “construct”, “craft”, “compile”, “design”, “modify” or in any other way “create” Virtual Items. Notwithstanding any other language or context to the contrary, as used in this EULA and/or in the Entropia Universe in the context of the in-world creation of Virtual Items, You expressly acknowledge that You do not obtain any ownership right or interest in the Virtual Item You “create” but all such terms refer to the licensed right to use a certain feature of the Entropia Universe System or the Entropia Universe in accordance with the terms and conditions of this EULA. For clarity, MindArk and/or the respective MindArk’s Planet Partner retains all rights, title and interest to all Virtual Items You create in-world..⁶⁵

Therefore, not only are game developer components owned by the game developers, they also stake a claim on all content created by end users in the game and any content that the end users create outside of the game and then subsequently upload into the game. Second Life’s terms of service (“ToS”) are a bit different from Entropia’s or World of Warcraft’s,⁶⁶ which is to be expected for a world that claims that “once you’ve built something, you can easily begin selling it to other residents,

61. World of Warcraft, End User License Agreement, <http://www.worldofwarcraft.com/legal/eula.html> (last visited April 5, 2010) (emphasis added).

62. Meehan, *supra* note 59, at 12 n.45.

63. Steven Chung, Comment, *Real Taxation of Virtual Commerce*, 28 VA. TAX REV. 733, 738-46 (2009).

64. See Entropia Universe End User License Agreement, <https://account.entropiauniverse.com/legal/eula.xml> (last visited March 30, 2010).

65. *Id.*

66. See Second Life, Terms of Service, <http://secondlife.com/corporate/tos.php> (last visited February 19, 2010).

because you control the IP Rights of your creations.”⁶⁷ The terms of service do allow users to maintain intellectual property rights in their creations; however, there are some important limitations.⁶⁸ Linden Labs, the creator of Second Life, reserves several rights to themselves including:

[Y]ou automatically grant . . . to Linden Lab . . . the perpetual and irrevocable right to delete any or all of your Content from Linden Lab's servers and from the Service, whether intentionally or unintentionally, and for any reason or no reason, without any liability of any kind to you or any other party . . . You also understand and agree that by submitting your Content to any area of the Service, you automatically grant . . . to Linden Lab and to all other users of the Service a non-exclusive, worldwide, fully paid-up, transferable, irrevocable, royalty-free and perpetual License, under any and all patent rights you may have or obtain with respect to your Content, to use your Content for all purposes within the Service. You further agree that you will not make any claims against Linden Lab or against other users of the Service based on any allegations that any activities by either of the foregoing within the Service infringe your (or anyone else's) patent rights.⁶⁹

There seems to be some inconsistencies within the Second Life terms of service. Although on the one hand they allow you absolute right to “your” content, on the other they require you to irrevocably license it to them and every other user of Second Life for free.⁷⁰ In addition, Linden Labs has the right to delete your content for any reason.⁷¹ They go on to require what seems like a minor concession. Although you own the intellectual property of your creations, you do not own “any data Linden Labs stores on Linden Lab servers.”⁷² Considering the fact that any content you create is by definition merely data on the Linden servers, it is unclear what exactly is left for users. So it seems that even in the more IP-friendly virtual worlds all is not as free as it seems. The question that remains is whether or not this is good enough. Do players deserve more rights to the content that they have earned or created?

67. Second Life, Create Anything, <http://secondlife.com/whatis/create.php> (last visited July 27, 2008).

68. See Second Life, Terms of Service, *supra* note 66.

69. *Id.*

70. *See id.*

71. *Id.*

72. *Id.*

D. *Player Rights*

There are several theories circulating about players' rights.⁷³ However, the first thing to address is whether or not they are even needed or feasible. Providing players with ownership rights brings with it more than just protection of the property. Will players who become property owners choose to sell that property in the real world marketplace for real money? If so, does that matter? In addition, does providing players with ownership of property bring with it liability to virtual world owners for lost property? And finally, do virtual world owners become liable to property owners for property that is stolen or destroyed by other players of the game?

Would players really want to sell their hard-earned property if they were given property rights? If so, what's the big deal? The first question is quite easy to answer with a resounding "yes." Remember the previous GDP calculation from Dibbell?⁷⁴ About \$2 billion worth of that calculation is a result of Real Money Transfers (RMT), a process where people exchange real currency for virtual world currency outside of the rules of the game.⁷⁵ Sites like www.playerauctions.com allow virtual world players to sell anything from in-world currency to pieces of property to entire user accounts.⁷⁶ This is generally not allowed within most virtual worlds and is a bannable offense.⁷⁷ Nonetheless, it has become a multi-billion dollar a year market.⁷⁸ At least one game developer has decided to give in and profit from the growing market.⁷⁹ Sony's *Everquest II* game does not allow people to sell their property for real money—that is unless they sell it through Sony's auction house Station Exchange.⁸⁰ *Second Life*, on the other hand, freely allows out-

73. See, e.g., F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1, 44-50 (2004).

74. See *Terra Nova*, *supra* note 56.

75. *Id.*

76. See *PlayerAuctions.com*, <http://www.playerauctions.com/> (last visited July 28, 2008).

77. See Westbrook, *supra* note 35, at 804.

78. See *Terra Nova*, *supra* note 56.

79. See, e.g., *Second Life, Marketplace*, <http://secondlife.com/whatis/marketplace.php> (last visited July 27, 2008).

80. See Westbrook, *supra* note 35, at 787.

of-game exchange of property,⁸¹ and several sites are available to users interested in buying or selling products.⁸²

The second answer is more complicated. Although at first blush it seems as though virtual world owners shouldn't care about what happens between players, there are several factors that could cause them great concern. Some virtual worlds are subscription-based.⁸³ Virtual worlds like World of Warcraft and Everquest require players to pay subscription fees to play.⁸⁴ In these worlds, players play missions to build up experience and to gain in-world currency.⁸⁵ If a player were able to purchase his experience and property, he would spend less time playing, whereby subscription fee income would be reduced.⁸⁶ As a result, some creators have a financial incentive to ban sales. Sony, for its part, claims that its foray into the virtual property sales market was driven by customer service problems related to fraudulent sales.⁸⁷ A spokesman for Sony, however, did admit that the value of the market was one of the driving forces behind the decision.⁸⁸ Sony's claim of customer service issues brings us to the cost that developers must absorb as a result of the real-world sale of virtual property.

There are at least two expenses to consider when discussing virtual property sales. The first—as Sony admits—is the customer service expense.⁸⁹ As people lose money to fraud, the first people they may turn to are the game developers in the hope that they can recover their property. They do control the virtual world after all. Although there are no official estimates of the expense related to this type of complaint in a

81. See Second Life, Marketplace, <http://secondlife.com/whatis/marketplace.php> (last visited July 27, 2008). See also Wikipedia, *Virtual Economy*, http://en.wikipedia.org/wiki/Virtual_economy#Overview (last visited July 27, 2008).

82. See, e.g., Xstreet SL – Second Life Commerce, <https://www.xstreetsl.com/> (Xstreetsl.com was purchased by Linden Labs, the creators of Second Life on January 20, 2009) (last visited Sept. 6, 2009).

83. See, e.g., Jeff W. LeBlanc, *The Pursuit of Virtual Life, Liberty, and Happiness and Its Economic and Legal Recognition in the Real World*, 9 FLA. COASTAL L. REV. 255, 280 (2008).

84. *Id.* (noting that World of Warcraft requires a subscription fee). See also Robert E. Litan & Hal J. Singer, *Unintended Consequences of Net Neutrality Regulation*, 5 J. TELECOMM. & HIGH TECH. L. 533, 547 (2007) (noting that Everquest requires a monthly subscription fee).

85. See Westbrook, *supra* note 35, at 788.

86. *Id.*

87. *Id.* at 787.

88. Sony's spokesperson, Chris Kramer, claims that the potential market for Everquest property is upwards of \$200 million. Tom Leupold, *Spot on: Virtual Economies Break Out of Cyberspace*, GAMESPOT, May 6, 2005, http://www.gamespot.com/news/2005/05/06/news_6123701.html.

89. See Westbrook, *supra* note 35, at 787.

game like World of Warcraft, with 10 million users⁹⁰ it is easy to imagine the process being quite expensive.

The second is somewhat related. Because virtual worlds have ultimate control of the environment, the loss of property due to fraudulent sales could create liability to game developers.⁹¹ This is certainly a strong reason to preclude virtual property rights. However, there are other impacts to corporate profits as well.

There is certainly a concern from the virtual world developers that property rights will lead to liability, and it is clear from the EULAs and ToS that they are trying to protect themselves.⁹² Some argue that corporate profits and needs outweigh players' rights by making it impractical to provide players with rights.⁹³ Dan Lawrence, in his paper on the topic, discusses three reasons why rights to virtual property would cripple game developers.⁹⁴ The first is the fact that software development companies are pressured by the gaming community to continually evolve and grow the game in terms of both complexity and richness of the environment.⁹⁵ Over time, these changes can lead to damage or loss of players' property by either rendering it useless in game play or coding in such a way that the property will no longer work.⁹⁶ The second is the need to eventually create and release a new architecture to advance the environment beyond the ability of the older coding architecture.⁹⁷ Creating this wholesale change would generally not allow for easy porting of virtual property from one architecture to another, which would require players to start over in the new world.⁹⁸ Lastly, Lawrence argues that, for economic purposes, companies will eventually drop support for older worlds (i.e. shut them down) because it would be more profitable to move those resources to newer development efforts.⁹⁹ This would essentially create an end-of-life scenario causing all property accumulated in the old world to disappear. In order to allow companies the flexibility needed to advance their gaming platforms and

90. *Annual Report*, 2007 VIVENDI 15, available at <http://www.docstoc.com/docs/951811/Viviendi-Universal-2007-Annual-Report>.

91. Jamie J. Kayser, *The New New-World: Virtual Property and the End User License Agreement*, 27 LOY. L.A. ENT. L. REV. 59, 82-83 (2006-2007).

92. *Id.*

93. See Lawrence, *supra* note 1, at 516-17.

94. *Id.* at 515-21.

95. *Id.* at 516-18.

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.* at 518-19.

satisfy their customers, Lawrence argues players' rights in property cannot be supported and are not needed.¹⁰⁰

A final argument against property rights brings all of these arguments together and creates what could be called the "so what" factor. Because virtual worlds are generally created by corporations with a profit motive, people will constantly require more and better upgrades and backwards compatibility may not be financially feasible as these upgrades roll out, what is the value of virtual property rights? Lawrence argues that property rights in virtual worlds are pointless because virtual property will not live on in isolation from the world in which it is created.¹⁰¹ The property itself can only survive as long as the company that built the virtual world "keeps the lights on."¹⁰² Providing property rights then becomes either complicated—companies will be forced to either pay damages when they want to bring a system down or leave it up at great cost—or pointless—if property rights are only as good as long as the virtual world exists. What stops virtual world developers from upgrading every year or two just to keep property rights in check? Despite these shortcomings, there are those who believe that strong property rights are needed to make these worlds thrive.¹⁰³

IV. POPULAR PROPERTY RIGHTS THEORIES

Several theories exist as to why property rights should be enforced. These vary from analogies to real property, to constitutional rights, all the way to the same economic arguments that were raised against property rights for gamers.

A. *The Lockean Labor Theory*

Dan Hunter and Gregory Lastowka have provided rationale for several theories of virtual property rights.¹⁰⁴ Among these theories is the Lockean "labor-desert theory," which gives property rights to "those who labor to distinguish that which is appropriated from the common of natural resources."¹⁰⁵ Therefore, in disregard to EULAs and ToS, property rights of virtual property, according to Lockean supporters,

100. *Id.* at 524–25.

101. *Id.* at 515.

102. *Id.*

103. *See, e.g.,* Westbrook, *supra* note 35, at 811–12.

104. *See generally* Lastowka & Hunter, *supra* note 73.

105. Steven J. Horowitz, Note, *Competing Lockean Claims to Virtual Property*, 20 HARV. J.L. & TECH. 443, 451 (2007). *See also* Lastowka & Hunter, *supra* note 73, at 46–48.

should go to those who put the most work into creating property.¹⁰⁶ In virtual worlds, this may become useful as between different users¹⁰⁷ but becomes complicated as against the virtual world creators. The “natural resources” that the users use to make their virtual property are created initially by the virtual world developers and provided under their licensing agreements.¹⁰⁸ Therefore, a Lockean-based claim by players against virtual world owners would lie on the belief that the virtual world players put more “work” into creating the virtual property than the virtual world developers put into creating the raw material.¹⁰⁹ What then of worlds where users cannot create their own property?

In virtual worlds where property is “found” or won in battle, the argument is that the person who finds this property left in its natural state has labored to create utility where there was none before.¹¹⁰ Having said that, labor does not require the creation of property.¹¹¹ Therefore, the effort of gathering property in worlds where property cannot be created should not be discounted when considering the labor input in virtual property.¹¹² The issue in practice is that virtual world creators have strong competing claims of property in these types of virtual worlds in any view of the labor theory.¹¹³ Defeating the EULA using Lockean claims to property, especially in worlds where all or most content is created by virtual world owners, would be difficult.¹¹⁴

106. See Lastowka & Hunter, *supra* note 73, at 46-47.

107. Westbrook describes how competing claims between users could be decided on a basis of who put in more time or money to acquire the object. See Westbrook, *supra* note 35, at 793.

108. See Horowitz, *supra* note 105, at 452-53.

109. Lastowka and Hunter argue that the ownership rights of players would be in the items that they created and not in the virtual world as a whole. The argument is persuasive because, as they describe in their example, the vast majority of work in an item created by an avatar is done by the player in aggregating and shaping virtual resources into a good. See Lastowka & Hunter, *supra* note 73, at 47.

110. See Horowitz, *supra* note 105, at 454.

111. *Id.*

112. A person may need to spend upwards of 350 hours to move to the highest level in the game and that the effort required to further gather property may be significant. David P. Sheldon, Comment, *Claiming Ownership, but Getting Owned: Contractual Limitations on Asserting Property Interests in Virtual Goods*, 54 UCLA L. REV. 751, 761 (2007). Thus, one can suppose a situation where moving to higher levels of a game and/or collecting property can be even more time consuming than that of a user of a virtual world where content can be created by users.

113. See Horowitz, *supra* note 105, at 457.

114. Horowitz argues that virtual world developers are most likely to win an argument based strictly on labor theory. See Horowitz, *supra* note 105, at 454-57. Horowitz concludes that “[f]or the vast majority of products in virtual worlds, operators have a stronger Lockean claim to virtual property rights than users have.” *Id.* at 457.

This difficulty arises in the stance by virtual world creators that virtual property is not a wild resource, but a resource created by them.¹¹⁵ The fear is that user claims to virtual property would be akin to staking claims in property that is bigger than what they are entitled.¹¹⁶ This is somewhat simplistic but in real virtual world terms there are more important issues that the Lockean theory alone cannot resolve. The rules and allowable norms of most virtual worlds allow behavior that is intolerable in the real world. Some of the enjoyable aspects of virtual world games, such as World of Warcraft, are the abilities of users to steal from or kill other players and as a result gain their property. Virtual worlds therefore require the ability to recognize property rights that are against Lockean and even traditional concepts of property.

B. *Personality Theory*

Hunter and Lastowka also describe the Hegel Personality Theory of Property as a potential foundation for property rights.¹¹⁷ Personality Theory is based on the idea that property rights are tied to personality and that, in some ways, a person is defined by her property.¹¹⁸ What makes Personality Theory a good fit for virtual worlds is that the measure of property value is not linked to real-world value, but rather to the intrinsic value that an item acquires by virtue of a person's emotional attachment to it.¹¹⁹ Virtual worlds become an ideal backdrop for personality theory since players' avatars normally start out on equal footing and must differentiate themselves either on the basis of work to customize their avatars¹²⁰ or the acquisition of property such as clothes or weapons.¹²¹ Ultimately, the question to be decided is whether or not property in these virtual worlds becomes such a part of the user that it becomes a part of his personality.¹²² Once again, the arguments favor

115. See Westbrook, *supra* note 35, at 794.

116. The argument against the Lockean Theory is put forth in a simple example: "If I own a can of tomato juice and spill it into the sea so that its molecules mingle . . . do I thereby come to own the sea?" See Lastowka & Hunter, *supra* note 73, at 47.

117. See Lastowka & Hunter, *supra* note 73, at 48.

118. See Westbrook, *supra* note 35, at 797-98. See also Lastowka & Hunter, *supra* note 73, at 48.

119. See Lastowka & Hunter, *supra* note 73, at 48.

120. Most virtual worlds allow people to customize the appearance of their avatars using settings of various complexity levels. Benjamin Duranske, *Coming Soon to a 3D Printer Near You: Mixed Reality Intellectual Property Infringement*, VIRTUALLY BLIND, June 30, 2008, <http://virtuallyblind.com/2008/06/30/mixed-reality-copyright/> (describing the ability in many games to customize avatars).

121. See Westbrook, *supra* note 35, at 799.

122. *Id.* at 797-98.

worlds that allow user-created content.¹²³ In worlds where content creation is not allowed, the consensus is that the strongest argument players have under Personality Theory is ownership of the avatars themselves.¹²⁴ Therefore, under the Personality Theory, virtual property would be protected in the same way that real property is protected.

One issue that the personality theory does not support is that of the Personality Theory of game developers. Game developers do, after all, develop the game in the first place. Just like the players in the virtual world, the virtual world developers become emotionally attached to the pieces of the world that they create. They have created the world and have given rise to all of the building blocks of virtual property. Do not each of these building blocks become a part of the original developer? Does the aggregation of building blocks into some new piece of property dilute the rights of the original developers? It could be argued that the amount of work that is required to develop the underlying architecture is so great that the possibility of a single individual using that architecture would not be able to create a great enough attachment to that property so as to dilute the developer's initial emotional connection.

C. *Utilitarianism*

One other common theory of virtual property rights put forth by Hunter and Lastowka is that of utilitarianism.¹²⁵ The goal of utilitarianism is to create the greatest good for the greatest number of people.¹²⁶ The utilitarian argument has been used successfully to create intellectual property rights which are themselves intangible.¹²⁷ The question in the case of virtual worlds is whether property rights as a whole would provide the greatest good to the greatest number of people. Arguments for utilitarianism are based on two separate goals. The first is the protection of property that has been amassed via billions of collective hours of game play.¹²⁸ The second is the theory that creating property rights in virtual worlds would move the sale of virtual property

123. Reuveni believes that by creating content the users put a part of themselves into the property and, therefore, have a stronger argument for property rights under the personality theory. Erez Reuveni, *On Virtual Worlds: Copyright and Contract Law at the Dawn of the Virtual Age*, 82 IND. L.J. 261, 278-79 (2007).

124. See Westbrook, *supra* note 35, at 799.

125. See Lastowka & Hunter, *supra* note 73, at 44.

126. *Id.*

127. See Westbrook, *supra* note 35, at 795.

128. *Id.* at 796. The gain to society from protecting virtual property rights may seem small, but when considered in the context of billions of hours of game play, the gain to society could be enormous. *Id.*

from the gray market that it currently enjoys to a pure black market, thereby creating a set of real world protections for those seeking relief against those who would swindle legitimate players.¹²⁹ These would certainly be positive attributes worthy of protection for players, but it is questionable whether the impact of full property rights on virtual world developers would truly create a positive experience for all players.¹³⁰ For any of these theories, the question then is, “Would the additional burden of property rights on game developers eliminate the incentive to create and support virtual worlds?”

Hunter and Lastroka do provide at least two reasons for why utilitarianism may not justify the imposition of property rights on virtual property. One of these is the application of utilitarianism to intellectual property. Patent and copyright laws, for example, provide property rights to the creators of IP, but they do not get unlimited rights.¹³¹ Both patent and copyright laws provide some protection, but even that protection is bound by time limits and limits to the property rights as well. Copyright law has a large carve out for fair use.¹³² Patent is also limited in that you can only get a patent under certain circumstances.¹³³ Once the time limits of the patent and copyright expire, these rights evaporate.¹³⁴

The second reason is that providing property rights to some users automatically excludes other users from accessing that property.¹³⁵ Therefore, based on utilitarian theory, the greatest good may actually come from allowing free access to all goods.¹³⁶ Hunter and Lastowka dismiss this out of hand by stating that the utilitarian argument is still valid for justifying property rights and leave the issue of equitable

129. *Id.*

130. Westbrook argues that virtual world developers seek to maximize profit and limit liability both of which may be hampered by virtual property rights. *Id.* at 797.

131. See Lastowka & Hunter, *supra* note 73, at 45.

132. See 17 U.S.C.A. §107 (West 2009) (“Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an *infringement of copyright.*”) (emphasis added).

133. See 35 U.S.C.A. § 101 (West 2009) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor[e], subject to the conditions and requirements of this title.”).

134. See, e.g., 17 U.S.C.A. § 302 (West 2009) (discussing the copyright term for works created on or after January 1, 1978). See also, e.g., 35 U.S.C.A. § 154 (West 2009) (noting a twenty-year patent term for utility patents).

135. See Lastowka & Hunter, *supra* note 73, at 45.

136. *Id.*

distribution for a separate discussion.¹³⁷ The real difficulty in using utilitarianism to justify property rights is that, in a world where nothing exists without someone's hand creating it, creating utility for one group automatically reduces the utility of another.¹³⁸

When utilities cannot be balanced, who should the scales favor? The argument becomes circular very quickly. Providing more utility to the players creates more liability for game developers, which may eventually lead to reduced functionality of the game and even to it being shut down.¹³⁹ Tipping utility towards the game developers may alienate players leading to lost revenue and eventually the world shutting down.¹⁴⁰ Clearly, there must be a better way.

One proponent of property rights for players is Raph Koster.¹⁴¹ What makes Koster an interesting theorist in the virtual world space is that he is a virtual world game developer.¹⁴² Therefore, his support of property rights in virtual worlds is counter to the expectations and beliefs of his employers.¹⁴³ Koster's theory of property rights is unique in that he feels property rights should develop as a result of virtual world pressure rather than from having real world legal influences.¹⁴⁴ His ideas allow virtual worlds to grow as independent countries, each developing its own norms and eventually demanding and receiving

137. "As a result, this argument goes, we should reject virtual property rights on utilitarian grounds. However, this objection is misplaced: we are using the utility function to provide a justification for the creation of property interests, not for the allocation of those interests. Let us bracket the allocation issue for the moment and return to it after considering the effect of the other property theories." *Id.* at 45-46.

138. *Id.*

139. See Westbrook, *supra* note 35, at 797 ("[D]evelopers may lose some of the profitability of their virtual worlds by losing their monopoly on sales of in-games items for cash."). See also Erez Reuveni, *On Virtual Worlds: Copyright and Contract Law at the Dawn of the Virtual Age*, 82 *IND. L.J.* 261, 286 (2007).

140. Naturally, alienating one's user base makes the members of the user base more inclined to leave one's virtual world, whereby one is likely to lose revenue, which could ultimately lead to the virtual world closing.

141. See Raph Koster, *Declaring the Rights of Players*, RAPH KOSTER'S WEBSITE, Aug. 27, 2000, <http://www.raphkoster.com/gaming/playerrights.shtml>.

142. Koster parcels out some rights for players: "The aim of virtual communities is the common good of its citizenry, from which arise the rights of avatars. Foremost among these rights is the right to be treated as people and not as disembodied, meaningless, soulless puppets. *Inherent in this right are therefore the natural and inalienable rights of man. These rights are liberty, property, security, and resistance to oppression.*" *Id.* (emphasis added).

143. *Id.*

144. *Id.*

rights as many countries have done in the real world.¹⁴⁵ Koster goes on to propose a virtual bill of rights specifically tailored to suit virtual worlds.¹⁴⁶ These virtual rights in some respects echo the real world freedom that we know in the real world, but the rights of the ruling class (system administrators) are not completely given away.¹⁴⁷ Koster realizes that administrators must maintain a certain level of control and requires only that they lay out the rules of the game and administer them equally and fairly to all.¹⁴⁸ It is clear that there is an abundance of property rights theories floating around, but there are also some practical applications of virtual property rights which may shed some light on what may or may not be applicable.

These are strong reasons for granting virtual property rights. They, like many other ideas related to virtual property, are theoretical analyses which try to create an analog between virtual property rights and real property rights. These theories illustrate, through various methods, justifications and mechanisms for granting rights to virtual property owners. What they lack, however, is practical real-world applications, some of which follow below.

145. Koster argues that, as was the case with the French Revolution, people's rights only begin to exist when the people themselves feel they have the right. At that point, the populace's perceptions turn around and, in essence, the citizens grant themselves rights and fight for them. *Id.*

146. *Id.*

147. *See id.*

148. Koster preserves administrative rights but with limits:

The principle of all sovereignty in a virtual space resides in the inalterable fact that somewhere there resides an individual who controls the hardware on which the virtual space is running, and the software with which it is created, and the database which makes up its existence. However, the body populace has the right to know and demand the enforcement of the standards by which this individual uses this power over the community, as authority must proceed from the community; a community that does not know the standards by which the administrators use their power is a community which permits its administrators to have no standards, and is therefore a community abetting in tyranny.

Id. Koster requires equitable treatment of all players and warns against abuse of power:

Avatars are created free and equal in rights. Special powers or privileges shall be founded solely on the common good, and not based on whim, favoritism, nepotism, or the caprice of those who hold power. Those who act as ordinary avatars within the space shall all have only the rights of normal avatars.

Id.

V. CURRENT PROPOSALS FOR PROPERTY PROTECTION AND LAWS

A. *Code as Law*

If game developers can create the worlds and make the rules, why not just allow the developers to encode all of the rules within the game code itself? Larry Lessig has argued that private regulation can take over where public regulation is not effective.¹⁴⁹ Lessig suggests that private regulation by way of code is a stronger and more flexible regulator than the government.¹⁵⁰ In virtual worlds, nothing exists outside of what the code allows. The modification of software code is also fast enough to keep up with the pace of change, which tends to occur in a new environment.¹⁵¹ As a result, it makes some sense that turning to code would solve the problems of virtual property. There are, however, several faults with using code alone to solve the virtual property problem.

The most obvious is that the people who control the code, the game developers, have already shown through their EULAs that they are not interested in recognizing property rights for players.¹⁵² There is no reason to believe that allowing the code to rule the world will solve this problem.

The second and most significant problem is the fact that even the most carefully written code can have bugs.¹⁵³ A direct result of these bugs is that even the best intentioned code may contain serious flaws that a user could exploit.¹⁵⁴ If one were to follow the precept that the codes embody all of the property right rules, then even a serious bug would not prevent unauthorized theft of the property. Imagining a real

149. "The lesson again is that the demand for private regulation increases in this context when public regulation fails." Lawrence Lessig, *Law Regulating Code Regulating Law*, 35 LOY. U. CHI. L.J. 1, 13 (2003).

150. "[T]he regulatory power of code is much greater and more plastic in cyberspace . . ." *Id.*

151. See Cheryl B. Preston, *Zoning the Internet: A New Approach to Protecting Children Online*, 2007 B.Y.U. L. REV. 1417, 1425 (2007) ("[T]he Court is willing to rely on private filter companies to create software . . . that keeps with the rapid innovation in code and the massive influx of new Internet pages . . .").

152. See, e.g., World of Warcraft, User License Agreement, <http://www.worldofwarcraft.com/legal/eula.html> (last visited Feb. 2, 2007).

153. Elizabeth MacDonald, *Bugs and Breaches*, 13 INT'L J.L. & INFO. TECH. 118, 127-28 (2005) ("[E]ven the best designed and tested programs are liable to cough totally unexpected data.").

154. Micah Schwalb, *Exploit Derivatives & National Security*, 9 YALE J.L. & TECH. 162, 168-69 (2007) ("A vendor must identify and fix thousands of bugs, whereas a computer attacker must only identify a single exploit to bring down an information system, let alone an entire network.").

world scenario under the same situation shows just how preposterous this idea could be. Imagine a world where every time the criminal code was changed there was a risk that a “bug” code would be introduced that would allow various thefts to go unpunished. This would be a strange world indeed. Using code alone to protect or enforce property rights, although appealing, leaves too much uncertainty to be desirable.

B. Virtual Property as Intangible Real Property

One notion put forth is to treat virtual property the way one would treat intangible property.¹⁵⁵ The Restatement of Torts describes the conversion of intangible property and requires a document where the intangible rights are merged.¹⁵⁶ State courts vary on how intangible property is treated, but California recognizes intangible property rights without the strict merger requirement, and New York’s interpretation does not require a physical document.¹⁵⁷ Most notable in the New York decision was that the court said in dicta that “the tort of conversion had to keep pace with the contemporary realities of widespread computer use,” therefore leaving open the possibility of protection for virtual property.¹⁵⁸ These decisions are on the fringe, and it will likely be a long time before these types of property rights stretch into and influence virtual worlds. Other approaches may be more optimal. Even if virtual property were to be considered protectable as intangible property, there are other hurdles that may be difficult to overcome.

155. See Chein, *supra* note 58, at 1062.

156. The restatement of torts states:

(1) Where there is conversion of a document in which intangible rights are merged, the damages include the value of such rights.

(2) One who effectively prevents the exercise of intangible rights of the kind customarily merged in a document is subject to a liability similar to that for conversion, even though the document is not itself converted.

RESTATEMENT (SECOND) OF TORTS § 242 (1965).

157. A Ninth Circuit case where a dispute over the improper transfer of a domain name resulted in a finding of conversion of intangible property even where the property rights were not documented. *Kremen v. Cohen*, 337 F.3d 1024, 1030–34 (9th Cir. 2003). A recent New York case held that the “electronic records . . . indistinguishable from printed documents - [were] subject to a claim for conversion. . . .” *Thyoff v. Nationwide Mut. Ins. Co.*, 8 N.Y.3d 283, 290-93, (2007).

158. The court did note that “[w]e cannot conceive of any reason in law or logic why this process of virtual creation should be treated any differently from production by pen on paper or quill on parchment” which may be interpreted to mean that a digital document of rights is needed rather than a piece of paper. The opinion however leaves room for other types of property as the “society’s growing dependence on intangibles” moves into the virtual world. *Id.* at 292.

Even in the most liberal court decision on intangible property, the requirements would be difficult to meet with virtual property.¹⁵⁹ Two requirements in particular would make it difficult to protect property against theft or destruction by both the virtual world developer and other players: the requirement of exclusive possession or control and, more importantly, the requirement of establishing a legitimate claim to exclusivity.¹⁶⁰ Even the most lenient EULA or ToS, that of Second Life, requires unlimited rights be distributed to Linden Labs and all of the other players.¹⁶¹ In addition, Linden Labs reserves the right to delete any property at any time.¹⁶² It would be difficult to imagine a court, even in California, attributing virtual property as intangible property and considering the EULA and ToS requirements, which limit a legitimate claim to exclusivity.

C. *Current Legal Protection*

As discussed above, the history of U.S. laws on virtual property is short and limited.¹⁶³ The only existing statute to be considered a potential fit for virtual property protection is the Computer Fraud and Abuse Act (CFAA).¹⁶⁴ The CFAA is designed to prevent unauthorized breaches of government and financial institution computer systems and networks.¹⁶⁵ However, the statute also provides protection against an intrusion of a computer with the intent to defraud where the perpetrator “obtains anything of value.”¹⁶⁶ There has been some debate as to whether or not the statute protects someone with property on a computer that they do not own.¹⁶⁷ The relevant sections of the statute appear to be

159. The *Kremen* court held that in order for electronic property to be considered to fall within the intangible property domain, it must follow specific guidelines: “First, there must be an interest capable of precise definition; second, it must be capable of exclusive possession or control; and third, the putative owner must have established a legitimate claim to exclusivity.” See Chein, *supra* note 58, at 1075.

160. *Id.*

161. See Second Life, Terms of Service, *supra* note 66.

162. *Id.*

163. “Bragg v. Linden Research is the first virtual-property-related case to result in a published opinion.” Lawrence, *supra* note 1, at 528.

164. See Lawrence, *supra* note 1, at 532.

165. See generally 18 U.S.C.A. § 1030 (West 2009).

166. Whoever “knowingly and with intent to defraud, accesses a protected computer without authorization, or exceeds authorized access, and by means of such conduct furthers the intended fraud and obtains anything of value....shall be punished” 18 U.S.C.A. § 1030(a)(4) (West 2009).

167. See Lawrence, *supra* note 1, at 533.

either §1030(a)(2), §1030(a)(4) or §1030(a)(5).¹⁶⁸ Some have argued that only the computer system owner has rights to relief under the statute, while others do not read this restriction into the statute.¹⁶⁹ Even if the statute applies to system users, there are serious restrictions on the statute that make it unsuitable for the protection of virtual property. Section 1030(c)(4)(A)(i) of the statute limits civil damages to a \$5000 per year minimum damage requirement, regardless of which part of the statute was violated.¹⁷⁰ With regards to §1030(a)(5), the \$5000 damage limitation was lifted as a result of recent legislation; however, there is a question as to whether or not that section of the statute applies to theft at all.¹⁷¹ Even though in aggregate there is a tremendous amount of money in virtual worlds, the low monetary value of the average individual virtual property item makes it difficult to see the utility of the statute.¹⁷² Considering the current virtual property climate, it is unlikely that the FBI will investigate anything but a major loss of property, further limiting the statute's value relative to virtual worlds.¹⁷³ The statute also provides no help against loss of property by the virtual world owners since they have full authority.¹⁷⁴

Statutory relief is obviously limited, but that is not the only place to turn for legal interpretation of virtual property rights. In May 2007, Marc Bragg sued Linden Labs, the creators of the Second Life virtual world, for illegally confiscating his virtual property and locking his

168. 18 U.S.C.A. § 1030(a)(2) makes it criminal to “[access] a computer without authorization or exceeds authorized access, and thereby obtains information from any protected computer.” 18 U.S.C.A. § 1030(a)(4) makes it criminal to “knowingly and with the intent to defraud, accesses a protected computer” and “furthers the intended fraud.” 18 U.S.C.A. § 1030(a)(5)(A) makes it a crime if someone “knowingly causes the transmission of a program . . . or command . . . and as a result of such conduct, intentionally causes damage without authorization.” See also Lawrence, *supra* note 1, at 535-40.

169. Lawrence claims that the CFAA has already been used in virtual property disputes with regard to an e-mail dispute. See Lawrence, *supra* note 1, at 533.

170. 18 U.S.C.A. § 1030(c)(4)(A)(i) does allow for damages for injuries that are less than \$5000 in situations where there is a physical injury, a threat to health or safety, where medical records are effected, and where government systems are involved. However, these situations are not likely to occur in virtual worlds, at least in their current incarnations.

171. In *Cenveo Corp. v. CelumSolutions Software GMBH & Co KG*, the court held that, in accordance with 18 U.S.C.A. § 1030(e)(11), the civil liability relief is limited to “require[] damages caused by an interruption of service.” 504 F.Supp.2d 574, 581 n.6 (2007). See also 18 U.S.C.A. § 1030(a)(5)(b)(i). It should be noted that the statute has been amended since *Cenovo*. However, the amendments have not impacted the thrust of the court's argument.

172. See Lawrence, *supra* note 1, at 538-39.

173. F. Gregory Lastowka & Dan Hunter, *Virtual Crimes*, 49 N.Y.L. SCH. L. REV. 293, 314 (2004/2005).

174. See 18 U.S.C.A. § 1030 (West 2009).

account.¹⁷⁵ The case was ultimately settled out of court leaving the question of virtual property rights in the same flux it was in before the case began.¹⁷⁶ Another case related to virtual property, *Eros, LLC v. Simon*, also settled before being decided, thereby eliminating any chance to create precedent.¹⁷⁷ More recently *Eros, LLC* filed a suit against Linden Labs for allegedly being complicit in the copyright violations of the players of *Second Life*.¹⁷⁸ The case is currently pending, but if it does go to trial, some of these questions will certainly be addressed. Although American courts and statutes have limited answers to the question of virtual property, a look overseas may provide some direction.

D. Foreign Legal History

In 2003, a Chinese player sued the game developer Artic Snow for allowing a loophole in the game code which allowed another player to steal some of his virtual property.¹⁷⁹ Despite the fact that the game developer did not recognize player property rights, the player was awarded the approximately \$1200 from the game developer.¹⁸⁰ The court held that the player's work at earning the property created rights in that property.¹⁸¹ In 2004, Chinese police began actively pursuing virtual property theft, including the prosecution of two teens.¹⁸² China does have a valid reason for strict enforcement of virtual property rights as a number of Chinese citizens are making a sizeable income in virtual property trade.¹⁸³

175. *Bragg v. Linden Research, Inc.*, 487 F. Supp. 2d 593 (2007).

176. Sean F. Kane, *Virtually Lawless: Legal & Economic Issues in Virtual Worlds*, THE COMPUTER AND INTERNET LAWYER, June 2008, at 13, 15.

177. *Id.* (discussing *Eros, LLC v. Simon*, No. 1:07-CV-0447.30 (E.D. N.Y. October 24, 2007)).

178. *Eros LLC v. Linden Labs*, No. 4:09-CV-04269-PJH (N.D. Cal. September 15, 2009).

179. Li Hongchen was a player of the virtual world "Red Moon." Jeff W. LeBlanc, *The Pursuit of Virtual Life, Liberty, and Happiness and Its Economic and Legal Recognition in the Real World*, 9 FL. COASTAL L. REV. 255, 282 (2008).

180. *Id.* at 282, n.158.

181. *Id.* at 283.

182. Joshua A.T. Fairfield, *Virtual Property*, 85 B.U.L. REV. 1047, 1085 (2005).

183. *Id.* at 1085 (estimating that 1000 professional sellers make a living selling virtual property in 2004 and 5000 as producers of virtual property; also estimating the underground market as 1 billion RMT). "In late 2004, government and industry specialists convened a conference in Shanghai to discuss statutes for the regulation and protection of virtual property. Kou Xiaowei, the Deputy Director-General of the Audio, Visual, Electronic, and Internet Publishing Department under the General Administration of Press and Publication, had publicly pressed for protection of virtual property as a means of incentivizing investment in Chinese-based virtual worlds." *Id.* at 1086.

Taiwan has had a law to protect electronic record theft since 1997.¹⁸⁴ The Taiwanese Ministry of Justice, in 2001, announced that virtual objects are indeed property making it a crime to steal virtual property.¹⁸⁵ The law created the same rights in virtual property that people would have in real property, explicitly providing rights to players of virtual worlds in their own property even over the virtual world owners.¹⁸⁶ The law requires a filing of a police report before prosecution, and hundreds of cases have been brought against virtual property holders in that country.¹⁸⁷

South Korea is believed to have more than 60 percent of the population of the country logging into virtual worlds.¹⁸⁸ The police enforcement of virtual property theft is fierce.¹⁸⁹ Unlike Taiwan, South Korea has no explicit virtual property rights and, as a result, there are a large number of suits between virtual world users and world creators with consumer protection claims and suits against the sale of virtual property by the game developers.¹⁹⁰ Asian laws create an idea of what can be expected if more explicit laws were created in the US, but the question is whether laws are the best way to handle the property rights issues with which game players are face.

VI. WHAT IS THE ANSWER?

Any proposed virtual property regime cannot exist in a vacuum. There are multiple types of property rights that need to be addressed. First, the protection of property rights is needed by virtual property owners to protect their property from theft by other players, as well as loss due to negligence or confiscation by virtual world developers. In addition, these protections for players will create a host of concerns, both practical and financial, for virtual world developers. Virtual worlds are also quite complicated. There are various rules and norms within games that make protection of virtual property different depending on the world. Some worlds allow theft among players; in others, theft is

184. *Id.*

185. *Id.*

186. *Id.* at 1087.

187. *Id.*

188. *Id.* at 1087-88.

189. *Id.* at 1088 (noting that South Korean police received 22,000 criminal complaints and more than 10,000 arrested teenagers over one year).

190. *Id.*

strictly forbidden.¹⁹¹ These complexities must be accommodated in any virtual property regime. Finally, the legal system has the perennial issue of crowded dockets, and adding the additional concerns of the complexities of virtual worlds will be too difficult and cumbersome for the legal system to handle. All of these concerns must be addressed for any property rights regime to succeed.

A. *Practical Considerations*

There have been two types of property protection discussed throughout this note: protection of property against virtual world owners and protection of property against theft by other players. Various factors make protection of players from each other more complicated than is first apparent. Some virtual worlds, such as World of Warcraft, actually allow for theft as part of the game play.¹⁹² Therefore, any property protection must allow for theft or other crimes that are part of the rules of the game. In addition, the game itself has rules written into the code.¹⁹³

Much as the laws of physics rule our everyday experiences, the rules of the code limit what is possible in the game.¹⁹⁴ The rules of code, for example, allow for theft of virtual items in World of Warcraft but prevent it in Second Life. Unlike physics, the rules in code are not constant. Code releases and unanticipated bugs within the code create an ever shifting array of virtual laws whenever a new release is pushed out to players.¹⁹⁵ As a result, any property protection should look first to the rules coded into of the game itself, but also be flexible enough to counter any unintended bugs that may create exploits. Although the rules of the game and the rules in the code work together to protect players from direct unapproved loss of property, there is still a need for protection of property due to fraud or coding exploits. In addition, because the game developers dictate the rules of the game and are solely

191. See Ryan Vacca, *Viewing Virtual Property Ownership Through the Lens of Innovation*, 76 TENN. L. REV. 33, 50 n.125 (2008).

192. Lastowka & Hunter, *supra* note 173, at 305. See also Vacca, *supra* note 191, at 50 n.125.

193. Marc Jonathan Blitz, *A First Amendment for Second Life: What Virtual Worlds Mean for the Law of Video Games*, 11 VAND. J. ENT. & TECH. L. 779, 815-16 (2009). See also Julian Dibbell, *Owned! Intellectual Property in the Age of eBayers, Gold Farmers, and Other Enemies of the Virtual State Or, How I Learned to Stop Worrying and Love the End-User License Agreement*, in *THE STATE OF PLAY: LAWS, GAMES, AND VIRTUAL WORLDS* 143 (Jack M. Balkin & Beth Simone Noveck eds., 2006).

194. See Blitz, *supra* note 193, at 815-16.

195. Lawrence, *supra* note 1, at 524.

responsible for the creation and maintenance of game code and virtual assets, there is little protection for gamers using those features alone.

In order to protect players' property rights fully, players must be protected against virtual world developers as well. This Article previously mentioned several reasons why virtual world developers are motivated to eliminate or limit property rights. Any property rights regime must support any legitimate developers' concerns. The first concern to tackle is the expense related to allowing players—who have property rights, including alienability—to sell their property.

One fear was loss of subscription revenue for players that would be able to increase their avatar's level by spending money rather than spending the time it normally takes to get leveled up the typical (and more time-consuming) way. The underlying assumption is that customers will quickly level up and then bore of the game and stop paying the subscription.¹⁹⁶ As a result of this, virtual world developers will face a choice of either losing the subscription revenue or creating ever more complex and difficult "levels" to keep players interested.¹⁹⁷ This assumption, however, is misguided. Players who start out at the bottom and have to work their way up are more likely to get bored of playing relatively easy levels until they are strong enough to fight bigger battles and possibly frustrated by their vulnerability and inability to play with their more established friends.¹⁹⁸ The expense related to developing more complex levels is also a bit misleading. Virtual world developers must bear the expense of creating more complex worlds regardless of whether or not players sell their advanced property and/or avatars. Existing advanced players will require new levels to keep their interest in the game regardless of how they got to that level. Therefore, although property sales may somewhat increase the pace of level development, it is unlikely to increase the expense so dramatically so as to defeat property rights for players. The other two expenses related to property rights—customer service expense and fear of liability for third party losses—are legitimate concerns that must be considered when creating a virtual property rights regime.

The need to continue to grow profits by creating ever more complex and advanced worlds is in part related to the insistence of gamers for ever increasing technical sophistication. This push can put strains on existing infrastructures requiring, in essence, wholesale

196. Westbrook, *supra* note 35, at 788.

197. *Id.* at 789.

198. *Id.* at 788.

redevelopment of the underlying technological infrastructure. One such example is Sony's Everquest which is now running two completely separate environments, one for the original Everquest virtual world and one for Everquest II, its newer implementation.¹⁹⁹ Several concerns have been voiced about the implications of virtual property rights on the ability of game developers to advance their technologies.²⁰⁰

It is certain that with each upgrade comes additional risk. There is a risk of data or property loss due to bugs in the upgrade and potential liability for the loss.²⁰¹ There is the risk that upgrades will render some property incompatible and therefore useless, once again creating potential liability.²⁰² There is also the expense of maintaining older versions of the virtual worlds, which will be needed in order to ensure that people's rights to the property in the old world aren't lost.²⁰³ Therefore, the critics claim, giving property rights to players will greatly inhibit the growth in terms of technology for virtual worlds.²⁰⁴ There are other businesses, however, that must face these issues on a regular basis and are therefore forced to balance equities between progress and property protection. Banks are the best example of this.

The concept of banking has been around for thousands of years and has therefore seen countless technological upgrades. The banking process has moved from paper to computers, from closed internal systems to systems that support direct telephonic access, and, more recently, to more and more sophisticated web-based systems. Each of these architectural leaps required a large shift in technology; in some instances, complete architectural restructuring was required. The fact that it is difficult for a bank to move customer accounts from one system to another does not preclude them from doing so. In fact, the tolerance for loss in the banking system is zero. Therefore, the banks themselves indemnify customers ensuring that they will have a safe transition. However, one does not have to go to the banking industry to see these "safe" upgrades in action.

Linden Labs' Second Life is an example of a virtual world where technical infrastructure change is a norm. Over the last few years it has introduced several new innovations without the necessity of leaving a path of deprecated functionality in its wake. One such example in which

199. Lawrence, *supra* note 1, at 519-20.

200. *Id.* at 515-21.

201. *Id.* at 523.

202. *Id.* at 517-20.

203. *Id.* at 518-20.

204. *Id.* at 524.

Linden Labs has dramatically changed the environment for players is through its improved rendering architecture, which created a dramatic improvement in the graphical interface.²⁰⁵ Although the upgrades have not been without hiccups, the vast majority of property has been preserved because each improvement has backward compatibility with existing property. Although the process is admittedly more time consuming and a bit more expensive, it is not so expensive as to render property rights moot.

Finally, as discussed previously, there is always a level of uncertainty in the long term viability of virtual worlds.²⁰⁶ As the argument goes, when property is bound to a virtual world and that world is shut down because a company ceases operations, the property, which is proprietary data, is worthless even if that data is extracted and provided to the users. This is what I called the “so what” factor of virtual property rights. In essence, if you have rights to a pile of data—which is what deep-down defines virtual property—in isolation from the virtual world, you have nothing at all.

Although the long-term viability of individual worlds may be questioned, the viability of virtual worlds as a whole is fairly certain. Worlds like Everquest that have millions of subscribers are unlikely to fade away any time soon. In addition, recent developments in the virtual world and technology space may signal that virtual worlds are becoming mainstream. In early August, Sony, the maker of Everquest, announced the beta version of “Home,” a virtual world built within its PlayStation 3 dedicated console application.²⁰⁷ On July 11, 2008, Apple Inc. launched the latest version of its iPhone.²⁰⁸ The phone is much more than a phone. It has an advanced processor, ample memory, near broadband internet access, and a relatively large display.²⁰⁹ Some have speculated that it is powerful enough to become a portal into some of these virtual worlds, allowing players to access their virtual property from nearly

205. Tateru Nino, *Windlight: What All the Fuss is About*, MASSIVELY, Nov. 28, 2007, <http://www.massively.com/2007/11/28/windlight-what-all-the-fuss-is-about/> (discussing the process that Linden Lab went through in installing Windlight and the benefits).

206. See Lawrence, *supra* note 1, at 515-21.

207. Jesus Diaz, *Sony Shows Latest PS3 Home, Now Recruiting Beta Testers*, GIZMODO (July 31, 2008), <http://gizmodo.com/5031383/sony-shows-latest-ps3-home-now-recruiting-beta-testers>; Press Release, Sony Corp., Sony Computer Entertainment Unveils Two Innovative User Community Titles at GDC 2007 (Mar. 7, 2007), *available at* <http://www.us.playstation.com/News/PressReleases/381>.

208. Joshua Topolsky, *AT&T Announces iPhone 3G Pricing Plans*, ENGADGET, July 1, 2008, <http://www.engadget.com/2008/07/01/atandt-announces-iphone-3g-pricing-plans/>.

209. See Apple.com, Technical Specifications for iPhone, <http://www.apple.com/iphone/specs.html> (last visited July 27, 2009).

anywhere.²¹⁰ There are significant doubts that even the iPhone can run a virtual world client, but it seems that it is only a matter of time before that possibility will exist.²¹¹ So why are these announcements significant?

Sony's PS3 has an install base of 13 million users worldwide which is 30 percent bigger than even the largest virtual world.²¹² Finally, the iPhone is in its infancy and, although it has had and continues to have growing pains, it has changed the market for smart phones forever. It has put ultimate portability and power in the hands of many users while, at the same time, pushing the industry to follow suit with ever more powerful phones. Taken individually, these developments are not big news but, as a whole, these changes create a tremendous opportunity for growth in the virtual world arena. There is still the issue of property portability. After all, even if some form of virtual world is around forever, it seems likely that a player in Second Life will still be out of luck if Linden Labs shuts its virtual doors.

There have been recent developments on that front as well. On July 8, 2008, IBM, another industry powerhouse and long time proponent of virtual worlds, announced the first successful "teleportation"²¹³ between virtual worlds.²¹⁴ The teleport was between the virtual world Second Life and one called OpenSIM.²¹⁵ The group from IBM, as well as the open source community supporting the project, have plans to allow for the interoperability and transfer of property between Second Life and OpenSim.²¹⁶ Although the functionality at the moment is very limited, this too opens the door for more interoperability of property between virtual worlds and the possibility of maintaining property even when a virtual world is shut down. Therefore, despite some legitimate concerns

210. Kenan Farrell, *iPhone 3g Opens Portal to Virtual Worlds; Can Gaming While Driving Crimes Be Far Behind?*, VIRTUALLY BLIND, July 11, 2008, <http://virtuallyblind.com/2008/07/11/iphone-3g-virtual-worlds-dwg-crimes/> (referencing the possibility that the virtual world World of Warcraft may be releasing an iPhone version).

211. *Id.*

212. Henning Molbaek, *Playstation 3 Install Base Reach [sic] 13 Million World Wide*, DVDTOWN, May 16, 2008, <http://www.dvdtown.com/news/playstation-3-install-base-reach-13-million-world-wide/5543>.

213. Teleporting is a way of traveling long distances in virtual worlds like Second Life. A person can teleport anywhere in the virtual world nearly instantaneously.

214. Virtual World News, *IBM and Linden Lab Officially Announce OpenSIM Interoperability*, July 8, 2008, <http://www.virtualworldsnews.com/2008/07/ibm-and-linden.html>.

215. OpenSIM is based on a similar architecture as Second Life and, therefore, the teleportation was much more straight forward than it would have been had they attempted to teleport to another disparate architecture. *Id.*

216. *Id.*

by virtual world developers, there does appear to be room and incentive to create property rights among players. How then should these rights be protected?

B. Protecting Players' Rights

The best way to view a unified theory of virtual property rights is as a three-tiered system. The first tier is the law that is built into the code. On the second tier are the rules of the game. The final tier is that of the civil and criminal justice system. Each of these tiers acts as a filter, setting the stage for what is allowed and what isn't. As such, each layer will have to deal with substantially fewer incidents than the previous layer. This layered approach has the benefit of minimizing the burden on both the game developers and, more importantly, on the court system.

As discussed above, the code for the game defines its physics and, as such, creates the outer limits of property rights. If a game developer, for example, develops the world such that virtual property does not have all of the requisite properties, then no property rights exist for any players of the game. As an example, imagine a virtual world where alienability of property as between players is not allowed. Without alienability, the value of the property falls to nothing and, therefore, property rights are not important. If you cannot transfer property, you have no need for property rights.²¹⁷ The inverse of this concept is that any property rights provided for by the code that meet the requirements of property discussed above²¹⁸ automatically create a property right for users despite any other contextual limitations. These property rights, once established in code, can no longer be revoked. Therefore, the baseline for property rights is set in the code. As a result, game developers can make choices early in the development process as to whether or not players will be able to receive property rights. Likewise, players will know upfront if the world they choose to use will allow them property rights. Game code is complex and the more complex a virtual world is, the more difficult it is to code for all possible exceptions. Even where code is written flawlessly, there are many things that cannot be coded against.²¹⁹

217. Although ultimately the avatar itself is arguably alienable, there are certainly software schemes in existence today that would prevent even that. Digital rights management (DRM) for songs and videos is but one example.

218. The request properties are exclusivity, persistence, transmutation, and alienability. See Westbrook, *supra* note 35.

219. See Horowitz, *supra* note 105, at 447-48.

Fraudulent activity and theft do not spare virtual worlds. What cannot be coded against must then fall into the next filter, the rules of the game. One thing that must be considered is that many virtual worlds actually allow for theft of property.²²⁰ Theft that is allowed within the rules of the game cannot be punishable outside of the game. Therefore, the rules of the game act as a set of virtual statutes by which all players must abide. Where players are clearly within the rules, they are not liable for a loss. Conversely, where they are clearly outside of the rules of the game, loss is actionable. The remaining scenarios are a bit more complicated. This is much like it is in the real world where there are many situations in which legal norms are not clear or globally accepted. Obscenity standards are a good example of rules that vary from region to region.²²¹ Much like the tests for obscenity use the concept of a “reasonable person test,” so too can a virtual world citizen base liability on the social norms of the particular world which they inhabit. The arbiter of those disputes is, of course, the court system.

The court system is no stranger to the concept of rule interpretation. Federal circuit courts are often called upon to interpret laws of various states and, in some cases, even laws of different countries when deciding both criminal and civil cases.²²² Therefore, it is not a leap to expect a federal court to make the same judgments based on the established rules and norms of the virtual world in which a crime has occurred. The court system is fraught with uncertainty. Consider the patent laws and the aforementioned obscenity rules as just two examples of fluctuating laws which seem to defy reason. With a framework of code and game rules in place, courts are well-suited to protect virtual property rights just as they protect real property. The courts, therefore, become the arbiters of property disputes, not only between players, but also in loss of property disputes due to negligence or even conversion by game developers.

The code and rules of the game, since they are both written by the game developers, serve as little protection against property loss caused

220. Lastowka and Hunter compare the crimes in games where theft is part of the game play with that of theft of the ball in basketball. Lastowka & Hunter, *supra* note 173, at 304-06.

221. One proposal for handling cases of virtual property is to use a modified “Miller test” to determine if property rights have been violated. Bret Boyce, *Obscenity and Community Standards*, 33 YALE J. INT’L L. 299, 318-19 (2008) (discussing the three-part “Miller test” for obscenity as: “(a) whether “the average person, applying contemporary community standards” would find that the work, taken as a whole, appeals to the prurient interest; (b) whether the work depicts or describes, in a patently offensive way, sexual conduct specifically defined by the applicable state law; and (c) whether the work, taken as a whole, lacks serious literary, artistic, political, or scientific value.”) (citing *Miller v. California*, 413 U.S. 15, 24 (1973)).

222. *See Speedco, Inc. v. Estes*, 853 F.2d 909, 914 (Fed. Cir. 1988).

by the game developers themselves.²²³ As a result, where loss of property is outside the rules of the game and is caused by game developers, players may bring suit for recovery in a court of law against virtual world developers. Therefore, virtual property rights receive similar protection as real property. The realization of property rights by players does expose many vulnerabilities in virtual world developers and, as a result, increases their liability and support costs substantially.²²⁴ Left unchecked, it is very likely that a virtual world developer could be forced to shut down the environment due to excessive losses. Because of this, some protection must be provided to virtual world developers as well.

One immediate liability for virtual world developers is loss of property due to software bugs.²²⁵ Software bugs introduced throughout the lifecycle of the code base can certainly interfere with players' property rights. Where a game is upgraded and a bug is revealed to create an exploit that may compromise the players' property rights, it becomes paramount that the game developers mitigate any risk. Exploits can quickly lead to loss of property from other users. Unfortunately, the nature of software development is that bugs can never be completely eliminated.²²⁶ As a result, virtual world developers must be kept free from liability due to loss from software bugs and upgrades where they were prudent and used ordinary care in testing and releasing the new code. Virtual world developers will, however, be held liable for all losses due to their negligence, recklessness, or disregard for players' property rights. Virtual world developers also fear additional support costs that will inevitably come when players acquire property rights.

These costs come from requests for assistance to either recover stolen property or to generate records and forensics for use in court cases. These support costs can be minimized by allowing virtual world developers to charge a reasonable fee for recovery of data for use in court cases—the fee to be paid by the losing party. In the case of recovery of property directly, virtual world owners may choose to assist players in recovering their property or they may require the players to use the court system to recover the property. This allows developers the freedom to choose how best these types of disputes may be handled. This leaves the question of how to handle damages.

223. See also Lawrence, *supra* note 1, at 515-24.

224. *Id.*

225. *Id.* at 523-24.

226. MacDonald, *supra* note 153.

Damages in the case of property loss can vary. The peak should be actual damages equal to the market value of the property. Other options in the case of theft could be the return of the property to the rightful owner or even the regeneration of the property by the virtual world developer where that is a possibility. Ultimately, the goal is to make players as whole as possible while minimizing the burden on the virtual and real societies.

VII. CONCLUSION

With the tremendous variation in virtual world environments and the vast reach of many of these games, a single paradigm will never cover every issue that will be encountered. There are many inconsistencies that remain even with a unified virtual property regime. There is no simple solution for issues that cross real world national borders. Similar issues impact the real world as well, and it is difficult to imagine a perfect resolution that would apply effectively to international disputes.

What also remains is the issue of lost property due to the collapse of a virtual world. Although one day many worlds may allow free exchange of property between them, that seems only a distant possibility. These issues, however, should not create an impediment to virtual property rights. The virtual world is in its relative infancy, but its future is certain. People will continue to flock to these worlds over time and many more will begin to earn a living solely within these worlds. At some point, regulation of virtual property will be thrown upon the courts of the United States in much the same way as it has in other countries. It is critical that player rights not be cast aside, and just as critical that any regime of virtual property rights minimize the impact to progress for virtual world developers.

A balance is needed in order to protect both individual and corporate investment in virtual worlds and the methodology presented here is certainly a foundation that can be built upon as case law develops. The future of virtual property is bright.