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Overstepping Digital Boundaries: An Exploration of Ownership in 3-D Virtual Worlds

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ABSTRACT

Ownership in virtual worlds is somewhat of an enigma. (If it is not clear that you "exist," how can you have property? If it is not clear that things "exist" how can you own them?) Still, the interconnectedness between real and virtual worlds creates real legal and ethical quandaries about virtual ownership, similar to the issues that have been addressed regarding intellectual property in the real world. While the relationship between virtual world activities and real-world laws has yet to be clearly defined, we identify three categories of intellectual property violations that can take place in virtual worlds : in-world cloning, between-world cloning and trademark violations. In an attempt to discover the extent to which these occur, this paper represents an in-depth exploration of the apparent prevalence of intellectual property violation in Second Life.

INTRODUCTION

As virtual worlds continue to develop and gain membership, questions continue to arise regarding the rights that exist for participants of these worlds. While they are often viewed as massively multi-user games where avatars, objects, and concepts are mere imitations of their real world counterparts, virtual worlds are becoming more and more inextricably intertwined with the real world. Real world companies market their brands to virtual audiences through many different means (Altschuller, Moscato, & Boekman, 2010), people conduct businesses within virtual worlds earning virtual money that is convertible to real money, virtual property is sold and traded in real world markets such as IGE and at one time eBay (Dibbell, 2003), and avatars interact with the real world by buying real world products, supporting real world politicians, attending concerts, listening to music and sending e-mails (Hemp, 2006).

Even as virtual worlds establish themselves as real societies, uncertainty arises as to how traditional societal norms apply in virtual places. In response, much effort and volumes of law publications have been devoted to the application of real world rights to virtual societies. Yet in their infancy, virtual worlds seem to be a wide open frontier with little regulation, where rules are ambiguous, and enforcement is rare. The following paper helps navigate the issues that arise with regard to rights of digital ownership in virtual worlds by classifying them into categories.

We focus on the concept of digital product ownership using in-world examples from Second Life to discover what seems to actually be happening on the virtual frontier.

BACKGROUND AND LITERATURE REVIEW

Virtual worlds are a fascinating creation because they don't physically exist except for the servers that are running them. Yet, entire virtual societies of avatars are interacting, learning, conducting business, and forming relationships at any given time. This paradox has led to much discussion of how to approach law and rights in these virtual environments. The point of departure in this debate is the question of whether or not what happens in a virtual world is "real" and subject to consideration by law-makers. Many theorists seem to agree that the amount of real-world time and money that is being invested in virtual worlds deem them worthy of discussion in the legal arena (Bonifield & Tomas, 2009; Castranova, 2002; Lastowka & Hunter, 2004a). The question that remains is: how do real world rights and laws apply in virtual spaces? Positions range from the assertion that avatars are virtual extensions of the humans that control them and therefore are subject to the same rights and laws (Lastowka & Hunter, 2004a), to the belief that just as with any other software, virtual world users are subject to the terms set forth by the creators of the virtual world as part of the end user license agreement (EULA) (Balkin, 2004). In either case, the issues are complex. If avatars are entitled to rights, who dictates what they are and enforces them? If virtual world owners are entitled to a dictatorship over their world, what happens when their policies come into conflict with users' rights such as freedom of expression?

In response to these probing questions, researchers have predicted various outcomes. While some foresee virtual inhabitants creating their own legal system and enforcing them within their own worlds (Claburn, 2006b; Lastowka & Hunter, 2004a), others expect real world courts to take action regarding virtual issues (Balkin, 2004). Already, we see signs of both of these trends. Virtual world cultures are dictating norms of behavior with reactions and punishments for "griefers" (virtual world inhabitants who bother other inhabitants) (Grimmelmann, 2004; Lastowka & Hunter, 2004b). At the same time, recent anecdotes are proving that virtual worlds are starting, in various ways, to make their mark within real world legal systems (Bonifield & Tomas, 2009; Claburn, 2006b; Scheck, 2011). As virtual worlds continue to develop, the rise of new laws and resolution of legal issues remains to be seen. What is relevant at this point is how the rights and laws that we are already familiar with in the real world are being impacted by activities in the virtual worlds. The following discussion outlines the spectrum of real world legal concepts of ownership as they are manifested in virtual worlds.

Examining the virtual landscape, we encounter numerous types of issues that arise relating to digital ownership in virtual worlds. We conceptualize them within three distinct categories to facilitate navigation of this topic.

Digital Real Estate

The right to own property is a basic tenet of most virtual worlds. For example, the basis of Second Life's business model is "leasing land" to its inhabitants (Siklos, 2006). Currently, Second Life consists of nearly a half million acres of virtual land either on Second Life's mainland or on private islands (<http://secondlife.com/land/faq/>). For all of that land, Second Life users have paid down-payments and continue to pay monthly fees for the privilege of customizing their virtual space to their liking. Much like the real world's real estate market, Second Life's real estate scene even comes complete with landlords and brokers. Still, it is not clear if virtual real estate owners actually have title (i.e. exclusive access) to the land or if they are merely paying for a license to use space and resources on Linden's servers (Bonifield & Tomas, 2009). Uncertainty over this issue was the subject of a real world law suit filed in 2006 and class action suit underway in San Francisco (Claburn, 2006b, 2006c; Sutter, 2010). While Second Life encourages the sale and customization of land, who ultimately has the final say in who owns what?

Further questions that arise regarding the land status of virtual land include: should it be subject to real estate taxes? If so, in which jurisdiction? Is virtual land ownership subject to other real estate laws, for example regarding contracts, leasing, bankruptcy, or heredity?

The argument that is often made rejecting the idea that virtual land ownership is in the same category as real land ownership dismisses virtual land as intangible and temporary. However Lastowka and Hunter (2004a) argue that in the real world, laws do exist for ownership of both intangible and temporary possessions of land. For example, property ownership in our current economic system often refers to an intangible interest in the property such as easement. In addition, leased property is an example of real world property ownership that is temporary. While the status of virtual land in the recent law suit (mentioned above) was not conclusive, the fact remains that virtual property has value in the real world. If so, the virtual real estate markets are relevant to our real world economies and as such, their status will likely face scrutiny as the parallel, yet intertwined existences persist.

Digital Currency

Land is not the only virtual world item that has value in the real world. Most virtual worlds also include an in-world currency. Though the virtual currency, such as the Linden Dollar in Second Life, is invented by the creators of the virtual world, the value that people place on it is what gives it legitimacy in the real world and therefore cannot be ignored (Castranova, 2002). In fact, virtual world economic activities have proven to closely mimic real world economies complete with in-world currency exchanges, wages, and statistics covering concepts such as labor supply, inflation, and foreign trade (Castranova, 2001). First Meta Exchange (firstmetaexchange.com) represents a marketplace for buying, selling and exchanging a variety of virtual world currencies. Currently the exchange supports at least five different virtual world currencies as well as US dollars and Euros. Indeed, virtual world inhabitants have amassed large stocks of valuable assets in these economies (Claburn, 2006a).

At the same time, virtual economies have some properties that are divergent from real world economies. For example, virtual world creators have a unique level of control over the world's economy and investments are safe from natural disasters. However, real and virtual economies are fundamentally intertwined. One company, MindArk, even offers a cash card that can be used in real world ATM's to convert virtual dollars into real world currency (Irvine, 2007). This means that as virtual economies grow, there could potentially be real impacts on the macroeconomics of the real world and complex issues relating to laws and governance regarding the rising value of virtual assets (Castranova, 2002). As in any economy, the need will arise to seek protections, damages, and claims but in virtual economies it is unclear who the authority is. Already, questions about virtual currency arise in the real world. The most salient example is the issue of taxation. Since virtual world users are also citizens of the real world, it seems that their virtual gains should be taxed (Castranova, 2002). However, uncertainties include: who has control over what happens in virtual worlds and under what jurisdiction would taxation occur? Does any in-world gain constitute a taxable event or do we perhaps only owe taxes when we convert currency back to real world currency (Camp, 2007)? The feasibility and propriety of a virtual world taxation policy has gained both congressional and IRS attention over the last few years (Terdiman, 2006).

Digital Objects

The virtual goods that make up the economies that we have just discussed are objects that are created by inhabitants of the worlds. Virtual citizens' creativity has led to the creation of a huge variety of virtual possessions including clothing, houses, buildings, and accessories. These digital objects can be used by their creators for their own benefit or they can be bought and sold in the virtual market as part of a virtual business. Just as in the previous two categories, the concept of the legitimacy of ownership of these objects according to real world standards has come into question. While some might not value a virtual world object with the same ownership potential as a physical one, scholars have pointed out that our real world economies certainly do allow for the ownership of intangible items (Lastowka & Hunter, 2004a). For example, you can own a mortgage, a domain name, a brand logo, or a song and they are all protected by copyright and trademark laws in the real world. Essentially, ownership of digital objects in virtual worlds are an extension of the intellectual property concepts and laws that we are familiar with in the real world and already have applied to the Internet in other ways (MacInnes, 2006). In the same category are personality rights, whereby people have the right to control the use of their name and image (Bonifield & Tomas, 2009).

A point of contention in virtual worlds is who owns the digital objects that are created? Is it the creators of the objects (virtual world inhabitants) or the owners of the servers that house the code that activates the digital objects? Currently, the rules of object ownership in virtual worlds are subject to determination by virtual world owners in their EULAs. Nevertheless, the answer is not so simple and the interconnectedness between real and virtual worlds is again relevant. As memberships in virtual worlds rise, real world people and companies become subject to intellectual property violations, albeit in the virtual world.

Surveying virtual world activities it is clear that there are at least three distinct types of intellectual property violations that can occur within virtual worlds. The first occurs solely in-world, while the others rely on the interdependence between real and virtual worlds.

1) **In-world cloning.** The availability of programs that clone digital objects, such as one called CopyBot (2011), have important utility such as backing up or moving creative works. However, they also introduce the potential for users to make illegitimate copies of digital objects that they did not create (Claburn, 2006a). This activity can be considered akin to making illegal copies of digital photos, software, or music files and can be thought of as theft of intellectual property. Though the legal status of such an action is not defined, the ethicality of it is difficult to argue. A current dispute in a San Francisco court involves a Second Life company that sells virtual horses claiming that another company has violated its intellectual property rights by copying its software to create and sell virtual rabbits (Scheck, 2011).

2) **Between-world cloning.** In virtual worlds like Second Life, users are at liberty to create whatever they fancy. Most of the time what they fancy is a digital representation of a real world item. However, sometimes the real world item that is being "virtualized" represents a design or concept that belongs to whomever has created it in the real world. Under copyright law (terms vary by country), one's expression of an idea is protected against duplication (Bonifield & Tomas, 2009). Making a digital copy of something that is protected by copyright law in the real world seems to be a violation of that copyright even in a virtual medium. Personality/privacy rights can also be violated in this way by creating a virtual likeness of a real person's appearance.

3) **Trademark violations.** In the real world, companies often spend millions of dollars to secure a name, logo, or symbol to distinguish their products as their own. They further expend money and effort to create a positive association with that symbol. In the real world such symbols are protected with trademarks to prevent confusing customers and/or tarnishing a brand's reputation (Bonifield & Tomas, 2009). Putting a company's trademark on a digital item in the virtual world, although it is not "real," can potentially violate the trademark in the same way. Personality/privacy rights can also be violated in this way by using a person's name or image without permission even in a virtual world.

THE CASE OF SECOND LIFE

Despite the uncertainty outlined above in each of the categories of digital ownership, at this juncture, each virtual world chooses the ownership status of creations in their worlds. While some are "property-averse", others are "property-promoting" (Horowitz, 2007). Second Life's philosophy is contrary to many other virtual worlds' attitudes and gives users intellectual property rights toward their creations to encourage attachment to the site and creativity within it (Bonifield & Tomas, 2009). Second Life also explicitly states on its Web site, Second Life Wiki, that real world trademarks and copyrights are to be respected ("Linden," 2011). Nevertheless, copyright infringements in Second Life have been said to be "rampant" (Siklos, 2006). Focusing on the Digital Objects category, the following report of our examination of current activities in Second Life confirms that Second Life inhabitants are not necessarily complying with the intellectual property interests of fellow users and real world entities.

Examples of Digital Knockoffs in Second Life

In this section, we present examples of how residents in Second Life have used legitimate real-world companies' logos for various entrepreneurial activities within the virtual world. In several cases the exact product names have been employed in the product or service while, in others, a very close but unmistakable link was made. All pictures are taken from actual screen captures from Second Life sims taken during late 2010 to early 2011.

In Figure 1 the Italian ice cream vendor Algida is shown exactly as it appears in the real world. What probably occurred was a Photoshop-like image was taken of a store display and transported into Second Life as part of a store display. The same can be said for the Juicy Fruit image.

Figure 1: Algida and Juicy Fruit Products.



In Figure 2, we illustrate three examples of how some vendors in Second Life add realistic displays to their sims. Travelers to Italy are very familiar with the street vendor stands of Ferrarelle which are present on many locations throughout the country. Both the freezer display and magazine display consist of real world brand names.

Figure 2: Freezer Display, Ferrarelle Street Vendor, and Magazine Display.



Figure 2: Freezer Display, Ferrarelle Street Vendor, and Magazine Display (continued).



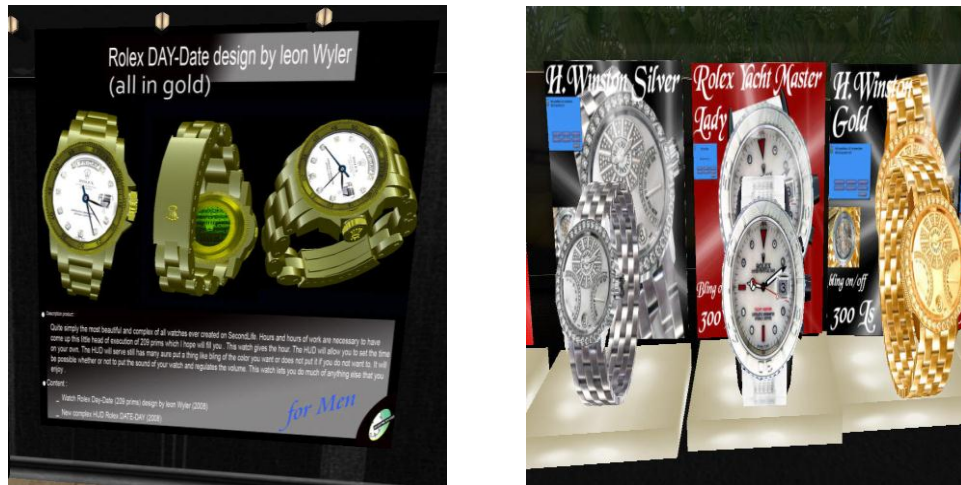
Figure 3 contains a store display offering SL products that employ the very popular characters Snoopy and Alf along with sound tracks of the two characters.

Figure 3: Examples of Snoopy and Alf Products.



Figure 4 illustrates examples of watches that are sold to adorn residents' avatars in the virtual world. Residents in virtual worlds occupy homes, drive cars, wear expensive designer clothes and adorn themselves with jewelry.

Figure 4: Two Examples of Rolex Watch and Winston Products Offered for Sale in SL.



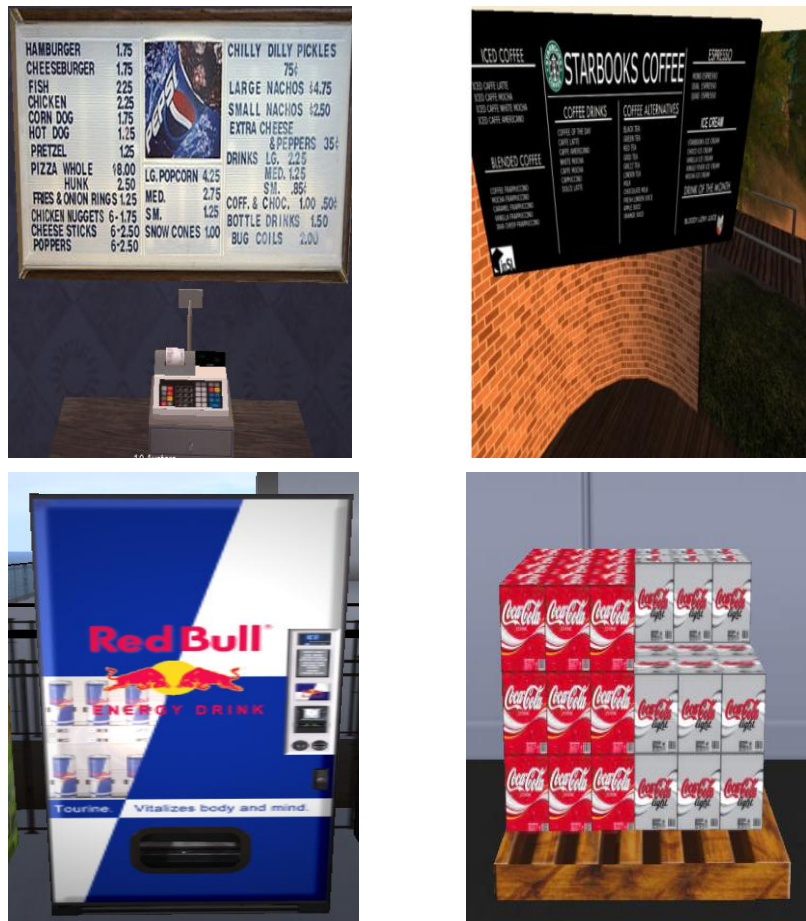
One of the most egregious categories of real-world products transported to virtual worlds is that of beverages. We present a cluster of examples that transcend soft drinks as well as beer products that either appear as vending machines or store displays. Figure 5 shows two brand-name products that are recognizable to consumers. No attempt has been made to disguise the product names.

Figure 5: Dr Pepper Vending Machine and Budweiser Display.



Figure 6 shows how residents can skirt the improper use of a brand by replicating the real-world display but with a slight modification in branding the product. Starbucks is called Starbooks but the virtual store looks almost identical to its real-world counterpart. The 3 other examples are identical to their real-world product characterizations.

Figure 6. Four Examples of Beverages.



Another category of knockoffs is that of automobiles. Figure 7 shows how creative virtual world entrepreneurs can be. New York City police logos were combined with the luxury Italian automaker, Lamborghini, and what a resident can purchase is something that is virtually impossible to have in the real world- a super charged law enforcement vehicle.

Figure 7: Lamborghini Police Vehicle in New York City.



In Figures 8 and 9, we illustrate three examples of references to automobile manufacturers with a significant presence in the real world. However, the manner in which they are presented is different. In the first example, the Fiat 500 (informally called the cinquecento) is represented in Second Life as the FEET 500 and the Vespa motor scooter is represented as VISPA. Clearly, there is an obvious link to the real world versions from their SL counterparts in both name and style. In point of fact, the script below the picture refers to both Fiat and Vespa as part of the search results. In the next two pictures that depict both the Jeep Renegade and a Ford vehicle, there is no attempt to disguise the brands being copied.

Figure 8. Fiat and Vespa Knockoffs.



Figure 9. Jeep Renegade and Ford



Figure 10 depicts two very popular U.S. sports cars—the Chevrolet Corvette and the Ford Thunderbird as screen captured from a Second Life vendor. The shot was taken from a showroom in Second Life. The reader should note the “info” tabs in the background. When touched they provide inquiring residents both descriptions and costs for the vehicles. Residents in Second Life can, therefore, drive their dream cars in the virtual world just as they could in real life.

Figure 10 Chevrolet Corvette and Ford Thunderbird in SL Showroom.



Figure 11 illustrates the creative way in which SL vendors circumvent branding issues. In the picture on the left, there is an ad for a “Slegway” which is an obvious reference to a “Segway” people mover quite popular with security personnel in malls. The picture on the left is an ad for a “Porschy 3.6i” which clearly refers to a Porsche.

Figure 11. Segway Knockoff and Porsche Knockoff.



In Figure 12, we have two examples of branding being used. Malev airlines logo and the shape of the airplane are both linked to the airline and Boeing. The scene is from an airport sim in Second Life.

Figure 12. Illustration of a Boeing 737 from Hungarian Airlines.



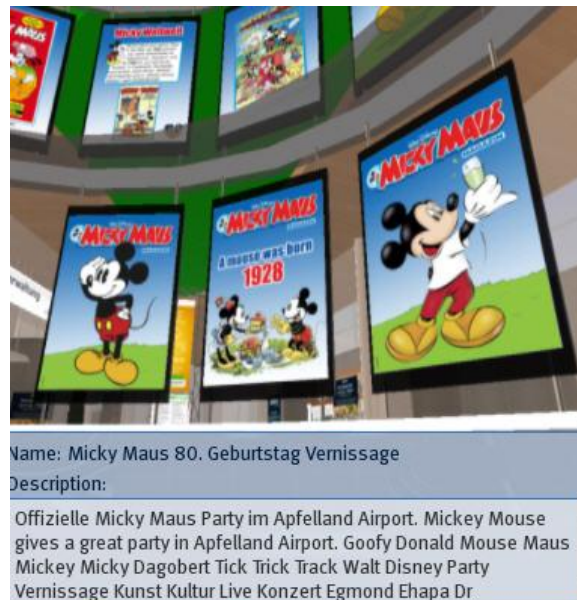
Figure 13 illustrates the “wild west” nature of the virtual world. Residents are able to pursue a myriad of activities that might prove to be difficult in the real world. Firearms are allowed on certain sims within Second Life. The impact of this freedom is the opportunity for vendors to manufacture and sell firearms to in-world residents. The illustration contains advertisements for both Beretta and HK -- two real world vendors of firearms. There was no attempt to disguise the products in the ads.

Figure 13. Two Examples of Firearms –the Beretta and the HK Models.



The final illustration, Figure 14, depicts the very familiar character, Mickey Mouse, from the Disney stable of known brands. Reference is made to Goofy and Donald Duck characters. Note how real the depiction is and there is no mistake as to what they represent.

Figure 14. Disney Advertisement for Micky Maus.



SUMMARY AND CONCLUSIONS

In this research paper, we began with a discussion of digital rights; namely, digital real estate, digital currency and digital objects. We explored the nature and issues of each type. In virtual world activities we presented three distinct types of intellectual property violations that can occur within virtual worlds. The first occurs solely in-world, while the others rely on the interdependence between real and virtual worlds. They are as follows: (1) in world cloning, (2) between world cloning and (3) trademark violations. The next section discussed one of the most popular virtual worlds-Second Life owned by Linden Labs. Finally, we demonstrated via screen captures of actual sites in Second Life, numerous examples of these violations taking place. They ranged from explicit knockoffs of real world products to near-knockoffs whereby a similar sounding product name was used but the actual replica of the real-world product was used. It should be noted that in Second Life there are many examples of proper attribution given to brand logos since the sites are sanctioned by the vendors (Altschuller et al., 2010).

In conclusion, it remains to be seen how, when and where these overt violations will be addressed by real-world corporations. One can argue that any publicity for a brand name in a virtual world, whether authorized or not, is good for the company. On the other hand, unless a corporation is aware of each instance of infringement they will not be able to determine if it is either good or bad for the organization. As virtual worlds like Second Life proliferate, it will become even more difficult to enforce the violations of intellectual property that are the central focus of this paper. This research brought to the fore the reality of what is actually happening in virtual worlds and has liberated it from the theoretical discussion realm.

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