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## The End of the (Virtual) World

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## THE END OF THE (VIRTUAL) WORLD

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*Joshua A.T. Fairfield\**

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### I. INTRODUCTION

Virtual worlds have been the next big thing for some time now. In 2008, more than 100 public virtual worlds received venture capital funding — a

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significant increase over previous years.<sup>1</sup> Yet virtual worlds have been going bankrupt faster than ever, including several high-profile firms and worlds.<sup>2</sup> Every technology goes through a shakedown phase, and for virtual worlds the current recession has served as a catalyst for a downturn that, although not unexpected, is nevertheless startling in both numbers and rapidity.

This article examines the intimate relationship between how a virtual world begins life and how it ends. The amount of money available to creditors at the end of a company's life, based on the bankruptcy system, helps to determine the terms of loans that creditors are willing to make. If creditors are able to get money out of a bankrupt virtual world, then virtual world creators may be able to borrow money at lower interest rates in order to start new projects.<sup>3</sup> This Article asks whether permitting virtual world creators to borrow against new kinds of valuable intangible assets will decrease borrowing costs. It therefore argues that how virtual worlds die will impact how they are born.

The piece first addresses the lessons learned in the early-millennium dot-com bubble burst and applies them to the shakedown currently underway in virtual worlds. It shows that during the dot-com burst, creditors learned ways to get money out of intangible assets because thinly-capitalized dot-coms had no other assets of value. The Article extends this trend to virtual worlds. Certain new intangible assets (called "virtual property") could and should be available to businesses as collateral for secured lending. Virtual property is often treated by the markets as personal property — for example, digital objects are bought and sold for real dollars and could serve as valuable collateral if law were clarified.<sup>4</sup>

The law of security interests in intangibles is clearer in some places than others. Although complex, the rules for perfecting, enforcing, and valuing security interests in patents, copyrights, and trademarks are now established.<sup>5</sup> U.C.C. Article 9 has expanded the ability of secured parties to secure interests in software that is physically embedded in goods or that is delivered via a tangible medium such as a CD-ROM (under the definitions of "goods" and "software" respectively).<sup>6</sup> Thus, when intellectual property is embedded in a good or deli-

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<sup>1</sup> See Dean Takahashi, *Game and Virtual World Fundings Reach \$936.8 Million in 2008*, VENTUREBEAT, Apr. 26, 2009, <http://games.venturebeat.com/2009/04/26/second-revision-game-and-virtual-world-fundings-reach-935-million-in-2008>.

<sup>2</sup> See *infra* Section II; see also Takahashi, *supra* note 1 ("Many of these companies may shut down because of the recession.").

<sup>3</sup> See, e.g., Steven L. Schwarcz, *Securitization Post-Enron*, 25 CARDOZO L. REV. 1539, 1559 (2004) ("Securitized debt often has a lower interest-rate cost than corporate debt because it provides a new source of financing, the capital markets, whose rates are systematically lower than the rates at which many companies commonly borrow.").

<sup>4</sup> Many virtual worlds, such as Second Life, EVE Online, and Project Entropia operate flourishing economies for players to buy and sell virtual goods for real money.

<sup>5</sup> See *infra* Section III.B.

<sup>6</sup> See U.C.C. § 9-102(44), (75) (2008) (defining "goods" and "software" respectively).

vered in tangible form, courts have little difficulty differentiating the chattel property right from the intellectual property right.<sup>7</sup>

But neither bankruptcy law nor Article 9 deals well with security interests in copies (not in *copyrights*) of software that are solely in electronic form.<sup>8</sup> In the area of intangible or electronic assets, courts often do not distinguish rights in a specific copy (a personal property right) from copyrights (an intellectual property right).<sup>9</sup> Many virtual world creators and businesses hold assets such as digital inventory, virtual currency, or prime virtual real estate. In order for those businesses to be able to borrow against this virtual property, the law must be significantly clarified. This article therefore advocates a theoretical overhaul of how courts value and understand digital assets in the bankruptcy context. Courts can, it suggests, apply established principles of law to permit game designers to borrow against virtual assets, and creditors to maximize their recoveries in bankruptcy.

The article will proceed in three parts. Part II will discuss the background of intangibles in bankruptcy and the burgeoning technologies of virtual worlds. Part III will analyze the legal impact of digital objects and intellectual property licenses in virtual world bankruptcies, with an eye toward determining whether increased protection for creditors might result in reduced borrowing costs for virtual world creators. Finally, Part IV will offer some recommendations for how courts can redefine the way they understand digital assets in the bankruptcy context so as to resolve the ambiguities clouding the use of these important emerging property rights as collateral.

## II. BACKGROUND

This section will examine the lessons of the dot-com bust, describe virtual worlds as a technology and as a business, and then detail the business of videogame finance, and how it might make use of a secured debt business model.

### A. *Lessons from the Dot-Com Bust*

At the turn of the millennium, the technology sector underwent a significant shakedown. Much of the investment in Internet startups was equity, and both venture capitalists and regular investors lost money when the tech bubble

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<sup>7</sup> See *infra* Section II.B.

<sup>8</sup> See *infra* Section IV.

<sup>9</sup> See Lois R. Lupica, *The Technology Rich 'Dot-Com' in Bankruptcy: The Debtor as Owner of Intellectual Property*, 53 ME. L. REV. 361, 363 (2001) (“[A] party seeking to use intellectual property as collateral is caught in the intersection of intellectual property law and Article 9 — with very little direction as to which way to turn.”).

burst.<sup>10</sup> But creditors — even secured creditors — of dot-coms were also hard-hit. Dot-coms did not have many conventional assets.<sup>11</sup> As a result, bankrupt dot-coms had difficulty liquidating cash and forming an estate from which they could repay some money to creditors. Troubled dot-coms did, however, have significant intangible assets: intellectual property, domain-name registrations, customer lists, and other valuable Internet real estate.<sup>12</sup> These intangibles proved to be of significant value to creditors.<sup>13</sup> As a result, intangibles have played an increasing role in securing loans for information-technology businesses. Creditors have loaned against code, URLs, and customer lists, in addition to the usual payment intangibles and accounts receivable, which have long been stock-in-trade for secured lenders.<sup>14</sup>

The valuation of such assets was often difficult.<sup>15</sup> Accurate valuation depends on a relatively thick market for sales.<sup>16</sup> Innovative Internet startups had no market to point to when their intellectual property reached the auction block. These valuation problems were compounded by the speed at which the market was developing.<sup>17</sup> By the time a bankrupt dot-com was sold off, the value of its intellectual property generally declined dramatically because of other market entrants, or because technology had evolved past the original business plan of the dot-com.<sup>18</sup>

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<sup>10</sup> See Reuters, *When a Dot-Com Goes Bust*, WIRED, June 7, 2000, available at <http://www.wired.com/techbiz/media/news/2000/06/36820>.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> See Ronald J. Mann, *Secured Credit and Software Financing*, 85 CORNELL L. REV. 134 (1999) (“Software is a relatively new type of business asset, but already has taken on a central role in all sectors of the economy; when any asset brings such a crucial value to businesses, the desire for lending based on that asset cannot be far behind.”).

<sup>14</sup> See *infra* Section III.C.

<sup>15</sup> See Lupica, *supra* note 9, at 382 (“While issues of valuation are always difficult in bankruptcy, when the collateral at issue is intellectual property, unique issues are raised.”).

<sup>16</sup> See Weston Anson, *Valuing Trademarks, Patents and Other Intangibles in a Bankruptcy Environment*, 15 AM. BANKR. INST. J. 29 (1996); Kevin G. Coleman, *Nanotechnology Company Valuation*, 2 NANOTECHNOLOGY L. & BUS. 376 (2005); Bradley J. Sklar & W. Todd Carlisle, *The Alabama Limited Liability Company Act*, 45 ALA. L. REV. 145, 217 (1993) (“However, in many closely held firms, accurate valuation may be difficult or impossible without a sale of all of the assets.”); Note, *Federal Estate Tax and the Right of Publicity: Taxing Estates for Celebrity Value*, 108 HARV. L. REV. 683, 688–92 (1995) (discussing methods of valuing intangible assets).

<sup>17</sup> See Lupica, *supra* note 9 at 381 (“Even if some of the problems concerning the ability to sell certain types of intellectual property in the course of a bankruptcy are overcome, there may not be a ready market for intellectual property sold at a ‘fire sale’ where a ‘going concern’ value may no longer be relevant. Intellectual property is potentially time-sensitive, particularly with respect to new technologies and there is the potential for early obsolescence as even newer technologies are developed.”).

<sup>18</sup> See *id.* (“Accordingly, in many cases, sales of ‘dot-com’ assets in connection with reorganizations and liquidations of ‘dot-com’ businesses may be problematic or in other cases, impossible.”); see also Robert Brady, Sean Beach & Karen B. Skomorucha, *Determining and Preserving the Assets of Dot-Coms*, 28 DEL. J. CORP. L. 185 (2003).

Despite these problems, intangibles became a valuable source of collateral, and a growing number of cases discussed the methods for perfecting and enforcing security interests in intellectual property and other intangibles, or in the transfer of such IP during the IP-licensor's bankruptcy.<sup>19</sup> Creditors' acceptance of these forms of collateral set the stage for the next step in the evolution of online assets, as the Internet matured from two-dimensional webpages to three-dimensional virtual worlds.

## B. *Virtual Worlds*

Virtual worlds represent the next iteration of Internet technologies: the Internet in 3D. The rise of the technology has been accompanied by enormous entrepreneurial activity, and as with any paradigm-shifting technology, there have been significant successes and spectacular failures. The following sections detail the rise of the virtual world, what virtual worlds are, and several instances of high-profile virtual world bankruptcies.

### 1. The Rise of Virtual Worlds

Virtual worlds began in 1978 with pure text, in Richard Bartle and Roy Trubshaw's *Multi-User Dungeon*.<sup>20</sup> They rapidly improved to two-dimensional graphical interfaces, then to two-a-half ("isometric") and then three dimensional worlds. Despite this rapid evolution, virtual worlds have only truly entered the mainstream in the past decade with the breakout success of Blizzard Entertainment's *World of Warcraft*. Modern virtual worlds have many different business models. Some virtual worlds are in-house corporate or military simulators "behind the firewall."<sup>21</sup> Others are open commercial worlds, where anyone can join the world for the price of a license.<sup>22</sup> Others are freeware or "freemium," in which entry is free, but premium services come at a price.<sup>23</sup> Still other virtual worlds are based on a microtransactions model, in which users purchase digital objects and rent or buy digital spaces from the virtual world creators.<sup>24</sup> There is

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<sup>19</sup> See *infra* Section II.C. See also Mann, *supra* note 13, *passim* (instead of relying on security interests in IP to repay debt in the event of foreclosure, banks developed symbiotic relationship with venture capital firms to provide lower-cost loans for software development).

<sup>20</sup> See E-mail from Richard Bartle to Alan Cox (Nov. 15, 1990, 19:00:55 GMT), available at <http://www.mud.co.uk/richard/mudhist.htm>.

<sup>21</sup> See Katherine Noyes, *The Business Case for Virtual Business, Part 2*, LINUXINSIDER, June 30, 2009, <http://www.linuxinsider.com/story/The-Business-Case-for-Virtual-Business-Part-2-67464.html>.

<sup>22</sup> See, e.g., World of Warcraft, <http://signup.worldofwarcraft.com/menu.html> (last visited Sept. 13, 2009).

<sup>23</sup> Second Life, for example, offers free membership to all, but premium users get a weekly stipend of Linden dollars as well as the right to own land. See Second Life's Membership Plans, <http://secondlife.com/whatis/plans.php> (last visited Sept. 13, 2009).

<sup>24</sup> Second Life also utilizes this model. See *id.*

nothing new about these phenomena: personal homepages are merely in the process of becoming virtual personal homes. What is new is the reach and penetration of the technology, with currently tens of millions of users of virtual worlds in the United States alone.<sup>25</sup>

Virtual worlds have become big business. In 2007, game and virtual world companies raised \$613 million.<sup>26</sup> In 2008, 112 game companies raised nearly a billion dollars in venture capital or angel investment, out of a total 2 billion that went into media and entertainment companies altogether.<sup>27</sup> The rate of funding of social and virtual worlds therefore accelerated right up to the current recession. This funding was in part due to the now-mainstream popularity of virtual worlds like *World of Warcraft* or *Lord of the Rings Online* (whose parent company, Turbine, secured \$40 million in one year alone for development of massively multiplayer online roleplaying games<sup>28</sup>), but also to the spread of virtualization concepts and technologies outside of the traditional framework of virtual worlds.

## 2. What Are Virtual Worlds?

Virtual worlds are a combination of social networking technology and video game graphics, used to create a shared, persistent environment in which users can interact. Although the technology often looks game-related, and the most famous virtual worlds are games, there is significant crossover, because the same technology can be used for multiple functions. Virtual worlds are used for military simulations, education, police training, medical diagnosis and treatment, sex, gambling, banking, architecture, e-commerce, high fashion, social interaction, creative development, programming, and good old-fashioned entertainment.<sup>29</sup>

The multiple uses of virtual world technology are important in the bankruptcy context because technology created for one purpose — say, a game — can be repurposed to another. Buyers can, therefore, increasingly be found for the technologies developed by soon-to-be-defunct virtual world's creators.<sup>30</sup>

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<sup>25</sup> See Virtual World Factsheet, <http://www.incredibleinternet.com/virtual-worlds/factsheet> (last visited Sept. 4, 2009).

<sup>26</sup> *Id.*

<sup>27</sup> Takahashi, *supra* note 1.

<sup>28</sup> See *Turbine Secures \$40 Million in Financing*, TURBINE PRESS RELEASE, June 4, 2008, <http://www.turbine.com/news/5-press/62-turbine-secures-40-million-in-financing.html>. See Yoville's website, <http://www.yoville.com> (last visited Sept. 13, 2009).

<sup>29</sup> For example, Linden Labs' Second Life serves thousands of purposes, including entertainment, creative, social, commercial, educational, military, political, and financial applications. See generally F. Gregory Lastowka and Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1 (2004) (discussing different uses for virtual worlds); Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047, 1059 (2005) [hereinafter *Virtual Property*] (same).

<sup>30</sup> See *infra* note 47, and accompanying text.

The market for virtualization technology will continue to expand as the technology finds uses outside of the traditional video-game context. Many virtual world applications are overlays on the two-dimensional Internet. For example, one application in Facebook called YoVille creates a virtual world over Facebook.<sup>31</sup> Another application, called Just Leap In, creates a three-dimensional overlay, turning 2D webpages into 3D.<sup>32</sup> Thus, those who wish to use a two-dimensional Internet may continue to do so; those preferring a three-dimensional environment may access the same content. Virtual worlds are even moving out of computers and onto mobile devices, and out of virtual spaces entirely and into realspace, with the help of augmented reality devices and three-dimensional barcodes that permit virtual objects to exist and interact with people who remain in the real world.<sup>33</sup>

Of particular interest are virtual currency and the trade in digital objects, because these provide the interface point between virtual and real economies. Facebook is testing virtual currency.<sup>34</sup> Chinese internet service provider Tencent used a virtual currency, the QQ coin, to become the largest Chinese supplier of digital goods.<sup>35</sup> The trade in virtual objects and currency has been subject to significant criticism by gamers and regulatory efforts by governments. For example, China has recently imposed controls on virtual currency that purport to halt the cashing out of virtual currency for real dollars.<sup>36</sup> Because these virtual assets are both misunderstood and quite valuable, they represent an opportunity for academics and practitioners seeking to find ways to lower the cost of capital to virtual world companies, as well as trustees, bankruptcy counsel, or bankruptcy judges seeking to maximize the recovery of creditors in a virtual world bankruptcy.

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<sup>31</sup> See YoVille's website, *supra* note 28.

<sup>32</sup> See Just Leap In's website, [http://www.justleapin.com/about\\_us](http://www.justleapin.com/about_us) (last visited Sept. 13, 2009).

<sup>33</sup> See, e.g., Parallel Kingdom, <http://www.parallelkingdom.com/Default.aspx> (last visited Oct. 16, 2009); The Hidden Park, <http://www.thehiddenpark.com/> (last visited Oct. 16, 2009); see also Erick Schonfeld, *Mobile Data: IBM Tags Wimbledon with Seer Android*, WASH. POST, June 23, 2009, available at <http://www.washingtonpost.com/wpdyn/content/article/2009/06/23/AR2009062303057.html>.

<sup>34</sup> See Alex Pham, *Facebook Mulls over Adding Virtual Currency as Coin of its Social Realm*, L.A. TIMES, Mar. 24, 2009, available at <http://latimesblogs.latimes.com/technology/2009/03/facebook-gdc-vi.html>; see also MG Siegler, *It's Heeerrre: 'Pay With Facebook' Is In The Wild*, TECHCRUNCH, May 29, 2009, <http://www.techcrunch.com/2009/05/29/its-heeerrre-pay-with-facebook-is-in-the-wild>.

<sup>35</sup> *Yuan Faces Virtual Threat from QQ Coin*, THE MALAYSIAN INSIDER, July 2, 2009, <http://www.themalaysianinsider.com/index.php/business/31137-yuan-faces-virtual-threat-from-qq-coin>.

<sup>36</sup> The regulation is designed to be "one way" only, so that microtransaction business models, in which companies sell virtual items or currency for real dollars is still permitted; but the purchasers then ostensibly cannot cash the currency back out. See John D. Sutter, *China Restricts 'Virtual' Economies*, CNN, July 1, 2009, <http://www.cnn.com/2009/TECH/07/01/china.virtual.currency/index.html>.



### 3. The End of the World

This section explores the various ways in which virtual worlds have gone out of business, and the potential market for re-use of the technology developed by a soon-to-be defunct entity. Virtual world startups have much in common with the Internet startups of the late 1990s. Some virtual world companies seem to have thin asset bases because they invest in creating intangibles, rather than building factories and warehousing inventory.

Virtual worlds have as many ways of going out of business as any other company, as well as a few new ones. A virtual world may be a company itself, and turning off the servers may be contemporaneous with a bankruptcy filing or receivership.<sup>37</sup> A virtual world project may continue during the bankruptcy and reorganization of its parent entity.<sup>38</sup> Or a virtual world may be a project of a healthy company that is cancelled for failure to realize sufficient revenue.<sup>39</sup>

Virtual worlds that fail have various fates. The underlying intellectual property and customer lists may be sold off in bankruptcy.<sup>40</sup> The world may be either sold to or abandoned to the fans, who re-create the world in their own time.<sup>41</sup> The world may simply be switched off, never to return.<sup>42</sup> Worlds may fail before they even begin, as companies make business decisions to pursue other products.<sup>43</sup>

The deaths of virtual worlds have implications beyond the companies that create and maintain them. There are companies that exist within virtual worlds, to sell virtual goods or services (or advertise real goods or services with-

<sup>37</sup> Faketown, for example, shut down the world when its parent company, Identity Play, filed for bankruptcy. See *Faketown Closes Due to Bankruptcy; Technology Up for Auction*, VIRTUAL WORLDS NEWS, July 28, 2008, <http://www.virtualworldsnews.com/2008/07/faketown-closes.html>.

<sup>38</sup> See *Nortel Filing for Bankruptcy Protection; Web.alive Development Uninterrupted*, VIRTUAL WORLDS NEWS, Jan. 14, 2009, <http://www.virtualworldsnews.com/2009/01/nortel-filing-for-bankruptcy-protection-webalive-development-uninterrupted.html>.

<sup>39</sup> NCSoft's *Tabula Rasa*, Electronic Arts' *Earth and Beyond*, and Google's experiment, *Lively*, all fall into this category.

<sup>40</sup> See Tom Magrino, *Hellgate: London Closing January 31*, GAMESPOT, Oct. 24, 2008, <http://uk.gamespot.com/news/6199996.html> (describing the financial troubles of Hellgate's creator, Flagship Studios); see also *Interview: Lessons from Faketown*, VIRTUAL WORLDS NEWS, July 29, 2008, <http://www.virtualworldsnews.com/2008/07/interview-lesso.html> (stating Faketown's bankruptcy and pending auction for the site).

<sup>41</sup> See *Myst Online: Uru Live* website, <http://www.mystonline.com/en> (last visited Sept. 13, 2009). Google Lively has unofficially taken this route too, as a group of active programmers have undertaken recreating the Lively world. See *NewLively* website, <http://www.newlively.com> (last visited Sept. 4, 2009).

<sup>42</sup> See Edward Castronova, *Financial Cost of E&B's Closure*, TERRA NOVA, Mar. 22, 2004, [http://terranova.blogs.com/terra\\_nova/2004/03/financial\\_cost\\_.html](http://terranova.blogs.com/terra_nova/2004/03/financial_cost_.html).

<sup>43</sup> See, e.g., Steve Butts, *Mythica Cancelled*, IGN.COM Feb. 12, 2004, available at <http://pc.ign.com/articles/492/492182p1.html> (detailing cancellation by Microsoft of its virtual world project).

in the virtual world).<sup>44</sup> Some businesses trade in virtual land or goods.<sup>45</sup> Some sell or lend virtual currency for real dollars.<sup>46</sup> The death of a virtual world has a ripple effect beyond its own existence, as the businesses that used the virtual world must relocate, reorganize, or fail.

The first and simplest form of virtual world bankruptcy is one in which the world is more or less synonymous with the company that created it. For example, on June 23, 2008, Identity Play, Inc., creator of the virtual world *Faketown*, filed for Chapter 7 bankruptcy.<sup>47</sup> Assets of the debtor included the websites, the intellectual property underlying the *Faketown* virtual world (including trademarks, trade names, source code, and graphics) and the customer user database.<sup>48</sup> The trustee solicited bids from 19 potentially interested parties, of which five expressed an interest in purchasing the soon-to-be-defunct virtual world.<sup>49</sup> The entire virtual world was sold for \$20,000 to FooMojo, an Internet startup that focuses on creating virtual pets.<sup>50</sup> The case was particularly straightforward because of two factors — first, an explicit clause in *Faketown*'s privacy policy that permitted sales of customers' personally identifiable information in the event of bankruptcy;<sup>51</sup> and second, the absence of secured parties.<sup>52</sup>

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<sup>44</sup> See generally SUE MARTIN MAHAR & JAY MAHAR, *THE UNOFFICIAL GUIDE TO BUILDING YOUR BUSINESS IN THE SECOND LIFE VIRTUAL WORLD* (2009).

<sup>45</sup> See Robert D. Hof, *My Virtual Life*, BUS. WK., Cover Story, May 1, 2006, available at [http://www.businessweek.com/magazine/content/06\\_18/b3982001.htm](http://www.businessweek.com/magazine/content/06_18/b3982001.htm).

<sup>46</sup> See Michael Learmonth, *Virtual Real Estate Boom Draws Real Dollars*, USA TODAY, June 3, 2004, available at [http://www.usatoday.com/tech/webguide/internetlife/2004-06-06-virtual-reality\\_x.htm](http://www.usatoday.com/tech/webguide/internetlife/2004-06-06-virtual-reality_x.htm) ("All goods and services in the game can be transacted in either Linden or U.S. dollars. One entrepreneur and Second Life player runs a currency exchange."); see also *Tycoons Buy in to Virtual Worlds*, PHYSORG.COM, May 10, 2007, available at <http://www.physorg.com/news98006532.html> ("Virtual banks, therefore, provide funds for players who need money to grow their holdings but don't want to sell their belongings to fund those ventures.").

<sup>47</sup> See Voluntary Petition, *In re Identity Play, Inc.*, No. 2-08-bk-19025-ER (Bankr. C.D. Cal. June 23, 2008).

<sup>48</sup> *Id.* at \*10.

<sup>49</sup> *Id.*

<sup>50</sup> See Order Approving Motion for Order Authorizing Sale and Assignment of Property of the Estate Free and Clear of Liens and Claims, and Approving Bidding Protection, *In re Identity Play, Inc.*, No. 2-08-bk-19025-ER (Bankr. C.D. Cal. June 23, 2008).

<sup>51</sup> *Faketown*'s Privacy Policy, <http://web.archive.org/web/20070806223559/http://www.faketown.com/privacy.php> (last visited Sept. 13, 2009) ("In the Event of Merger, Sale or Bankruptcy. In the event that Faketown is acquired by or merged with a third party entity, we reserve the right, in any of these circumstances, to transfer or assign the information we have collected from our users as part of such merger, acquisition, sale, or other change of control. In the unlikely event of our bankruptcy, insolvency, reorganization, receivership, or assignment for the benefit of creditors, or the application of laws or equitable principles affecting creditors' rights generally, we may not be able to control how your personal information is treated, transferred, or used.").

<sup>52</sup> See *In re Identity Play, Inc.*, *supra* note 13.

Secured parties and other entities with an interest in the virtual world may complicate matters. Flagship Studios, developer of the virtual worlds *Hellgate: London* and *Mythos*, experienced development delays and liquidity problems in early 2008.<sup>53</sup> Flagship then entered into an innovative financing agreement with a Texas bank, Comerica, which extended Flagship a credit facility secured by Flagship's distribution and sales rights in *Hellgate: London*. The credit facility was based on the model of financing for independent films.<sup>54</sup>

The arrangement, though groundbreaking, did not ultimately permit Flagship to survive. Three months later, Flagship laid off nearly all employees.<sup>55</sup> Although Flagship claimed that it was not entirely defunct, industry consensus was that the company had closed its doors.<sup>56</sup> To complicate matters, HanbitSoft, *Hellgate: London's* distributor for Asia, asserted through U.S. lawyers that it was the owner of *Mythos* under prior arrangement with Flagship, and that it reserved its rights to continue operation of *Hellgate: London* in Asia pursuant to its exclusive license agreement for that area.<sup>57</sup> HanbitSoft also claimed that it had offered, and Flagship Studios had refused, additional cash infusions.<sup>58</sup>

What followed was not clear. Flagship seems to have made no bankruptcy filing, and the company is listed as "active" in the California corporate records.<sup>59</sup> *Hellgate: London* ceased operation in the United States in February of 2009.<sup>60</sup> The principal claimants in Flagship's IP, HanbitSoft and Comerica Bank, seem to have reached an accommodation. T3 Entertainment, a Korean games publisher, purchased a controlling interest in HanbitSoft, and began advertising for developers to work on *Hellgate: London* and *Mythos* in Korea.<sup>61</sup> T3 Entertainment has since announced that *Hellgate: London* will be reopened

<sup>53</sup> See Stuart Bishop, *We Ballsed Things up with Hellgate, Roper Admits*, CVG, Feb. 25, 2008, available at <http://www.computerandvideogames.com/article.php?id=183206>.

<sup>54</sup> See *Comerica Bank Finances Flagship Studios*, IGN, Mar. 26, 2008, <http://pc.ign.com/articles/862/862223p1.html>.

<sup>55</sup> See Chris Remo, *Layoffs Confirmed at Hellgate Developer Flagship*, GAMASUTRA, July 11, 2008, [http://www.gamasutra.com/php-bin/news\\_index.php?story=19386](http://www.gamasutra.com/php-bin/news_index.php?story=19386).

<sup>56</sup> See Andrew Burnes, *Flagship Studios' Closure Confirmed, All Staff Fired, All I.P. Lost, but Now the Studio is Saved!*, July 12, 2008, <http://ve3d.ign.com/articles/news/39866/Flagship-Studios-Closure-Confirmed-All-Staff-Fired-All-I-P-Lost-But-Now-The-Studio-Is-Saved>.

<sup>57</sup> See Matt Warner, *HanbitSoft CEO Claims Ownership Rights to Hellgate:London and Mythos*, MASSIVELY, July 14, 2008, <http://www.massively.com/2008/07/14/hanbitsoft-ceo-claims-ownership-rights-to-hellgate-london-and-my>.

<sup>58</sup> See Sol Invictus, *HanbitSoft: "Flagship is Selfish and Irresponsible."* HELLGATE GURU, July 16, 2008, <http://hellgateguru.com/2008/07/hanbitsoft-flagship-is-selfish-and-irresponsible>.

<sup>59</sup> See California Business Search, <http://kepler.sos.ca.gov/list.html> (type "Flagship Studios" in the corporation search bar and click "Search" — the company was listed "active" when last visited on Sept. 13, 2009).

<sup>60</sup> See Magrino, *supra* note 40.

<sup>61</sup> See Simon Carless, *Report: T3 to Continue Hellgate, Mythos Development in SF Office*, GAMASUTRA, July 31, 2008, [http://www.gamasutra.com/php-bin/news\\_index.php?story=19658](http://www.gamasutra.com/php-bin/news_index.php?story=19658).

as free-to-play in Asia.<sup>62</sup> Moreover, Kee Young Kim, CEO of HanbitSoft, has claimed on the publisher's English-language website that HanbitSoft now owns the *Hellgate: London* intellectual property, suggesting that a deal for the sale of the intellectual property was reached with Comeria.<sup>63</sup>

Coming full circle, HanbitSoft and T3 Entertainment have announced their desire to relaunch *Hellgate: London* in the West but claim that the distribution agreement between Flagship and U.S. distributor Namco Bandai prevents them from opening the Korean servers to U.S. and European players.<sup>64</sup> The *Mythos* developers have since reformed as Runic Studios and are developing the property for T3 Entertainment, and — particularly interesting — a U.S. release is contemplated, supported by a development studio set up by the Korean companies in the U.S., under the rubric of Redbana U.S.<sup>65</sup>

Other virtual worlds have gone through several different iterations rather than being sold off for scrap or partitioned among business partners. *Uru: Ages Beyond Myst*, a massively multiplayer sequel to the bestselling *Myst* series, suffered development delays, but was kept alive by fans and hosted on player-maintained “shards” for several years.<sup>66</sup> The *Uru* fan base was particularly loyal, and scholars have studied the “Uru Diaspora,” in which fans of *Uru* recreated their environment and communities in other virtual worlds, including *There.com* and *Second Life*.<sup>67</sup> After *Uru* was taken offline, it was sold to GameTap, which resurrected the game for a period during 2007.<sup>68</sup> GameTap then took the game offline in 2008, for lack of subscriptions.<sup>69</sup> Cyan (*Uru*'s developer) then reacquired the rights to the game, and has proposed bringing *Uru*, now called the *Myst Online Restoration Experiment* (or *MORE*) back for a third incarnation as an open source fan-fueled project.<sup>70</sup>

<sup>62</sup> See Leigh Alexander, *HanbitSoft: Hellgate London to Continue as Free-to-Play Title*, GAMASUTRA, Jan. 26, 2009, [http://www.gamasutra.com/php-bin/news\\_index.php?story=22005](http://www.gamasutra.com/php-bin/news_index.php?story=22005) [hereinafter *Hellgate London to Continue*].

<sup>63</sup> See *Invictus*, *supra* note 58.

<sup>64</sup> See *Hellgate London to Continue*, *supra* note 62.

<sup>65</sup> See Leigh Alexander, *Interview: T3's Redbana Launches Western Dev. Publishing Office, Talks Rescuing Audition*, GAMASUTRA, June 23, 2009, [http://www.gamasutra.com/php-bin/news\\_index.php?story=24066](http://www.gamasutra.com/php-bin/news_index.php?story=24066).

<sup>66</sup> See Nathaniel Berens, *The Ending has not yet been Written*, THE ESCAPIST, Nov. 6, 2007, [http://www.escapistmagazine.com/articles/view/issues/issue\\_122/2598-The-Ending-Has-Not-Yet-Been-Written.2](http://www.escapistmagazine.com/articles/view/issues/issue_122/2598-The-Ending-Has-Not-Yet-Been-Written.2).

<sup>67</sup> See Celia Pearce, *Identity-as-Place: Fictive Ethnicities in Online Games & Virtual Worlds*, Address at MIT Comparative Media Studies Spring 2009 Colloquium Lecture Series (synopsis available at [http://gambit.mit.edu/updates/2009/02/now\\_guest-starring\\_celia\\_pearce.php](http://gambit.mit.edu/updates/2009/02/now_guest-starring_celia_pearce.php)) (last visited Sept. 13, 2009).

<sup>68</sup> See Daniel Terdiman, *Online Game Rising from the Dead*, CNET NEWS, May 18, 2006, [http://news.cnet.com/Online-game-rising-from-the-dead/2100-1043\\_3-6073611.html](http://news.cnet.com/Online-game-rising-from-the-dead/2100-1043_3-6073611.html).

<sup>69</sup> See Charles Oynett, *Myst Online is Discontinued*, IGN, Feb. 4, 2008, <http://pc.ign.com/articles/849/849518p1.html>.

<sup>70</sup> See *Myst Online*, *supra* note 41.

Thus far, this section has discussed cases in which the virtual world and the company involved are more or less synonymous — often the case when the company is a startup or when the virtual world is a company's flagship product. Virtual assets are important in other forms of business as well. One emerging model is that of a company within a virtual world. Companies operating inside virtual worlds like Second Life sell everything from avatars to fashion to banking to sex.<sup>71</sup> Thus, a virtual world meltdown could impact the companies that call the world home, or the bankruptcy of an important in-world company could impact other companies, or even the virtual world itself. For example, Anshe Chung, the widely touted first virtual world real-dollar millionaire, made her money as a virtual land baron.<sup>72</sup> The virtual land owned by Chung was worth real money. If someone like Chung were to go bankrupt, the virtual assets would likely be the most valuable asset of the estate. Moreover, her bankruptcy would have still further downstream effects on Chung's virtual world tenants, which themselves may be prominent businesses.

Although no bankruptcy case has yet dealt with an entirely in-world entity, there have been multiple costly and high-profile business closures in virtual worlds. In 2007, Ginko Financial, a bank in Second Life, suffered a rapid decline and dissolution following game god Linden Lab's decision to ban gambling.<sup>73</sup> Ginko had promised up to 40% interest rates, and has subsequently been accused of operating as a Ponzi scheme.<sup>74</sup> Depositors demanded their money, and Ginko rapidly dissolved, leaving many creditors empty-handed, saddled with a net loss of \$750,000.<sup>75</sup> Although Ginko Financial appeared to have no assets for creditors upon its dissolution, it is easy to imagine in-world companies that would. For example, real-world banking licenses have been issued to companies that operate in the virtual world Project Entropia;<sup>76</sup> it is not at all implausible that a virtual bank could someday dissolve under circumstances that would leave some assets for creditors.

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<sup>71</sup> See Stefanie Olsen, *Storefronts in Virtual Worlds Bringing in Real Money*, N.Y. TIMES, Dec. 7, 2008, available at <http://www.nytimes.com/2008/12/08/technology/internet/08virtual.html>.

<sup>72</sup> See Anshe Chung Studios website, <http://acs.anshechung.com> (Anshe Chung, real name Ailin Graef, describing her virtual assets and climb to virtual success).

<sup>73</sup> See Bryan Gardiner, *Bank Failure in Second Life Leads to Calls for Regulation*, WIRED, Aug. 15, 2007, available at [http://www.wired.com/gaming/virtualworlds/news/2007/08/virtual\\_bank](http://www.wired.com/gaming/virtualworlds/news/2007/08/virtual_bank).

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> A real-world banking license has been granted to Mindark, the creator of Project Entropia, and from that license, it has issued "sub-licenses" to users within the world to create in-game banks. See *Online Game gets Banking Licence*, BBC NEWS, Mar. 20, 2009, <http://news.bbc.co.uk/2/hi/technology/7954629.stm>; Wolfgang Gruener, *Virtual Bank License for Entropia Universe Sold for \$90,000*, TG DAILY, May 3, 2007, <http://www.tgdaily.com/content/view/31900/118>.

In a similar fashion, real-world companies have been investing in virtual assets. For example, IBM has spent millions of dollars developing its online real estate in Second Life.<sup>77</sup> The IBM Welcome Center and other facilities on the IBM islands in Second Life are corporate assets like any other, and could be sold off to satisfy creditors in the event of IBM's bankruptcy. Although virtual assets are currently quite a small portion of the overall assets of a real-world company, the amount and value of virtual assets are likely to grow over time.<sup>78</sup>

### C. *The Business of Game Finance and Secured Lending*

This spate of virtual world failures raises the question of whether enterprising lawyers can help virtual world entrepreneurs find new ways to secure the capital they need for virtual world projects. This sub-part will examine the business of game finance and the business of secured lending, to determine what changes in law are likely to produce cheaper access to development funds for virtual world creators.

The most common method of game funding is venture capital and equity finance.<sup>79</sup> This makes sense, as many game developers, especially virtual world developers, have only recently set up shop. The game industry has not made as much use of debt finance as other, more established, areas of creative endeavor, such as movies or music catalogs.<sup>80</sup> Video games, like most software, often have a short shelf-life, meaning that even a wildly successful game may not serve as good collateral.<sup>81</sup> The flash-in-the-pan nature of game profits does

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<sup>77</sup> See Stephen Baker, *IBM on Second Life: More than PR*, BUS. WK., Nov. 15, 2006, available at [http://www.businessweek.com/the\\_thread/blogspotting/archives/2006/11/ibm\\_on\\_second\\_1.html](http://www.businessweek.com/the_thread/blogspotting/archives/2006/11/ibm_on_second_1.html).

<sup>78</sup> See Mark Wallace, *The Game is Virtual. The Profit is Real.*, THE N.Y. TIMES, May 29, 2005, available at <http://www.nytimes.com/2005/05/29/business/yourmoney/29game.html?r=1&pagewanted=1> ("The value of the average player's transactions, if converted to real money, is more than \$1,000 a year and has been growing nearly 25 percent a month.") (quoting Philip Rosedale, founder of Second Life).

<sup>79</sup> See Xuan-Thao N. Nguyen, *Commercial Law Collides with Cyberspace: The Trouble with Perfection — Insecurity Interests in the New Corporate Asset*, 59 WASH. & LEE L. REV. 37, 40 (2002) ("[M]ost, if not all, the e-deals were equity-based investments, not secured transactions as in the Old Economy."); see also Ronald J. Mann, *Secured Credit and Software Financing*, 85 CORNELL L. REV. 134, 137 (1999) ("Because the commercial development of new software products ordinarily is a risky endeavor, the typical software developer must rely on angel investors or venture capitalists.").

<sup>80</sup> See, e.g., Hewson Chen, *Don't Sell Out, Sell Bonds: The Pullman Group's Securitization of the Music Industry, an Interview with David Pullman*, 2 VAND. J. ENT. L. & PRAC. 161, 161–64 (2000) (describing development of music catalog securitization, including the music catalogs of James Brown and David Bowie).

<sup>81</sup> See Greg Costikyan, *Death to the Games Industry*, PowerPoint Demonstration, <http://costik.com/presentations/Death%20to%20the%20Games%20Industry.ppt>, available in HTML at <http://74.125.47.132/search?q=cache:jRlOofjUjXgJ:www.costik.com/presentations/Death%2520to%2520the%2520Games%2520Industry.ppt+death+to+the+games+industry+average>

not produce the kind of regular and predictable revenue stream that banks prefer to service a loan.<sup>82</sup> Further, many developers cede a large block of rights to the publisher, in order to get the game on the market.<sup>83</sup> Thus, a developer may not have much in the way of collateral to back a loan.

However, as the video game industry matures, debt financing may well increase.<sup>84</sup> Established companies with track records for profitability will better be able to convince banks to make loans.<sup>85</sup> Further, game expansions and updates serve to smooth out the flash-in-the-pan nature of software shelf-life, and permit companies to reassure banks that the loan will be repaid.<sup>86</sup>

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e+shelf+life&cd=1&hl=en&ct=clnk&gl=us (stating that the average shelf life is less than four weeks for a video game).

<sup>82</sup> Volatility is of concern in the music business as well, and songs with a longer earning span are better for bond offerings than are quick successes. See Phyllis Furman, *Rock Solid Investment? David Pullman Has a Big New Deal Brewing for Musicians*, Oct. 26, 1998, [http://www.nydailynews.com/archives/money/1998/10/26/1998-10-26\\_rock\\_solid\\_investment\\_\\_david.html](http://www.nydailynews.com/archives/money/1998/10/26/1998-10-26_rock_solid_investment__david.html).

<sup>83</sup> See Eric Zimmerman, *A Game Developers' Bill of Rights* (Nov. 21, 2005), [http://www.gamasutra.com/features/20051121/zimmerman\\_01.shtml](http://www.gamasutra.com/features/20051121/zimmerman_01.shtml) (defining the "First Amendment" as "[t]he right to full ownership of what we fully create" and the "Fifth Amendment" as "[t]he right to a fair and equitable share of profits derived from a game"). See also E. Scott Johnson & Jonathan M. Holda, *IP and the Video Game Developer*, Bar Bulletin, Maryland State Bar Association (2007), available at [http://www.msba.org/departments/commpubl/publications/bar\\_bult/2007/sep/developer.asp](http://www.msba.org/departments/commpubl/publications/bar_bult/2007/sep/developer.asp) (outlining the rights of a developer and the transfer of those rights); *Video Game Industry*, Wikipedia, [http://en.wikipedia.org/wiki/Video\\_game\\_industry\\_practices#Practices](http://en.wikipedia.org/wiki/Video_game_industry_practices#Practices) ("Video game industry practices are similar to those of other entertainment industries (e.g. the music recording industry), but the video game industry in particular has been accused of treating its development talent poorly.") (last visited Sept. 13, 2009).

<sup>84</sup> This would track maturation in the software industry broadly, where debt financing has evolved a symbiotic relationship with traditional venture capital finance. See Mann, *supra* note 79, at 137 ("[L]enders also have found a profitable role for debt [in software financing]."). Indeed, the videogame market may be more profitable for secured lending than music in the long term. See Chen, *supra* note 80, at 163 ("[T]he music business is a limited market . . . . But if you can get to the software companies, then this could be a huge business." (quotations omitted)).

<sup>85</sup> See Patricia A. McCoy, *The National Business Judgment Rule in Banking*, 44 CATH. U. L. REV. 1031, 1044 (1995) ("New business loans present undeniably high levels of risk, at least insofar as repayment depends on operating revenues. For this reason, courts have split over the propriety of loans to start-up ventures, both recently and in the past. This split reflects conflicting philosophies as to appropriate judicial techniques for managing the inherent risk in new business loans.").

<sup>86</sup> See, e.g., Paul Hyman, *Video Game Companies Encourage 'Modders,'* THE HOLLYWOOD REP., [http://www.hollywoodreporter.com/hr/search/article\\_display.jsp?vnu\\_content\\_id=1000484956](http://www.hollywoodreporter.com/hr/search/article_display.jsp?vnu_content_id=1000484956) ("In the typical scenario, even if a game is a mega-hit, within eight to twelve months on the store shelves, it's gone. But, in the case of 'Half-Life,' our revenue stream increased year after year for the first three years of the game's life. I attribute a lot of that to three mods [expansions] . . . ."); Christopher Riley, *The Need for Software Innovation Policy*, 5 J. TELECOMM. & HIGH TECH. L. 589, 616 (2007) ("[T]he video game industry is characterized by a particularly short shelf life . . . .").

Virtual worlds in particular may be able to take advantage of debt financing. Virtual worlds have longer useful lives than most software. *Ultima Online*, one of the first graphical virtual worlds, opened its doors in 1997 and is still in operation.<sup>87</sup> Virtual worlds are also unlikely to be supplanted by sequels. Sequels for virtual worlds tend to do poorly because the player base of a company must give up its investment in the original world to transition to the follow up. Thus, even high-profile sequel worlds (for example, *Everquest II* and *Asheron's Call II*) have done poorly compared to the success of the originals.<sup>88</sup>

In addition, virtual world license fees provide a regular, steady income stream to service a loan. Players do not buy the software once.<sup>89</sup> Rather, they make periodic (often monthly) license payments. Players are likely to keep paying these license fees because they are locked in to virtual worlds and cannot leave with their virtual property and the communities they have come to value.<sup>90</sup> While traditional game developers must compete on an open market with each subsequent title, a virtual world provider can essentially hold the property and communities that a player develops in-game hostage, ensuring the monthly payment of a license fee.<sup>91</sup>

Successful virtual world creators expand the original world rather than replace it. For example, game developer Mythic Entertainment expanded its virtual world *Dark Age of Camelot* and eventually migrated its entire user base to an updated client, such that it was able to drop support for the game client as first shipped.<sup>92</sup> Similarly, virtual world titan Blizzard Entertainment has continued to expand and upgrade its virtual world *World of Warcraft* over the five years that the game has been open.<sup>93</sup> Today's game experience uses technology

<sup>87</sup> See *Ultima Online's Tenth Anniversary Announcement*, <http://www.uoherald.com/tenth> (last visited Sept. 13, 2009).

<sup>88</sup> See Kyle Horner, *On the subject of risky MMO sequel*, May 3, 2008, <http://www.massively.com/2008/05/03/on-the-subject-of-risky-mmo-sequels> (enumerating the lesser showing of sequels to *Everquest*, *Asheron's Call*, and *Lineage*). See also Brendan Drain, *Should MMOs have sequels?* June 11, 2008, <http://www.massively.com/2009/06/11/should-mmos-have-sequels>.

<sup>89</sup> Although there is some variation on this point. For example, the virtual world *Guild Wars* does not rely on monthly fees, but instead relies on sales of expansion packs. *Dungeons & Dragons Online* has just moved from a monthly fee schedule to a "freemium" model. However, the monthly license model remains the most successful among U.S. virtual worlds.

<sup>90</sup> See Vivendi Games, *Introduction to Vivendi Games*, Investors' Report filed with Securities and Exchange Commission 15 (June 2006), <http://www.sec.gov/Archives/edgar/data/1127055/000095012306007628/y22210exv99w1.htm> ("Advantages that accrue to highly successful [virtual worlds include] high consumer switching costs — the player has to leave their characters and friends!").

<sup>91</sup> See *id.*

<sup>92</sup> See Sanya Thomas, *1.73F — Farewell, Classic Client!*, Nov. 8, 2004, [http://www.camelotherald.com/news/news\\_article.php?storyid=1776](http://www.camelotherald.com/news/news_article.php?storyid=1776) (noting that the original "Classic" client will no longer function after the 1.73 expansion patch).

<sup>93</sup> See *World of Warcraft, Current Patch Notes*, <http://www.worldofwarcraft.com/patchnotes/?rhtml=y>.



entirely unavailable at launch. Moreover, due to the need to patch, update, alter, and adjust the virtual world on an ongoing basis, virtual world providers are more likely to reserve to themselves rights in intellectual property that could serve as valuable collateral.

Further, like independent film financing efforts, virtual world providers are likely to have overseas licenses similar to film pre-sales. These overseas transactions may provide a baseline for valuing the game as collateral for a loan. Unlike many video games, virtual worlds are national (rather than international) phenomena because many are locally hosted.<sup>94</sup> The community nature of play means that language matters; and “lag,” or low response between the player’s computer and the game server, is best reduced by having local servers. As a result, virtual world providers often seek local partners for overseas markets.<sup>95</sup> Once the value of the license has been established by successful transactions, the developer has a starting point for valuing the game as collateral.

The development of a clear legal framework for dealing with virtual assets is also likely to be useful for banks and regulators. Banks lend on established cash flow.<sup>96</sup> But collateral matters because banks seek as many routes to repayment as possible, especially where a project is untried or innovative. The more novel the project, the more clarity (and collateral) a bank will desire. Regulators also are influenced by collateral, and the opinions of regulators necessarily impact banks. A bank will wish to appear fully secured on a loan to avoid a regulator’s suggestion that the bank keep additional reserves due to the riskiness of the transaction.<sup>97</sup> Such suggestions can have significant influence on a bank, even in the absence of any formal enforcement action.

In sum, established lenders will be most comfortable working from their experience in project finance in other fields.<sup>98</sup> Equity funding will remain popular. But as the games industry matures and reputations and profits increase, banks will be more willing to offer debt finance. Developers may retain sufficient rights to themselves to act as attractive collateral. And while the volatile nature of software sales in general may prevent banks from offering debt finance to game developers, the longer term, more stable nature of virtual worlds may provide greater predictability to banks. What is needed above all is

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<sup>94</sup> See Mia Consalvo, *Localization Meets Culturalization*, Mar. 5, 2008, [http://terranova.blogs.com/terra\\_nova/2008/03/localization-me.html](http://terranova.blogs.com/terra_nova/2008/03/localization-me.html).

<sup>95</sup> See Aleister Kronos, *Second Life Brazil Launches 23rd April*, Apr. 14, 2007, <http://www.3pointd.com/20070414/second-life-brazil-launches-23rd-april>.

<sup>96</sup> See Linda Gorman, *Bringing Racial Quotas to Bank Lending in Colorado*, INDEPENDENCE INST., May 23, 1996, available at [http://www.i2i.org/main/article.php?article\\_id=474](http://www.i2i.org/main/article.php?article_id=474) (“[B]ank lending depends on credit history, cash flow, financial strength, the industry a business is in, collateral, size, and the quality of management.”).

<sup>97</sup> See 12 C.F.R. § 560.160(b) (2009) (requiring banks to classify assets and “establish adequate valuation allowances or charge-offs, as appropriate, consistent with generally accepted accounting principles and the practices of the federal banking agencies.”).

<sup>98</sup> See *Comerica Bank Finances Flagship Studios*, *supra* note 54.

a stable set of rules for perfection, priority, enforcement, and treatment in bankruptcy for these assets, so that banks can be sure what they are getting if they should decide to take a security interest in virtual assets as collateral. The following section addresses these issues.

### III. VIRTUAL ASSETS IN BANKRUPTCY

An example may prove useful to anchor the following discussion on the treatment of various types of assets related to virtual worlds in bankruptcy. Suppose a business in a virtual world, called PixelDolls, sells digital clothing to players in the world.<sup>99</sup> Players purchase digital clothing with virtual currency, and then wear the clothing on their avatars. If PixelDolls were to go bankrupt, there would be three distinct categories of assets available for creditors (or, before bankruptcy, PixelDolls might use these assets as collateral). First, intellectual property — the copyrighted bitmaps, wireframes, etc. — that represent the creative effort in making the clothes. Second, there would be intangible non-IP assets, or “virtual property,” that would consist of the virtual currency held by the business, its digital inventory, and the virtual real estate on which the business operated. The third asset would be the customer service lists and information that PixelDolls gathered about its customers. This section discusses each type of intangible asset in the context of bankruptcy and virtual worlds.

#### A. *Intellectual Property*

There are two distinct issues for the treatment of the intellectual property that inheres in virtual worlds. The first is how security interests in intellectual property are created pre-bankruptcy; the second is how intellectual property licenses are treated in bankruptcy. The following sub-parts discuss these rules as well as applications to the specific context of virtual worlds.

##### 1. Security Interests in Intellectual Property

The rules for perfection of security interests in the intellectual property inherent in software are nonsensical but stable enough to merit brief mention. Generally, a lender may take a security interest in the intellectual property inherent in software by concluding a security agreement with the debtor and properly filing a financing statement covering the intellectual property in software as a “general intangible.”<sup>100</sup>

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<sup>99</sup> This example is based on a real business that has gained a significant following in the virtual world Second Life. See PixelDolls, <http://pixeldolls.wordpress.com/>.

<sup>100</sup> See *In re Peregrine Ent.*, 116 B.R. 194 (C.D. Cal. 1990) (holding that section 205 of the Copyright Act preempts the UCC); Lupica, *supra* note 9, at 367–72 (outlining the preemptive nature of copyright and patent law over the UCC, but not trademark law). See also Kenneth N. Klee & David A. Fidler, *Recent Developments Concerning Intellectual Property and Bankruptcy*, SK092 ALI-ABA 355 (2005) (discussing the interplay between the UCC and intellectual property

The fighting question is whether state (Article 9) or federal (Copyright or Lanham Act) filing systems must be used to give notice to subsequent lenders that the intellectual property is encumbered. Security interests in unregistered copyrights and trademarks must be filed with the state UCC filing office, generally the Secretary of State.<sup>101</sup> Security interests in federally registered copyrights must be filed with the Copyright Office.<sup>102</sup> State filings are sufficient to perfect security interests in patents against subsequent lenders, but a federal filing is necessary to prevent a subsequent purchaser from priming the bank's security interest.<sup>103</sup> These rules have been subject to many articles and much debate.<sup>104</sup> All that can be said for them is that they currently seem generally accepted, and stability perhaps trumps sanity in law.

For a virtual world game god or for the owner of a business that operates inside a virtual world, these rules are most often of concern when a general intangibles collateral description in a security agreement sweeps the copyrights, patents, and trademarks of a company into the hands of a foreclosing lender. These collateral descriptions are common, and thus issues of intellectual property will crop up often in bankruptcies. The most important components of creating a security interest in intellectual property are attention to possible issues of federal preemption (which, as above, sometimes necessitate dual filing) and careful description of the intellectual property interest encumbered in the security agreement.

## 2. Intellectual Property Licenses in Bankruptcy

This section examines what happens to the web of intellectual property licenses within a virtual world when the world or a business inside it goes bankrupt. Bankruptcy Courts are likely to treat interests in avatars, accounts, and

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law); Juliet M. Moringiello, *False Categories in Commercial Law: The (Ir)relevance of (In)tangibility*, 35 FLA. ST. U. L. REV. 119 (2007) [hereinafter *False Categories*] (discussing the notion of tangibility with respect to property rights).

<sup>101</sup> See *In re World Auxiliary Power Co.*, 303 F.3d 1120, 1132 (9th Cir. 2002) (holding that security interests in registered copyrights are governed by federal procedures, but security interest in unregistered copyright are perfected by state UCC filing). See also Marjorie Chertok & Warren E. Agin, *Restart.Com: Identifying, Securing and Maximizing the Liquidation Value of Cyber-Assets in Bankruptcy Proceedings*, 8 AM. BANKR. INST. L. REV. 255, 268–69 (2000) (discussing methods for perfecting interests in developing software by securing an interest in the underlying copyright); and *In re Avalon Software Inc.*, 209 B.R. 517 (Bankr. D. Ariz. 1997) (“This court holds that a product to which a copyright attaches, such as computer software, acquires its character as ‘copyrightable’ when the intellectual work is created.”) *rev’d on other grounds by In re World Auxiliary Power*.

<sup>102</sup> *In re Avalon Software Inc.*, 209 B.R. at 522.

<sup>103</sup> *In re Cybernetic Services, Inc.*, 252 F.3d 1039 (9th Cir. 2001) (affirming Bankruptcy Appellate panel determination that state law filing was sufficient to perfect security interest, but noting that such a secured party would be required to yield to a subsequent assignee of the patent right under federal law).

<sup>104</sup> See, e.g., *False Categories*, *supra* note 100.

other virtual assets as intellectual property licenses.<sup>105</sup> Game gods typically own much of the intellectual property that makes up the world itself, and license this content to players. By contrast, players that run businesses in virtual worlds can own intellectual property interests in user-generated content that they license back to the game world and to their customers.

Different virtual worlds offer different regimes governing user-generated content. Open worlds like Second Life or There.com permit users varying abilities to create and retain IP rights.<sup>106</sup> Closed worlds like *World of Warcraft* or *Eve Online* do not permit user-generated content.<sup>107</sup> Some worlds, like NCsoft's *City of Heroes*, are in between — for example, users can create content with the City of Heroes Mission Architect, but immediately convey those intellectual property interests to the game world creators.<sup>108</sup>

If a virtual world files for bankruptcy, players may seek to retain their rights under their licenses, or the game god may seek to retain its licenses in user-generated content. Section 365 of the Bankruptcy Code permits the trustee to assume or reject executory contracts.<sup>109</sup> A rejection by the trustee relegates the non-debtor to an unsecured claim for that breach.<sup>110</sup> The assumption and rejection portions of the Code therefore permit the debtor to treat executory contracts as breached as of the date of bankruptcy filing.<sup>111</sup>

<sup>105</sup> See *id.* at 125 and *infra* note 162.

<sup>106</sup> Second Life's Terms of Service § 3.2, <http://secondlife.com/corporate/tos.php> ("You retain copyright and other intellectual property rights with respect to Content you create in Second Life, to the extent that you have such rights under applicable law. However, you must make certain representations and warranties, and provide certain license rights, forbearances and indemnification, to Linden Lab and to other users of Second Life.") (last visited Sept. 13, 2009).

<sup>107</sup> World of Warcraft's End User License Agreement ¶ 4, <http://www.worldofwarcraft.com/legal/eula.html> (last visited Sept. 13, 2009).

<sup>108</sup> See Mission Architect Overview, [http://cityofheroes.com/game\\_info/mission\\_architect/overview.html](http://cityofheroes.com/game_info/mission_architect/overview.html) (last visited Oct. 16, 2009); City of Heroes User Agreement, <http://us.ncsoft.com/en/legal/user-agreements/city-of-heroes-user-agreement.html> ("By submitting Member Content or creating Member Content . . . you . . . acknowledge and agree that such Member Content is the sole property of NC Interactive.") (last visited Oct. 26, 2009).

<sup>109</sup> See 11 U.S.C. § 365(a) (2008) ("Except as provided in sections 765 and 766 of this title and in subsections (b), (c), and (d) of this section, the trustee, subject to the court's approval, may assume or reject any executory contract or unexpired lease of the debtor.")

<sup>110</sup> See THOMAS M. WARD, INTELLECTUAL PROPERTY IN COMMERCE § 4:7, at 351 (2005) ("The breach that results from rejection is deemed to be the debtor's prebankruptcy breach but it gives the nonbankrupt party a claim against the estate."); 11 U.S.C. § 365(g) (2009) ("Except as provided in subsections (h)(2) and (i)(2) of this section, the rejection of an executory contract or unexpired lease of the debtor constitutes a breach of such contract or lease . . . immediately before the date of the filing of the petition."); see also *In re Penn Traffic Co.*, 524 F.3d 373, 378 (2d Cir. 2008) ("[R]ejection under 11 U.S.C. § 365(a) simply means that the court will permit the debtor to breach the contract, with the result that the contractual obligations will be reduced to general unsecured claims for prepetition damages pursuant to 11 U.S.C. § 365(g)(1).") (citing *In re Child World, Inc.*, 147 B.R. 847, 852 (Bankr. S.D.N.Y. 1992)).

<sup>111</sup> See WARD, *supra* note 110.

Because intellectual property licenses are often the core of a business, such licenses are treated differently from garden-variety executory contracts in bankruptcy. Under certain circumstances a non-debtor licensee can force the debtor-licensor to honor an executory intellectual property license under § 365(n) of the Bankruptcy Code. Similarly, a non-debtor intellectual property licensor may prohibit the assumption and assignment of the debtor-licensee's rights under § 365(c).

Businesses that operate within a virtual world or users with valuable accounts or digital assets may wish to use these provisions to attempt to retain their intellectual property or, in rare cases, retain their accounts and items. The following sub-parts explore these possibilities.

#### a. Section 365 and Executory Contracts

Section 365 applies only to executory contracts and unexpired leases. The Bankruptcy Code does not define the term "executory." Most courts have adopted Professor Countryman's well-known definition, which defines a contract as executory if it is a:

[C]ontract under which the obligation of both the bankrupt and the other party to the contract are so far unperformed that the failure of either to complete performance would constitute a material breach excusing the performance of the other.<sup>112</sup>

The first problem facing a user or creator of virtual worlds seeking to enforce intellectual property licenses is that such contracts are usually quite limited in scope. Players of virtual worlds pay on a month-to-month or semi-annual basis, and the license agreements can be terminated by either player or virtual world creator at will.<sup>113</sup> Such contracts are executory because there is an obligation on the part of both the user and the god not to sue one another for infringement of any IP licenses they may hold.<sup>114</sup> But this legal distinction may not matter. In practice, "a contract may not be assumed under Section 365 if it has already

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<sup>112</sup> Vern Countryman, *Executory Contracts in Bankruptcy: Part I*, 57 MINN. L. REV. 439, 460 (1973).

<sup>113</sup> See World of Warcraft's End User License Agreement, *supra* note 107, at ¶ 7 ("This License Agreement is effective until terminated. *You may terminate the License Agreement at any time* by (i) permanently destroying all copies of the Game in your possession or control; (ii) removing the Game Client from your hard drive; and (iii) notifying Blizzard of your intention to terminate this License Agreement. *Blizzard may terminate this Agreement at any time for any reason or no reason.* Upon termination for any reason, all licenses granted herein shall immediately terminate and you must immediately and permanently destroy all copies of the Game in your possession and control and remove the Game Client from your hard drive." (emphasis added)).

<sup>114</sup> *Id.*

expired according to its terms.”<sup>115</sup> If a contract is terminated pre-petition, there is nothing left to assume.<sup>116</sup> And “executoriness is determined as of the petition date.”<sup>117</sup> Therefore, if such a player/creator license is legitimately cancelled prior to bankruptcy, there is no license to assume or reject.<sup>118</sup> As a result, run-of-the-mill player licenses are unlikely to reach even the first stages of § 365 analysis, since a bankrupt virtual world creator that wishes to turn off the world, or sell it, will cancel all player licenses prior to the filing date.

However, there are several sorts of interests commonly found in virtual worlds that may invoke § 365 analysis. First, virtual world creators reserve for themselves robust licenses in user-generated content. For example, NCsoft’s *City of Heroes* game permits players to design missions, incorporate stories, and add other user-generated content to the game.<sup>119</sup> In its End User License Agreement (EULA), NCsoft not only claims sole ownership of all user-generated content, but further provides that if it is prevented by operation of law from claiming exclusive ownership:

[Y]ou hereby grant (or you warrant that the owner of such Member Content has expressly granted) to NC Interactive and its related Game Content Providers a non-exclusive, universal, perpetual, irrevocable, royalty-free, sublicenseable right to exercise all rights of any kind or nature associated with such Member Content, and all ancillary and subsidiary rights thereto, in any languages and media now known or not currently known.<sup>120</sup>

Such a permanent license is likely to survive into bankruptcy and to be determined executory for purposes for triggering § 365 analysis.

Similarly, some virtual worlds grant “founders’ licenses” or similar lifetime licenses, in which the player pays a one-time fee in return for access to the virtual world for as long as it remains commercially available. For example, game developer Turbine noted: “The Lifetime Membership will afford a Founder . . . with online access . . . so long as the service provider determines, in its

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<sup>115</sup> *Counties Contract & Constr. Co. v. Constitution Life Ins. Co.*, 855 F.2d 1054, 1061 (3d Cir. 1988).

<sup>116</sup> 2 NORTON BANKR. LAW & PRAC. § 46.18 (William L. Norton, Jr. et al eds., 3d ed. 2009) (citing *Moody v. Amoco Oil Co.*, 734 F.2d 1200 (7th Cir. 1984)).

<sup>117</sup> *In re Riodizio Inc.*, 204 B.R. 417, 421 (Bankr. S.D.N.Y. 1997)

<sup>118</sup> *Counties Contract & Constr. Co.*, 855 F.2d at 1061.

<sup>119</sup> Mission Architect allows players to make their own storylines for players to follow and villains to fight. See Mission Architect Overview, *supra* note 108.

<sup>120</sup> City of Heroes User Agreement, <http://us.ncsoft.com/en/legal/user-agreements/city-of-heroes-user-agreement.html> (last visited Oct. 26, 2009).

sole discretion, to make the Game commercially available.”<sup>121</sup> Now-defunct game designer Flagship Studios, creator of *Hellgate London*, made a similar offer: “Lifetime Subscription refers to the lifetime of the online subscription component for Hellgate London, not the user’s lifetime.”<sup>122</sup> Given such language, a virtual world creator that is reorganizing rather than liquidating may be subject to a Founder’s ability to continue its rights under § 365(n), as noted below.

b. Assumption and Assignment: Exclusive and Non-Exclusive Licenses

This subpart examines the ability of the debtor-licensee to assume or assign intellectual property interests. In the virtual world context, the debtor-licensee may either be a bankrupt virtual world that desires to assign its IP licenses in user-generated content to a potential buyer, or a debtor-user within a virtual world that seeks to assume and assign rights in its account, avatar, or other virtual assets.<sup>123</sup>

Section 365(c) restricts the ability of the debtor-licensee to assume or assign contracts over the non-debtor licensor’s objection:<sup>124</sup>

[T]he trustee may not assume or assign any executory contract or unexpired lease of the debtor, whether or not such contract or lease prohibits or restricts assignment of rights or delegation of duties, if . . . (1)(A) applicable law excuses a party, other than the debtor, to such contract or lease from accepting performance from or rendering performance to, an entity other than the debtor . . . and (B) such party does not consent to such assumption or assignment.<sup>125</sup>

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<sup>121</sup> Lord of the Rings Online, *originally available at* <http://www.lotro.com/founder>, *now available at* <http://web.archive.org/web/20070305082130/www.lotro.com/founder> (archived on Mar. 5, 2007) (last visited Oct. 16, 2009).

<sup>122</sup> Hellgate: London Beta Account, *originally available at* <http://www.hellgatelondon.com/beta>, *now available at* <http://web.archive.org/web/20071011194214/http://www.hellgatelondon.com/beta> (archived on Oct. 11, 2007) (last visited Oct. 16, 2009).

<sup>123</sup> For an excellent treatment of intellectual property interests in bankruptcy, see generally, Madlyn Gleich Primoff & Erica G. Weinberger, *E-Commerce and Dot-Com Bankruptcies: Assumption, Assignment and Rejection of Executory Contracts, Including Intellectual Property Agreements, and Related Issues Under Sections 365(C), 365(E) and 365(N) of the Bankruptcy Code*, 8 AM. BANKR. INST. L. REV. 307 (2000).

<sup>124</sup> *Id.* at 321; see also *In re Catapult Entm’t, Inc.*, 165 F.3d 747, 750 (9th Cir. 1999) (summarizing § 365(c) as barring “a debtor in possession from *assuming* an executory contract without the nondebtor’s consent where applicable law precludes *assignment* of the contract to a third party.”).

<sup>125</sup> 11 U.S.C. § 365(c) (2009).

Copyright law is “applicable law” that excuses the licensor’s performance to an assignee, since interests in copyright cannot be conveyed by parties other than the owner.<sup>126</sup> However, if the owner of the copyright has transferred ownership to a third party through grant of an exclusive license, then “applicable law” will not excuse the nondebtor-licensor from accepting performance from a third party.<sup>127</sup> This is based on § 101 of the Copyright Act, which states:

A “transfer of copyright ownership” is an assignment, mortgage, exclusive license, or any other conveyance, alienation, or hypothecation of a copyright or any of the exclusive rights comprised in a copyright, whether or not it is limited in time or place of effect, but not including a nonexclusive license.<sup>128</sup>

Thus, a debtor-licensee may unconditionally assume and assign an exclusive copyright license, since the nondebtor-licensor has conveyed a property interest (the exclusive license).<sup>129</sup> But a debtor-licensee cannot assume and assign a non-exclusive license in a jurisdiction that follows the “hypothetical test” unless the licensor agrees.<sup>130</sup> This test bars a debtor-licensee from assuming the license if applicable nonbankruptcy law would bar an assignment to a hypothetical third party, whether or not assignment is actually likely to happen.<sup>131</sup>

A minority of circuits and a majority of bankruptcy courts apply the “actual test,” which asks whether the contract interest would actually be assigned, or whether the intellectual property would be used solely by the debtor-licensee.<sup>132</sup> Under the actual test, a virtual world debtor-licensee could assume a

<sup>126</sup> Primoff & Weinberger, *supra* note 123, at 325 n.76; *see also* 17 U.S.C. § 106 (2009) (stating that the owner of a copyright under Title 17 “has the exclusive right to do and to authorize” uses of the work); Landau v. Cosmetic & Reconstructive Surgery Ctr., Inc., 158 F.R.D. 117, 119 (N.D. Ill. 1994) (“[U]nder the copyright laws, only the owner of the copyright may transfer rights to copyrighted work.”).

<sup>127</sup> Primoff & Weinberger, *supra* note 123, at 326; *see also* 17 U.S.C. § 101 (2009); 17 U.S.C. § 201(d)(2) (2008) (“The owner of any particular exclusive right is entitled, to the extent of that right, to all of the protection and remedies accorded to the copyright owner by this title.”).

<sup>128</sup> 17 U.S.C. § 101.

<sup>129</sup> *See* Primoff & Weinberger, *supra* note 123, at 326. *See also supra* notes 125–128.

<sup>130</sup> *See* 11 U.S.C. § 365(c).

<sup>131</sup> The Third, Fourth, Ninth, and Eleventh Circuits all follow the plain meaning, or hypothetical test, for determining whether § 365(c) bars assumption. *See* 2 NORTON BANKR. LAW & PRAC. § 46.20 n.18 (citing *In re Sunterra Corp.*, 361 F.3d 257 (4th Cir. 2004) (assumption of copyright licensing prohibited); *In re Catapult Entertainment, Inc.*, 165 F.3d 747 (9th Cir. 1999); *In re James Cable Partners, L.P.*, 27 F.3d 534 (11th Cir. 1994) (assumption of contract permitted as no applicable law rendered performance nondelegable); *Matter of West Electronics Inc.*, 852 F.2d 79 (3d Cir. 1988) (assumption of contract prohibited since contract in question could not be assigned under applicable non-bankruptcy law without consent)).

<sup>132</sup> The First Circuit, and many lower courts, abide by the so-called “actual test” that allows assumption if no transfer is going to take place. *See* 2 NORTON BANKR. LAW & PRAC. § 46.20 n.22 (citing *Institut Pasteur v. Cambridge Biotech Corp.*, 104 F.3d 489 (1st Cir. 1997); *Texaco Inc. v.*



non-exclusive license if the court found that the licensee would not actually assign the interest to a third party.<sup>133</sup>

c. Enforcement of Intellectual Property Licenses under § 365(n)

The prior sub-part examined the risk that a debtor-licensee would not be able to continue to use intellectual property that was licensed to it by a nonbankrupt entity. This sub-part examines the opposite scenario to determine whether nonbankrupt licensees can enforce their rights under license contracts rejected by bankrupt licensors. One possible scenario would concern the bankruptcy of a virtual world in which users had built up value in their avatars, virtual objects, or accounts.<sup>134</sup> In such a case, players might elect to enforce their rights under § 365(n) against a bankrupt virtual world provider.<sup>135</sup>

Section 365(n) notes:

If the trustee rejects an executory contract under which the debtor is a licensor of a right to intellectual property, the licensee may elect--

(A) [to terminate the contract]; or

(B) to retain its rights . . . under such contract . . . as such rights existed immediately before the case commenced, for []

(i) the duration of the contract; and

(ii) any period for which such contract may be extended by the licensee as of right under applicable nonbankruptcy law.<sup>136</sup>

If the nondebtor licensee elects to enforce her rights in the rejected IP license, the trustee must make the IP covered by the license available to the nondebtor

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LA Land & Exploration Co., 136 B.R. 658, 668–71 (M.D. La. 1992); *In re Aerobox Composite Structures, LLC*, 373 B.R. 135 (Bankr. D. N.M. 2007); *Matter of GP Exp. Airlines, Inc.*, 200 B.R. 222, 231–33 (Bankr. D. Neb. 1996); *Matter of American Ship Bldg. Co., Inc.*, 164 B.R. 358, 362–63 (Bankr. M.D. Fla. 1994); *In re Fastrax, Inc.*, 129 B.R. 274, 277 (Bankr. M.D. Fla. 1991); *In re Hartex Enters. Inc.*, 117 B.R. 865, 871–73 (Bankr. W.D. Tex. 1990).

<sup>133</sup> *Id.*

<sup>134</sup> On May 28, 2009, for example, there were \$L 5,851,223,689 in play in Linden Lab's Second Life, with an estimated value of USD \$24,266,493.58, as well as value in the goods and items users own in-world. See Economic Statistics, <http://secondlife.com/statistics/economy-data.php> (last visited Sept. 12, 2009).

<sup>135</sup> Thanks to Ken Klee for this idea and for the suggestions which sparked this section.

<sup>136</sup> 11 U.S.C. § 365(n) (2008).

licensee and the nondebtor licensee must continue to pay royalties (including license fees) for use of the IP.

This provision has been rarely discussed in the caselaw. Congress enacted § 365(n) in response to the Fourth Circuit's decision in *In re Richmond Metal Finishers, Inc.* (commonly called *Lubrizol*), in which a non-debtor licensee lost its non-exclusive license to utilize a metal coating process owned by the debtor, Richmond Metal Finishers ("RMF").<sup>137</sup> When RMF filed for Chapter 11 bankruptcy in 1983, it sought to reject the license agreement under § 365(a).<sup>138</sup> The bankruptcy court approved the rejection.<sup>139</sup> That decision was reversed by the district court, as it found that the agreement was not executory and, alternatively, that if it was, a rejection could not benefit the estate, since the license was non-exclusive.<sup>140</sup> The Fourth Circuit reversed yet again, finding that (a) the contract was executory, as there were material duties on both sides, and (b) that approval of a § 365 rejection gives deference to the sound business decision of the debtor.<sup>141</sup> The statute was unambiguous and did not contemplate the effect of rejection on the non-debtor. The court recognized the "general chilling effect upon the willingness of such parties to contract" under these facts, but decided that the express language of the statute should prevail regardless.<sup>142</sup> Congress responded with the enactment of § 365(n) in 1988, with the goal of permitting a non-debtor licensee to continue use of critical intellectual property despite the licensor's bankruptcy. Thus, the guiding principle of § 365(n) is that an IP-licensee who has built its business model on the license may require a debtor-licensor to continue to honor the license.<sup>143</sup>

If a player's EULA is considered executory, then at first blush it may appear that she may maintain her rights under the EULA despite the bankruptcy and subsequent rejection of the contract by the virtual world creator. As with rights to assume and assign, however, the executoriness of the contract may not matter if the debtor-licensor has a unilateral contractual right to terminate the license agreement at will—as most game gods do.<sup>144</sup> If the debtor exercises her

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<sup>137</sup> *Lubrizol Enterprises, Inc. v. Richmond Metal Finishers, Inc.*, 756 F.2d 1043 (4th Cir. 1985).

<sup>138</sup> *Id.* at 1045.

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.* at 1045–48.

<sup>142</sup> *Id.* at 1048.

<sup>143</sup> See *In re CellNet Data Systems, Inc.*, 327 F.3d 242 (3d Cir. 2003) (Section 365(n) used to require debtor-licensor to honor license regarding wireless data network for meter reading); *In re Prize Frize, Inc.*, 32 F.3d 426 (9th Cir. 1994) (license fees are "royalties" under the terms of the statute, and nondebtor-licensee must continue to pay them in order to retain license); *In re Ron Matusalem & Matusa of Florida*, 158 B.R. 514, 522 (Bankr. S.D. Fla. 1993) ("The court also concludes that . . . the proposed rejection would utterly destroy the business of Inc. and with it the livelihood of Inc.'s principals and employees.").

<sup>144</sup> See, e.g., *Matter of Interco, Inc.*, 135 B.R. 634 (Bankr. E.D. Mo. 1992) (debtor could terminate sale arrangement at will; thus sale arrangement was not executory); *In re W.S.M. Enterprises*,

right to terminate the at-will license agreement prior to filing, the license is not executory.<sup>145</sup> Post-petition, intervening circumstances (such as the election of the debtor to exercise its contractual right to terminate an agreement) may cause a court to deem the contract non-executory because no future obligations exist under the contract, even though executoriness is ordinarily measured as of the bankruptcy date.<sup>146</sup> The question may be academic, however, because a prevailing non-debtor licensee under § 365(n) can only retain her rights for the “duration of the contract.” Many players only have month-to-month licenses, and even those who pay up in advance only secure licenses for six months to a year.<sup>147</sup> Thus, the vast majority of player licenses will have expired by the time a bankruptcy reaches the assumption or rejection phase.

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Inc., 102 B.R. 461 (Bankr. D. Md. 1989) (“[W]here the agreement was terminable at will, and the termination was within the scope of the authority of the debtor-in-possession, the bankruptcy court will not require the debtor to go through the meaningless ceremony of obtaining a confirmatory order of court. . . . Equity will not enforce a contract specifically which, by its terms . . . the defendant may terminate immediately [including any] contract terminable at the will of the defendant. According to this analysis, the agreement in the instant case is not an executory contract.”) (citations omitted). Although a non-debtor’s exercise of a terminable-at-will clause due to the debtor’s bankruptcy would violate the automatic stay and the Code’s prohibition on *ipso facto* clauses, see 11 U.S.C. § 365(e)(1)(A),(B),(C); *In re Elder Beerman Stores Corp.*, 195 B.R. 1012 (Bankr. S.D. Ohio 1996) (non-debtor’s at-will termination violates automatic stay); see also *In re Ernie Haire Ford*, 403 B.R. 750 (M.D. Fla. 2009) (court refused to permit enforcement of terminable-at-will clause), courts will generally not prevent a debtor from exercising its terminable-at-will clauses unless some other interest (such as the preservation of employee benefits) is in play, as noted above.

<sup>145</sup> See NORTON BANKRUPTCY LAW AND PRACTICE § 46:18 (3d ed. 2008) (“ . . . Code § 365 does not refer to other types of executory contracts or leases that are terminated prior to bankruptcy.”).

<sup>146</sup> See *In re Spectrum Information Tech., Inc.*, 193 B.R. 400, 404 (Bankr. E.D.N.Y. 1996) (“The rationale of these decisions stems from the widely accepted Countryman definition that an executory contract is one under which substantial performance remains on *both* sides . . . . Although the agreement may have been executory on the filing date . . . at the date of the Debtor’s motion to reject . . . Marchione no longer had any material unperformed obligations under the Employment Agreement.”); *In re Total Transp. Service, Inc.*, 37 B.R. 904, 906 (Bankr. W.D. Ohio 1984) (“If the employer ceases operation of the facility, there can be no future performance by either the employer or union members under the collective bargaining agreement of such obligations. . . . [The] agreement before us is not executory because future performance pursuant to it will not take place.”); *Gloria Manufacturing Corp. v. International Ladies Garmet Workers’ Union*, 734 F.2d 1020 (4th Cir. 1984); *In re Government Securities Corp.*, 101 Bankr. 343 (Bankr. S.D. Fla. 1989); *In re Pesce Baking Co., Inc.*, 43 B.R. 949 (Bankr. N.D. Ohio 1984). Other courts will not recharacterize the contract as non-executory if the debtor accepts the benefits of post-petition performance of a contract that was executory as of the filing date. See *Penn Traffic Co. V. COR Route 5 Co.*, 2005 U.S. Dist. LEXIS 20407 \*18-19 (S.D.N.Y. 2005) (debtor’s inducement of post-petition performance of a contract pending assumption or rejection will not render executory contract non-executory).

<sup>147</sup> See, e.g., *World of Warcraft Website, Subscription Options*, available at: <http://www.wow-europe.com/en/requirements/subscription.html> (detailing month-to-month, three-month, and six-month recurring subscriptions).

Players seeking to retain their licenses during the bankruptcy of a virtual world creator face another hurdle as well. “By rejecting the licensing agreement, the debtor is relieved from performing any affirmative duties under the contract.”<sup>148</sup> Section 365(n)(1)(B) states that a nondebtor licensee may retain her rights “excluding any other right under applicable nonbankruptcy law to specific performance of such contract.”<sup>149</sup> If the nondebtor licensee elects to retain her rights in the face of the trustee’s rejection, the trustee’s sole obligations are to honor any exclusivity agreements, to permit the use of the intellectual property, and upon written request, allow the nondebtor licensee access to the intellectual property, if that is covered by the contract.<sup>150</sup> There is no obligation that the debtor licensor perform non-license portions of the contract. “Section 365 of the Bankruptcy Code was designed to strike an equitable balance between protecting the interests of the non-debtor licensee with regard to continued use of the intellectual property and permitting the debtor-licensor to avoid affirmative obligations that burden its bankruptcy estate.”<sup>151</sup> Thus, “the licensee cannot require specific performance of any other obligations under the license, such as a licensor’s duty to provide service, maintenance, or future upgrades and improvements.”<sup>152</sup>

This distinction may matter a great deal in virtual worlds, because the contract permitting access to the virtual world covers both an intellectual property license with respect to game content, and non-IP rights with respect to access to the virtual world’s game servers. Even if a user retains her rights under § 365(n) against the trustee’s rejection, the virtual world provider may be under no obligation to continue to permit the virtual world user to access the world.

This difficulty is compounded by the twin problems of upgrades and compatibility. As Ken Klee noted, “[t]he licensee’s ability to retain a software license may be a hollow victory if the software is rendered obsolete by postpetition upgrades to which section 365(n) protection does not extend.”<sup>153</sup> Virtual worlds are living spaces. Virtual world creators constantly provide patches and

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<sup>148</sup> Peter S. Menell, *Licensor Bankruptcy*, in 4-19A NIMMER ON COPYRIGHT § 19A.06 (Bender 2009).

<sup>149</sup> 11 U.S.C. § 365(n)(1)(B) (2008).

<sup>150</sup> See 11 U.S.C. § 365(n)(3) (2008) (“If the licensee elects to retain its rights, as described in paragraph (1)(B) of this subsection, then on the written request of the licensee the trustee shall — (A) to the extent provided in such contract, or any agreement supplementary to such contract, provide to the licensee any intellectual property (including such embodiment) held by the trustee; and (B) not interfere with the rights of the licensee as provided in such contract, or any agreement supplementary to such contract, to such intellectual property (including such embodiment) including any right to obtain such intellectual property (or such embodiment) from another entity.”).

<sup>151</sup> See Primoff & Weinberger, *supra* note 123, at 338.

<sup>152</sup> *Id.* at 342.

<sup>153</sup> Kenneth N. Klee, Isaac M. Pachulski & David Fuller, *The Effect of Bankruptcy on Intellectual Property Rights*, SD24 ALI-ABA 69, 74 (1998).

updates to the original world.<sup>154</sup> Given the speed and frequency of updates, a user of a virtual world may find herself only able to use an out-of-date version of the software that is not compatible with the version of the world being used by all other users. Not only are the upgrades important to improving the experience of the world, but because virtual worlds are networked, an un-upgraded client soon becomes unable to interact with upgraded versions of the product.

Despite these limitations, § 365(n) may be useful if a virtual world provider decides to reorganize rather than liquidate. Reorganization is particularly likely where a virtual world is merely one project in a larger company. For example, corporate virtual world Web.Alive survived the bankruptcy of parent company Nortel.<sup>155</sup> In a case where the virtual world will remain open through bankruptcy, users might enforce licenses that the company cannot simply terminate at will. Players with “founders’ accounts,” which remain in effect for as long as the world remains commercially available, might be able to enforce their licenses in bankruptcy over the rejection of the virtual world provider.<sup>156</sup> It remains an open question, however, whether the obligation of the virtual world provider would be simply not to impede the user-licensee’s use of the intellectual property, or whether it would also be required to permit the user to access the servers that the virtual world would use from the point of bankruptcy forward.

It is also possible that some non-debtor licensees will benefit from having negotiated non-standard EULAs. Although the overwhelming majority of virtual world users are bound by the standard EULA and Terms of Service (or Terms of Use), powerful groups or companies that enter virtual worlds may negotiate individualized EULAs that may have specific clauses governing the event of bankruptcy or termination of the world service. For example, computer giant IBM has set up a multi-million-dollar complex in Second Life, which it uses for purposes ranging from PR to coding.<sup>157</sup> Such “superusers” of virtual worlds are likely to have negotiated separate license agreements with virtual world creators in order to protect their investments. These licenses may have different clauses that do not permit termination of the license at will.

As noted above, another likely permutation is that a non-debtor virtual world might use § 365(n) to maintain its rights in user-generated content created by a debtor-user. This would require the debtor-user to itself be a significant

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<sup>154</sup> See Candidus Dougherty & Greg Lastowka, *Virtual Trademarks*, 24 SANTA CLARA COMPUTER & HIGH TECH. L. J. 749, 758 (2008) (“Often, the culture and software of a particular virtual world are moving targets. Players establish new practices, and virtual world owners frequently expand and improve their platforms by releasing downloadable ‘patches’ that modify the world’s space, rules and physics.”).

<sup>155</sup> See Virtual World News, *Nortel Filing for Bankruptcy Protection; Web.alive Development Uninterrupted*, Jan. 14, 2009, <http://www.virtualworldsnews.com/2009/01/nortel-filing-for-bankruptcy-protection-webalive-development-uninterrupted.html>.

<sup>156</sup> See sources cited *supra* notes 126–130.

<sup>157</sup> See Baker, *supra* note 77.

creator of content, most likely in the form of an in-world business creating content for sale. This user-generated content creates not only business opportunities for the individual user-creators, but also is the lifeblood of some virtual worlds.<sup>158</sup> Thus it is plausible that virtual world creators may at some point need to maintain licenses in user-generated content. These licenses are often of longer duration (the norm is perpetual, granted in the EULA) and may be enforced over the objections of the debtor-user.

Because the virtual world creator generally maintains the servers on which the virtual world abides, there may be less difficulty in making use of the § 365(n) compulsory license in user-generated content. There are likely no positive steps that the debtor-licensor would have to take to enable use of the license. This is doubly so because the intellectual property would likely already be instantiated on the server, and thus the virtual world creator would have a copy available from backup, even if the debtor-licensor had deleted the content prior to dissolution.

One catch, however, might be found in emerging industry standard clauses governing termination of Web 2.0 operator's rights in user-generated content. Some Web 2.0 sites, including MySpace and Facebook, responded to consumer criticism by promising to delete their users' information once the user herself had taken the content down.<sup>159</sup> Some wordings of such clauses could certainly be construed as terminating the EULA-granted license in the user-generated content, thus rendering the agreement non-executory, and the question of continuation of the license moot.

### B. *Virtual Property*

This Section considers whether virtual world creators or businesses might be able to take out loans collateralized directly by non-IP intangible interests, such as virtual objects, currency, or real estate. While the law of intellectual property in bankruptcy detailed above is relatively clear (if prolix), the law of non-IP intangible assets is not. To return to our example of PixelDolls, the question here is not whether PixelDolls could take out a loan based on the intellectual property in her clothing designs, but instead whether her reserves of virtual currency, prime virtual real estate, and other non-IP intangible assets (in-

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<sup>158</sup> Indeed, Second Life's own description is: "Second Life is an online 3D virtual world imagined and designed by you." See Second Life's "What is Second Life," <http://secondlife.com/whatis/#welcome> (last visited Sept. 12, 2009).

<sup>159</sup> See Facebook's Statement of Rights and Responsibilities ¶ 2.2, <http://www.facebook.com/terms.php> (last visited Sept. 13, 2009) ("When you delete IP content, it is deleted in a manner similar to emptying the recycle bin on a computer. However, you understand that removed content may persist in backup copies for a reasonable period of time (but will not be available to others).").

cluding the copies of digital clothes in her store) might also serve as collateral. In prior articles, I have termed these non-IP intangibles “virtual property.”<sup>160</sup>

Non-IP intangible assets are notoriously difficult to deal with under Article 9 and the Bankruptcy Code.<sup>161</sup> The problem lies in two distinctions that courts often fail to make correctly. The first is the distinction between intangible and intellectual property.<sup>162</sup> Courts are likely to mistake intangible non-IP interests for intellectual property interests because intangibility has long been a bad proxy for intellectual property.<sup>163</sup> But as Juliet Moringiello importantly noted, tangibility is utterly irrelevant to a determination of whether intellectual or chattel property rules ought to apply.<sup>164</sup> The proxy system ignores the many categories of intangible assets, from domain names, to bank deposit accounts, to stocks, to virtual property, that are not intellectual property interests at all.<sup>165</sup>

The proper distinction is not difficult. I own the copy of the picture on the wall in my office, but I do not own the copyright. The difference between the personal property right in the copy and the intellectual property right in the copyright is quite clear.<sup>166</sup> I can take out a loan using my ownership of the copy of the picture as collateral, without any need for me to ever own the copyright. Note that my ownership right in the copy of the painting is every bit as intangible as the intellectual property right that inheres in the artwork.<sup>167</sup> But when

<sup>160</sup> See *Virtual Property*, *supra* note 29. The following discussion analyzes the likely treatment of virtual property in part by reference to non-exclusive licenses in intellectual property, but that is because this is where courts are likely to begin, not because the characterization is correct. A right in a copy of a book is distinct from even the non-exclusive copyright license that comes with the copy.

<sup>161</sup> See *False Categories*, *supra* note 100, at 125 (“Article 9 of the U.C.C. was also revised recently, but its provisions do not adequately govern security interests in intangible rights.”).

<sup>162</sup> See *id.* at 141 (“[C]ourts and some scholars tend to give new intangible rights the ‘intellectual property’ label.”).

<sup>163</sup> See *id.* at 137 (“Despite the fact that individuals commonly think of intangible rights embodied in almost worthless tangible things as property, intangible rights unconnected to tangible things continue to confound judges.”).

<sup>164</sup> See *id.* at 120 (“[T]he category of tangible is irrelevant in property law and . . . commercial law must discard distinctions based on the physical manifestations of assets and focus instead on the legal qualities of those assets.”).

<sup>165</sup> See *id.* at 147 (“An internet domain name is an example of such property.”); see also *Virtual Property*, *supra* note 29, at 1057 (“Virtual property also plays an important part in financial institutions — a bank account may be one of the earliest forms of virtual property.”).

<sup>166</sup> See *Virtual Property*, *supra* note 29, at 1096 (“We understand instinctually and logically that ownership of a thing is always separate from ownership of the intellectual property embedded in a thing. Ownership of a book is not ownership of the intellectual property of the novel that the author wrote. The book purchaser owns the physical book, nothing more. . . . An owner of virtual property owns the same rights that the owner of a book does . . .”).

<sup>167</sup> See *id.*

there is no tangible object to anchor the personal property right, courts become confused and mistake intangibility for intellectual property.<sup>168</sup>

The second distinction that causes confusion is that between property and contract.<sup>169</sup> In some areas of the law, property rights are defined in contradiction to contract rights (as in the treatment of executory contracts versus completed property transfers in intellectual property licenses, above).<sup>170</sup> And, some commentators have argued that because Article 9 limits itself to transactions creating a security interest in property, contract rights are necessarily excluded from the ambit of Article 9.<sup>171</sup> Some courts have taken this to mean that “contract” rights cannot be “property” rights, and that non-IP intangible assets created by contract, like a domain name registration, are not “property” in its purest sense, and thus are outside of the scope of Article 9. Under this theory, non-IP intangible assets like a domain name registration—if it is deemed a pure contract right by state law—cannot be the subject matter of a security interest at all.<sup>172</sup>

Courts that follow this approach do not grasp the breadth of the revised UCC or the Bankruptcy Code.<sup>173</sup> “Property” under the UCC and the Bankruptcy Code does not stand in strict contradistinction to “contract.” Both Article 9 and the Bankruptcy Code include numerous contract rights as property in which a debtor can create a security interest, or as property of the debtor’s estate.<sup>174</sup> The

<sup>168</sup> See *False Categories*, *supra* note 100, at 147 (“This habit is a harmful one because it directs judges and lawmakers to look to intellectual property law rather than property law generally for rules to govern electronic assets.”).

<sup>169</sup> See *id.* at 135 (“When intangible assets are at issue, however, people have difficulty extricating the intangible asset from the contract that conveyed the property right in that asset.”).

<sup>170</sup> See *id.* at 137–38 (“By failing to look beyond the fact that the assets in question were intangible, the courts deciding these cases made decisions that have the potential to hinder the development of the property law components of commercial law.”).

<sup>171</sup> See Revised U.C.C. § 1-201(b)(35) (defining “security interest” as “an interest in personal property . . . which secures payment or performance of an obligation.”). The Code in fact expressly contemplates security interests in non-IP general intangible contract rights like non-exclusive licenses in software, see U.C.C. § 9-408 and Official Cmts., leaving the determination of whether the rights can support a security interest to state law. Thus, Official Comment 3 to Article 9, § 408 states that “[n]either this section nor any other provision of this Article determines whether a debtor has a property interest. The definition of the term ‘security interest’ provides that it is an ‘interest in personal property.’ . . . Other law determines whether a debtor has a property interest . . . and the nature of that interest. For example, the nonexclusive [software] license addressed in Example I may not create any property interest whatsoever . . .”

<sup>172</sup> See, e.g., *Network Solutions v. Umbro Int’l, Inc.*, 529 S.E.2d 80, 86–88 (Va. 2000).

<sup>173</sup> See *False Categories*, *supra* note 100, at 122 (“[W]hen novel issues arise in transactions covered by the U.C.C., courts should fill the statutory gaps. Courts, by focusing on the intangibility of electronic assets and not on the relationships between the persons claiming rights in those assets and the assets themselves, are not adequately filling the gaps.”).

<sup>174</sup> See U.C.C. § 9-102(a)(42) (defining “general intangible” as including “any personal property, including things in action . . . includ[ing] payment intangibles and software.”); see also U.C.C. § 9-408 and Official Cmts., dissolving contractual and legislative restrictions on creation, attach-



Bankruptcy Code includes all legal and equitable interests of the debtor in property as of the commencement of the case as property of the debtor's estate, including contracts.<sup>175</sup> Thus, "[c]ontractual rights are intangible property which is included within the definition of the estate of the debtor."<sup>176</sup> Current Article 9 expressly permits the creation of security interests in contract rights under the rubric of general intangibles — taking as its core example non-exclusive licenses for computer software — and dissolves state laws or contractual provisions that attempt to stop the creation, perfection, or attachment of security interests in such intangibles.<sup>177</sup> Other contract rights fall into distinct categories of permissible collateral under Article 9, including accounts, payment intangibles, accounts receivable, and more.<sup>178</sup> Indeed, under the 1962 version of Article 9, "contract rights" had their own collateral category, now subsumed variously under the definitions of "accounts" and "general intangibles."<sup>179</sup> Thus, an asset is not excluded from being deemed "property" for purposes of Article 9 merely because it is a contract right.<sup>180</sup> If that were so, Article 9's "property" requirement would be irreconcilable with its many express provisions dealing with the creation of security interests in different forms of pure contract rights.

These two basic errors can lead to a serious discrepancy between brick-and-mortar businesses and their virtual counterparts. If a court mistakes non-IP intangible assets for intellectual property interests, it is not likely to enforce a

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ment, or perfection of security interests in general intangibles, including non-exclusive licenses of software.; *see also* U.C.C. § 9-102(a)(2) (defining "account").

<sup>175</sup> Thus, for example, the debtor's executory contracts become part of the debtor's bankruptcy estate. *See* 11 U.S.C. § 541(a)(1) (2009) (defining "property of the estate" to include "all legal or equitable interests of the debtor in property as of the commencement of the case."); *see also* Michelle Morgan Harner et al., *Debtors Beware: The Expanding Universe of Non-Assumable/Non-Assignable Contracts in Bankruptcy*, 13 AM. BANKR. INST. L. REV. 187, 244 & n.232 ("A debtor's interest in an unassumed executory contract . . . generally is considered property of the debtor's estate under section 541(a).") (citing *Cinicola v. Sharffenberger*, 248 F.3d 110, 121 (3d Cir. 2001) (same); *In re Rickel Home Ctrs., Inc.*, 209 F.3d 291, 302 n.12 (3d Cir. 2000) (same); and *Computer Communications, Inc. v. Codex Corp.* (*In re Computer Communications, Inc.*), 824 F.2d 725, 730 (9th Cir. 1987) (same)).

<sup>176</sup> *In re Chateaugay Corp.*, 116 B.R. 887, 898 (Bankr. S.D.N.Y. 1990).

<sup>177</sup> *See* U.C.C. § 9-408 and Official Cmts. (2009).

<sup>178</sup> *See* Juliet M. Moringiello, *Seizing Domain Names to Enforce Judgments: Looking Back to Look to the Future*, 72 U. CIN. L. REV. 95, 108 (2003) ("Today, no one would argue that a deposit account held by a bank is not the property of the depositor. . . . Uncertificated securities provide another example. It is impossible for a stockholder to take physical possession of an uncertificated security.").

<sup>179</sup> *See* Kenneth Kettering, *True Sale of Receivables: A Purposive Analysis*, 16 AM. BANKR. INST. L. REV. 511, 513 n.6 (2008) ("Article 9 originally governed 'any sale of accounts, contracts rights, or chattel paper.'" U.C.C. § 9-102(1)(b) (1962). The 1972 revision deleted the concept of "contract rights" from Article 9, its content being picked up by the definitions of "account" and "general intangible.").

<sup>180</sup> *See, e.g.*, GRANT GILMORE, SECURITY INTERESTS IN PERSONAL PROPERTY 14, Lawbook Exchange (1999) ("It is . . . generally agreed that insurance policies are pledgeable.").

security agreement because the debtor may not own intellectual property in which a security interest can be created.<sup>181</sup> On the other hand, if the court argues that the assets are non-exclusive software licenses, and that they cannot be the subject of a security interest because “contracts” cannot be “property,” the same result is achieved.<sup>182</sup> The parties again cannot use valuable collateral to reduce the cost of capital. This would be like barring me from using my picture as collateral because I do not own the copyright, or because I possess a non-exclusive license in the intellectual property that inheres in the picture. Even if both are true, these facts should not impede me from using the picture itself as collateral.<sup>183</sup>

If courts fail to grasp these distinctions, PixelDolls (from the example above) would not be permitted to mortgage its virtual real estate, because Linden Lab (the creator of Second Life) owns intellectual property that inheres in that virtual land, and merely licenses it to PixelDolls.<sup>184</sup> Under this sort of analysis, there will continue to be a serious disconnect under both bankruptcy and secured transactions law. Consider a music store owner who operates on a regular streetcorner. Her inventory of CDs can serve as collateral for a loan, despite the fact that she does not own any IP interest in them. Now consider a music store owner on a corner in a virtual world. Her inventory of MP3s of the very same music would not be valid collateral if a court mistook the right to a copy for the copyright, or if the court barred the creation of security interests in the collateral because it involved contract rights.

But once these two theoretical hurdles are overcome, there should be no bar to creating a security interest in non-IP virtual property.<sup>185</sup> The best fit with U.C.C. Article 9 for such a right would still be as a “general intangible,” the U.C.C.’s catch-all category.<sup>186</sup> A virtual world business ought to be able to draft

<sup>181</sup> See *Umbro*, 529 S.E.2d at 86–88 (characterizing domain name as contract right rather than property right, and thus not subject to garnishment); See also *False Categories*, *supra* note 100, at 149 (“Had the court characterized the domain name as property, lawyers relying on the decision could then find some way to take possession or control of it. By characterizing it as intellectual property, however, the court directed lawyers to consult the far more complex rules regarding enforcement of judgments in intellectual property rights. As a result, the Virginia Supreme Court pointed out in *Umbro* that intellectual property rights generally cannot be taken by creditors using procedures such as execution or seizure.”).

<sup>182</sup> See, e.g., *Bank of Am. Strategic Solutions, Inc., v. Cooker Rest. Corp.*, 2006 Ohio 4567 (Ohio App. 2006) (holding that liquor license was a personal license, and thus could not be the subject of a security interest, despite language of § 9-408 holding invalid state laws barring creation of security interest in contract rights).

<sup>183</sup> See *False Categories*, *supra* note 100, at 150 (“Thus, the treatment of domain names as intellectual property can lead to a wrong result.”).

<sup>184</sup> Cf. *id.* at 150 (“Therefore, while Article 9 of the U.C.C. defines collateral in property terms, any right that a debtor can exchange for money should be considered a property right for commercial law purposes.”).

<sup>185</sup> See *id.* at 165 (“In commercial law . . . adaptation is necessary, because it would be senseless to revise the Uniform Commercial Code every time a novel form of asset is developed.”).

<sup>186</sup> See U.C.C. § 9-102(a)(42) (defining “general intangible”).

carefully a security agreement that would detail the non-IP assets to be used as collateral under the designation of “general intangibles,” authorize the filing of a financing statement covering such general intangibles, and reasonably expect that the interest would be enforced in bankruptcy.<sup>187</sup>

Although a carefully-drafted security agreement and a financing statement covering general intangibles ought to work, there are two weaknesses to a general intangibles approach that lead me to offer alternative solutions below. The first is that virtual property would still share the “general intangibles” category with intellectual property, which would continue to foster the kind of confusion detailed above. Although a detailed security agreement could clarify between the parties that only the non-IP components are collateral, a designation of “general intangibles” on the financing statement might leave the impression that all of the intellectual property of a company is encumbered, when in fact only its non-IP intangibles are collateral.

The second problem is that, just as security interests in bank deposit accounts require the consent of the depository bank, or security interests in investment accounts require the consent of the brokerage, a security interest in virtual world assets ought to involve the participation of the game god. UCC Article 9-408 dissolves contract clauses that prohibit the creation, attachment, or perfection of a security interest in numerous types of intangibles (including non-exclusive software licenses), but such a security interest cannot be enforced against the software licensor, or, indeed, against the debtor.<sup>188</sup> Thus, a non-assignment clause in a virtual world EULA could not prevent a user/debtor from creating, or a secured party from perfecting, a security interest in the user’s rights under the contract.<sup>189</sup> However, the secured party could not enforce the debtor’s rights under the nonexclusive software license against the game god, nor could it foreclose on the license.<sup>190</sup> This non-enforceable security interest in

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<sup>187</sup> See U.C.C. § 9-310 (permitting perfection of security interest for all interests not otherwise specified by means of a filed financing statement).

<sup>188</sup> See U.C.C. § 9-408(a)(1), (c)(1), (d) (holding ineffective contractual and legislative provisions barring creation, attachment, or perfection of security interests in general intangibles, but denying the secured party any enforcement power or right to the debtor’s rights in the general intangible).

<sup>189</sup> See U.C.C. § 9-408(a)(1), (c)(1), and Official Cmt. 2 (“This section makes ineffective any attempt to restrict the assignment of a general intangible . . . whether the restriction appears in the . . . agreement between an account debtor and a debtor . . . or in a rule of law, including a statute or governmental rule or regulation. . . . This result allows the creation, attachment, and perfection of a security interest in a general intangible, such as an agreement for the nonexclusive license of software . . .”).

<sup>190</sup> See U.C.C. § 9-408(d)(1)–(4) and Official Cmt. 2 (“On the other hand, subsection (d) protects the other party — the “account debtor” on a general intangible . . . from adverse effects arising from the security interest. It leaves the account debtor’s or obligated person’s rights and obligations unaffected in all material respects . . . Example 1: A term of an agreement for the non-exclusive license of computer software prohibits the licensee from assigning any of its rights as licensee with respect to the software . . . . The licensee, as debtor, grants to a secured party a security interest in its rights under the license and in the computers in which it is installed. Under this

general intangibles is nevertheless useful because it preserves the secured party's perfection and priority in proceeds of the general intangible if it is ever sold with permission of the software licensor.<sup>191</sup> Thus, in a bankruptcy proceeding, the secured party would be protected.<sup>192</sup>

Yet the one thing missing from § 9-408's regime is self-help enforcement. Self-help enforcement of intangibles usually involves going to the gatekeeper of the intangible to transfer the asset. For example, foreclosing on a bank deposit account means that the secured party requests the depository bank to transfer funds out of the account. Similarly, investment account foreclosure means telling the brokerage to sell the stocks. Thus, as detailed at greater length in the solutions section, below, a better model for security interests in virtual property would include the game god, so that the secured party could foreclose on the virtual assets without need for judicial proceedings.

### C. *ToySmart and Customer Lists*

There is a third type of virtual world asset that is both of enormous value and likely to be subject to particularized rules in bankruptcy. As with traditional dot-coms, information about the customers of a bankrupt entity is the item most likely to excite interest from other virtual world providers.<sup>193</sup> Thus, this section examines the process by which a virtual world may sell the vast store of information it gathers about its customers.

Virtual world creators gather enormous amounts of information about their customers both overtly and tacitly.<sup>194</sup> Some of this is traditional personally identifiable information: credit card numbers, names, real-space and email ad-

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section, the term . . . is ineffective . . . . However, under subsection (d), the secured party . . . is not entitled to enforce the license or to use, assign, or otherwise enjoy the benefits of the licensed software . . . .”).

<sup>191</sup> See U.C.C. § 9-408, Official Cmt. 7 (“This section could have a substantial effect if the assignor enters bankruptcy. Roughly speaking, Bankruptcy Code Section 552 invalidates security interests in property acquired after a bankruptcy petition is filed, except to the extent that the postpetition property constitutes proceeds of prepetition collateral. Example 4: A debtor is the owner of a cable television franchise that, under applicable law, cannot be assigned without the consent of the municipal franchisor. [The debtor grants a security interest in the franchise, as well as all other existing and after acquired property, to secure a loan, over the municipality’s objection.] Under this section . . . the security interest would attach to the franchise. As a result, the security interest would attach to the proceeds of any sale of the franchise while a bankruptcy is pending.”).

<sup>192</sup> See *id.*

<sup>193</sup> See, e.g., Order Approving Motion for Order Authorizing Sale and Assignment of Property of the Estate Free and Clear of Liens and Claims, and Approving Bidding Protection, *In re Identity Play, Inc.*, No. 2-08-bk-19025 ER (Bankr. C.D. Cal. Mar. 5, 2009) (selling faketown.com and other URLs, trademarks, trade names, source code, graphics, goodwill, and customer user database for \$20,000 — the largest asset of the bankrupt entity).

<sup>194</sup> See Joshua A.T. Fairfield, *Escape into the Panopticon: Virtual Worlds and the Surveillance Society*, 118 YALE L.J. POCKET PART 131 (2009).

dresses, birth dates (for purposes of screening children out of mature content), and telephone numbers for customer service purposes.<sup>195</sup> Virtual world providers also gather and maintain logs of interactions and conversations within their worlds.<sup>196</sup> Some maintain these logs for a very short time; others seem to have kept logs for years.<sup>197</sup> For example, Linden Labs logs every commercial transaction within its virtual world,<sup>198</sup> and in the *Bragg*<sup>199</sup> case, it was able to produce records of conversations between players in virtual worlds that occurred years prior to litigation.<sup>200</sup> Thus, virtual world providers gather not only their customers' credit card numbers, but information about their actions, speech, intimate behavior, purchasing patterns, and places visited throughout the virtual world. The depth and completeness of the potential customer profiles make standard clickstream data gathering seem passé. All of this information is potentially up for sale in a bankruptcy.

### 1. ToySmart

In 2000, following a poor holiday season of sales, online vendor Toysmart announced that it was going out of business, and advertised in the Wall

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<sup>195</sup> See, e.g., Second Life Privacy Policy, <http://www.secondlife.com/corporate/privacy.php> (last visited Sept. 15, 2009) (“As used in this privacy policy, the term ‘personal information’ means any information that may be used to identify an individual, including, but not limited to, a first and last name, home or other physical address, and email address, phone number or other contact information, whether at work or at home. . . . We collect personal information and usage statistics to maintain a high-quality customer experience and deliver superior customer service.”). See also Blizzard Entertainment Online Privacy Policy, <http://www.blizzard.com/us/privacy.html>; (last visited Sept. 15, 2009); Disney’s Club Penguin’s Privacy Policy, <http://www.clubpenguin.com/privacy.htm> (last visited Sept. 15, 2009).

<sup>196</sup> See George L. Paul & Jason R. Baron, *Information Inflation: Can the Legal System Adapt?*, 13 RICH. J.L. & TECH. 10, 10 n.34 (2007) (“Voluminous logs of chat are kept by administrators of the game to resolve disputes and to police the virtual world for adherence to rules.”).

<sup>197</sup> Most privacy policies do not include a time limit for retaining the data they collect. Linden Lab produced logs from years before in response to a lawsuit brought against them. *Infra* note 200.

<sup>198</sup> See Second Life’s Terms of Service, *supra* note 106, at § 6.2 (allowing for recordation of all interactions, including in-game trades without monetary exchange).

<sup>199</sup> *Bragg v. Linden Research, Inc.*, 487 F. Supp. 2d 593 (E.D. Pa. 2007).

<sup>200</sup> See BENJAMIN TYSON DURANSKE, VIRTUAL LAW, 45–56 (2008) (noting Linden Lab’s ability to produce records of conversations years after the fact); see also Defendants Linden Research, Inc. & Philip Rosedale’s Answer to Complaint & Linden Research, Inc.’s First Amended Counterclaims Against Plaintiff Marc Bragg for: (1) Federal Computer Fraud, 18 U.S.C. § 1030; (2) California Statutory Computer Fraud, Cal. Penal Code § 502; (3) Breach of Contract; (4) Breach of the Implied Covenant of Good Faith and Fair Dealing; (5) California Statutory Unfair Competition, Cal. Bus. & Prof. Code § 17200; (6) Declaratory Judgment ¶¶ 32–64, *Bragg v. Linden Research, Inc.*, 487 F. Supp. 2d 593 (E.D. Pa. 2007), available at 2007 WL 2435763 (describing Bragg’s bidding and conversations with other users leading up to Linden Lab’s suspension of his account).

Street Journal for offers to purchase its customer lists.<sup>201</sup> ToySmart was forced into involuntary bankruptcy the next day.<sup>202</sup> The FTC opposed the sale of the customer list, because ToySmart's privacy policy stated that personally identifiable information would not be shared with third parties.<sup>203</sup> Eventually, the FTC and ToySmart reached an agreement, but when that deal was introduced in the bankruptcy proceedings, it was challenged by 47 state attorneys general, complaining that the settlement compromised consumer rights to satisfy creditors.<sup>204</sup> The bankruptcy court did not rule on whether the sale violated Section 5 of the FTC Act, as alleged by the FTC, but instead awaited a buyer.<sup>205</sup> The customer service list was eventually sold to parent company Disney for \$50,000 on the condition that it be destroyed.<sup>206</sup>

## 2. Section 363(b)(1)

The ToySmart controversy generated significant comment and criticism. Congress responded by amending the Bankruptcy Code with sections 363(b)(1), 101(41A), and 332, to deal with situations in which a sale of personally identifiable information in bankruptcy might violate the debtor's privacy policy.<sup>207</sup> Section 363(b)(1) limits the power of the trustee to sell personally identifiable information about customers if the debtor's privacy policy prohibits such a transfer, and if such a policy is in effect as of the date of the commencement of the case.<sup>208</sup> Personally identifiable information ("PII") is defined in 11 U.S.C. § 101(41A)(A) as including names, geographical addresses, electronic addresses (including email), telephone numbers, or credit card numbers. PII also includes in Section 41A(B) "any other information concerning an individu-

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<sup>201</sup> See Richard A. Beckmann, Comment, *Privacy Policies and Empty Promises: Closing the "Toysmart Loophole,"* 62 U. PITT. L. REV. 765, 767 (2001) (citing Victoria Colliver, *Dot-com Closures Distressing Consumers-Unfulfilled Orders, Lost Sensitive Data Vexing E-shoppers*, S.F. EXAMINER, July 7, 2000, at D1).

<sup>202</sup> See Plaintiff's First Amended Complaint, *F.T.C. v. Toysmart.com*, 2000 WL 34016434 (D. Mass. 2000), 2000 WL 34016406 (July 21, 2000), ¶ 12 available at <http://www.ftc.gov/os/2000/07/toysmartcomplaint.htm>.

<sup>203</sup> See Plaintiff's First Amended Complaint, *supra* note 202, at ¶¶ 17–18; Beckmann, *supra* note 201.

<sup>204</sup> See Beckmann, *supra* note 201, at 768 (citing Objection of the Commonwealth of Massachusetts and 46 States to the Debtor's Motion to Approve Settlement With Federal Trade Commission and for Authority to Enter Into Consent agreement, *In re Toysmart.com, L.L.C.*, No. 00-13995-CJK (Bankr. E.D. Mass Aug. 10, 2000)).

<sup>205</sup> See Order Denying Motion to Approve Stipulation, *In re Toysmart.com, L.L.C.*, No. 00-13995-CJK (Bankr. E.D. Mass Aug. 17, 2000); Beckmann *supra* note 201, at 769.

<sup>206</sup> See Victoria Shannon, *Tech Brief: ToySmart Paid Off*, N.Y. TIMES, Jan. 11, 2001, available at [http://www.nytimes.com/2001/01/11/business/worldbusiness/11iht-techbrief.2.t\\_67.html](http://www.nytimes.com/2001/01/11/business/worldbusiness/11iht-techbrief.2.t_67.html).

<sup>207</sup> See Kenneth N. Klee & Brendt C. Butler, *The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 Business Bankruptcy Amendments*, 38 UCC L.J. 4 Art. 1 (2006).

<sup>208</sup> 11 U.S.C. § 363(b)(1) (2008).

al that, if disclosed, will result in contacting or identifying such individual physically or electronically” if that information is paired with any of the information listed in Section 41A(A).<sup>209</sup>

For virtual world providers, this latter language is quite encompassing. Every action and word in a virtual world is traceable to the account of the person making the statement. Virtual world accounts are tied to a real world name, email address, and credit card number. Moreover, an avatar name — like an email address — is an electronic pseudonym that enables a party to contact the individual electronically. Thus, almost all of the information gathered by virtual world providers on their consumers consists of information that could lead to “contacting or identifying such individual physically or electronically,” and it is all paired with information listed in Section 41(A)(A).

Based on this broad statutory ambit, the consumer protection offered by 363(b)(1) may appear to significantly hinder the sale of personally identifiable information by a bankrupt virtual world provider. Not so. The statute does not apply at all if the privacy policy of the virtual world provider expressly permits the transfer of PII in the event of bankruptcy.<sup>210</sup> Such clauses are quotidian in virtual world EULAs.<sup>211</sup> Thus the effect of the statute is limited entirely to cases in which the sale of the personally identifiable information is not “consistent with [the virtual world provider’s] policy.”<sup>212</sup>

Section 363(b)(1) therefore creates a mechanism for legitimating sales under privacy policies that do not expressly permit transfer of personally identifiable information. This whitewashing effect occurs through an “ombudsman,” appointed under § 332 of the Act.<sup>213</sup> The role of the ombudsman is to “provide to the court information to assist the court” in considering the impact of the data sale on consumer privacy expectations.<sup>214</sup> The statute suggests that the ombudsman (and thus the judge) consider the text of the privacy policy, the effects of the sale on consumer privacy, the costs or benefits to consumers of the sale, and potential alternatives or conditions to the sale.<sup>215</sup> In practice, the recommendations of the ombudsman tend toward three primary suggestions — that the sale be to a “qualified buyer” who is in the industry of the debtor; that the

<sup>209</sup> 11 U.S.C. § 101(41A)(B) (2008).

<sup>210</sup> 11 U.S.C. § 363(b)(1) (2008) (“[T]he trustee may not sell or lease personally identifiable information to any person unless — (A) such sale or such lease is consistent with such policy . . .”).

<sup>211</sup> See e.g. Second Life’s Privacy Policy, *supra* note 195 (“In addition, if Linden Lab should ever file for bankruptcy or merge with another company, we may sell the information you provide to us on this site to a third party or share your personal information with any company with whom we merge.”).

<sup>212</sup> See 11 U.S.C. § 363(b)(1).

<sup>213</sup> See Luis Salazar, *Don’t Fear the Consumer Privacy Ombudsman*, 26-JAN AM. BANKR. INST. J. 42 (2008).

<sup>214</sup> 11 U.S.C. § 332 (2008).

<sup>215</sup> 11 U.S.C. § 332(b)(1)–(4) (2008).

buyer will serve as successor-in-interest to the debtor's security and privacy policies; and that the customers be provided an opportunity to opt in or (more commonly) opt out of the proposed transfer.<sup>216</sup>

In practice, courts have used the appointment and hearing provision to help clarify ambiguities in privacy policies that do not expressly consider transfer in the event of bankruptcy.<sup>217</sup> Such a hearing is not required by the statute, because such a transfer is consistent with a privacy policy that is silent on the subject.<sup>218</sup> Nevertheless, courts have used the information gathering abilities of the ombudsman to lend an aura of legitimacy to such transfers.<sup>219</sup>

One constraint appears in § 363(b)(1)(B)(ii). This section notes that approval for a sale inconsistent with a privacy policy must nevertheless satisfy applicable nonbankruptcy law.<sup>220</sup> Although some question remains as to what law applies, at minimum courts should consider whether the transfer violates FTC Act Section 5(a)'s prohibition on "unfair or deceptive acts or practices."<sup>221</sup> Other possible sources of applicable nonbankruptcy law may include COPPA<sup>222</sup> (for children's virtual worlds), HIPAA<sup>223</sup> (for medical sites), FCRA<sup>224</sup> (for on-line businesses dealing with financial data), or the EU Privacy Directive<sup>225</sup> (for those virtual worlds with substantial numbers of players from the European Union).

<sup>216</sup> See Salazar, *supra* note 213, at 42.

<sup>217</sup> See *id.* ("In general, these ombudsmen encountered similar sets of facts — debtors seeking to sell PII in the face of privacy policies that did not explicitly allow or were silent as to such transfers.").

<sup>218</sup> 11 U.S.C. § 363(b)(1)(A) (2008).

<sup>219</sup> Luis Salazar accumulated a list of 10 cases that have applied the ombudsman provision; in two of them, he served as the ombudsman. See Salazar, *supra* note 213, at 42 (citing *In re Refco Inc., et al.*, Case No. 05-60006 (RDD) (Bankr. S.D.N.Y. 2007); *In re Storehouse Inc.*, Case No. 06-11144 (SSM) (Bankr. E.D. Va. 2007); *In re Tweeter Home Entertainment Group Inc. et al.*, Case No. 07-10787 (PJW) (Bankr. D. Del. 2007); *In re R.J. Gators Inc., et al.*, Case No. 07-14954 (Bankr. S.D. Fla. 2007); *In re Foxtons Inc.*, Case No. 07-24496 (Bankr. D. N.J. 2007); JS Marketing and Communications Inc., Case No. 05-65426-11 (Bankr. D. Mont. 2007); *In re Engaging and Empowering Citizenship Inc.*, Case No. 02-BKC-28175-CGC (Bankr. D. Ariz. 2006); *In re Three A's Holdings LLC, et al.*, Case No. 06-10886 (BLS) (Bankr. D. Del. 2006); *In re Bodies in Motion Inc.*, Case No. 06-10931 (Bankr. C.D. Cal. 2006), and *In re Western Medical Inc.*, Case No. 06-01784 (Bankr. D. Ariz. 2006)).

<sup>220</sup> 11 U.S.C. § 363(b)(1)(B)(ii) (2008).

<sup>221</sup> 15 U.S.C. § 45(a) (2008).

<sup>222</sup> The Children's Online Privacy Act of 1998 (COPPA), 15 U.S.C. §§ 6501 *et seq.* (2008); Title XIII, Omnibus Consolidated and Emergency Supplemental Appropriations Act. 1999.

<sup>223</sup> The Health Insurance Portability and Accountability Act of 1996 (HIPAA), 15 U.S.C. §§ 6801 *et seq.* (2008).

<sup>224</sup> The Fair Credit Reporting Act (FCRA), 15 U.S.C. § 1681 (2008).

<sup>225</sup> The European Union Privacy Directive of 1995, Council Directive 95/46, 1995 O.J. (L. 281) 31, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:EN:HTML>.



## IV. CHALLENGES AND RECOMMENDATIONS

One significant difficulty with securing loans with virtual property is the ongoing failure of the law to honor legal interests in digital assets distinct from any intellectual property interest. This problem surfaces repeatedly in the cases and issues discussed above. Secured lenders have difficulty enforcing a security interest in a URL or domain name, because courts consider the domain name a contract right rather than a right in property.<sup>226</sup> Yet bankruptcy courts sell off domain names as personal property — and often the most valuable asset of a bankrupt dot-com’s estate — all the time.<sup>227</sup> Similarly, Article 9 has clarified the process by which a software vendor can borrow money against software inventory.<sup>228</sup> But the clarification in the law came just in time for business models to change — what chattel property interest in inventory can a direct-to-download vendor use to finance its business?<sup>229</sup>

The confusion is compounded by discussions of exclusive and non-exclusive licenses of intellectual property. An exclusive license in intellectual property is indeed a property interest, and the conveyance of such a license is a sale.<sup>230</sup> But an exclusive license is the sale of an ownership interest in the right to make copies, not of the right to any given copy.<sup>231</sup> Thus, it is possible to convey a number of interests inherent in virtual property, each distinct. It is possible to sell a right to make copies exclusively (construed as a property interest).

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<sup>226</sup> See *Dorer v. Arel*, 60 F. Supp. 2d 558 (E.D. Va. 1999); *Zurakov v. Register.com, Inc.*, 304 A.D.2d 176 (N.Y. App. Div. 2003); *Network Solutions, Inc. v. Umbro International, Inc.*, 529 S.E.2d 80 (Va. 2000). *But see* *Kremen v. Cohen*, 337 F.3d 1024 (9th Cir. 2003); *Harrods, Ltd. v. Sixty Internet Domain Names*, 302 F.3d 214 (4th Cir. 2002); *Caesars World, Inc. v. Caesars-Palace.Com*, 112 F. Supp. 2d 502 (E.D. Va. 2000); *In re Larry Koenig & Assoc.*, No. 01-12829 2004 WL 3244582 (Bankr. M.D. La. 2004) (slip opinion).

<sup>227</sup> See, e.g., *In re Identity Play, Inc.*, *supra* note 13.

<sup>228</sup> See U.C.C. § 9-102(42) (“General intangible” definition includes software); U.C.C. § 9-310 (general rule is perfection by filing.)

<sup>229</sup> See, e.g., *Direct2Drive*, [www.direct2drive.com](http://www.direct2drive.com) (software vendor selling solely electronic copies of software).

<sup>230</sup> See The Copyright Act, 17 U.S.C. § 101 (“A ‘transfer of copyright ownership’ is an assignment, mortgage, exclusive license, or of any other conveyance, alienation, or hypothecation of a copyright or any of the exclusive rights comprised in a copyright, whether or not it is limited in time or place of effect, but not including a nonexclusive license.”).

<sup>231</sup> See *id.* at § 106 (“Subject to sections 107 through 122, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following: (1) to *reproduce* the copyrighted work in copies or phonorecords; (2) to *prepare* derivative works based upon the copyrighted work; (3) to *distribute* copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending; (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to *perform* the copyrighted work publicly; (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to *display* the copyrighted work publicly; and (6) in the case of sound recordings, to *perform* the copyrighted work publicly by means of a digital audio transmission.”) (emphasis added).

It is possible to license the IP non-exclusively (construed as a contract interest). And, it should be possible to convey a property interest in a copy, as distinct from the sale or licensing of the copyrights. (For that matter, it is also possible to rent out the chattel right in the copy, as in a video rental store.)

These distinct interests work well together when there is a physical object in which intellectual property inheres. But confusion strikes when intellectual property inheres in a digital object. As a matter of theory, there is no difficulty distinguishing between a chattel property right in a copy of a thing and the right to make copies of a thing. Rights in a copy have long been distinguished from copyrights. Only online have courts and lawyers become confused about this distinction.

Law has moved haltingly to resolve these issues. There has been some progress in treating digital objects as things. URLs, despite their occasional treatment as contract rights in enforcement actions, are governed by the Anti-Cybersquatting Consumer Protection Act, which has an explicit *in rem* action against the digital object itself if the defendant registrant of the URL is not ascertainable after reasonable effort.<sup>232</sup> Revised Article 9 has also taken several steps to reify certain types of intangibles, especially those that (like most forms of virtual property) consist of valuable rights in a resource that are actually just entries in an electronic database.<sup>233</sup>

For example, Article 9 has adopted the “control” mechanic from Article 8 as its means of granting a security interest in certain intangible assets, like bank accounts, investment accounts, or electronic chattel paper.<sup>234</sup> Under Article 9, one means of creating a security interest is to physically pledge the item of property.<sup>235</sup> The transfer of possession from debtor to lender provides notice to subsequent lenders that the asset is encumbered.<sup>236</sup> Control is Article 9’s proxy for possession, where the asset cannot be traditionally possessed due to its

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<sup>232</sup> 15 U.S.C. § 1125(d)(2)(a) (2006) (“The owner of a mark may file an *in rem* civil action against a domain name in the judicial district in which the domain name registrar, domain name registry, or other domain name authority that registered or assigned the domain name is located . . .”).

<sup>233</sup> See *supra* notes 88–90.

<sup>234</sup> See Steven Walt, *Underestimation Bias and the Regulation of Consumer Debt*, 40 UCC L.J. 2 Art. 3 (2007) (“Displacement matters for intangible collateral because Article 9 eliminates the exclusive control requirement for collateral regulated by it. Deposit accounts represent a valuable type of intangible right, and Article 9 does not regulate security interests in consumer deposit accounts as original collateral. Thus the common law of pledge and assignment, including the exclusive control rule, continues to apply to them. The increased costs of collateralizing the consumer’s deposit account arguably induces the debtor to gauge the true risk of default on a prospective secured loan.”). Compare U.C.C. § 8-106 (2002), with U.C.C. §§ 9-104–105 (2002), U.C.C. § 9-106 (2002) (“A person has control of a certificated security, uncertificated security, or security entitlement as provided in Section 8-106.”), and U.C.C. § 9-107 (2002).

<sup>235</sup> Walt, *supra* note 234, at Art. 3.

<sup>236</sup> See U.C.C. § 9-314(a) (2002) (“A security interest in investment property, deposit accounts, letter-of-credit rights, or electronic chattel paper may be perfected by control of the collateral under Section 9-104, 9-105, 9-106, or 9-107.”).

intangible nature. A party has control of an asset when she has secured the permission of the maintaining intermediary entity (a bank in the case of a bank account, or the investment firm in the case of an investment account, etc.) to honor the to-be-secured party's orders with respect to the collateral.<sup>237</sup> For example, a secured party has control of an investment account if the maintaining intermediary agrees to honor the request by the secured party to have the investments sold.

This system of control governs assets that are much like digital assets or currency. For example, a bank account is much like virtual property. First, the actual nature of the account is merely an entry in a database. Similarly, many virtual assets consist merely in an annotation in an electronic database that a player "owns" a given piece of land or asset. Ownership online consists in permissions; the registry of permissions, similar to a registry of land ownership, is the core of the system of ownership of such assets.

A second important similarity between virtual assets and bank accounts are that each is subject to the important and potentially overriding interests of the entity that maintains the asset.<sup>238</sup> Because any security interest in a bank account must involve the bank that maintains the account, the bank must be involved in any "control" agreement that creates a security interest in the account in favor of a third party.<sup>239</sup> In the same way, any agreement that would permit self-help with respect to assets within a virtual world would almost necessarily involve a three-way agreement between debtor, creditor, and the virtual world creator. Thus, the model of "control" drawn from and expanded by the revisions to Article 9 might be a good place to begin in determining an effective mechanic for perfection of interests in digital objects. This is the mechanic already used by Article 9 to govern security interests in electronic chattel paper, a form of legal right that has been traditionally "tangified" by trading the instantiation in the paper as a marker for trading the legal right.<sup>240</sup>

This article has proposed a theoretical overhaul of how courts value and understand digital assets in the bankruptcy context. Virtual objects and currency are indisputably worth real dollars. As such, courts should strive to form common-sense notions of what these assets are and are worth, such that online

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<sup>237</sup> See U.C.C. § 9-206.

<sup>238</sup> See U.C.C. §§ 9-104, 9-314, 9-327(3) (bank deposit account is perfected by control agreement between debtor, secured party, and depository bank; however, depository bank's interest in amounts on deposit will trump the secured lender's interest unless the parties conclude an explicit subordination agreement).

<sup>239</sup> See U.C.C. §§ 9-314 (general rule of perfection by control in specified intangible assets), 9-104 (control of deposit account), 9-106 and 8-106 (control of investment property, including securities or securities accounts), 9-107 (control of letter-of-credit rights).

<sup>240</sup> See U.C.C. § 9-105 ("A secured party has control of electronic chattel paper if the record or records comprising the chattel paper are created, stored, and assigned in such a manner that: (1) a single authoritative copy of the record or records exists which is unique, identifiable and . . . unalterable . . . ; (2) the authoritative copy identifies the secured party as the assignee of the record . . . [and other conditions apply limiting copies of the authoritative copy].").

businesses can take out the same loans against inventory that their brick-and-mortar compatriots can. Further, courts should realize that despite the novel nature of online intangible assets, law has already done much of the work of recognizing the value of certain kinds of intangibles, and these areas of law can serve as models. Lessons can be drawn from the independent film financing context for intellectual property assets. For digital inventory, courts might draw from Article 9's treatment of software. And for player accounts and digital objects, courts might draw on Article 9's treatment of bank accounts and reified legal rights like chattel paper.

## V. CONCLUSION

The recent spate of high-profile virtual world shutdowns could easily be taken as a sign that this technology has passed its zenith. Not so. The broader picture is that the virtual worlds industry — like the rest of the games industry — is maturing. Companies with track records or teams with established reputations may wish to move from traditional venture capital financing, often used most by new firms, to more traditional secured lending, the hallmark of an established industry.

The virtual worlds industry is in many ways ideally positioned to capitalize on new and innovative funding opportunities. Virtual assets are worth enormous amounts of real money. However, the uncertainty surrounding digital assets in bankruptcy is a significant hurdle. This article has suggested that much clarity can be gained by treating digital assets as personal property, subject to security interests by filing or by the expedient of control. If these issues are resolved, the bankruptcies of virtual worlds will not serve merely as a testament to the difficulties entrepreneurs face in bringing a product to market. Rather, how worlds die will teach us important things about how to encourage their birth.

