

Communications of the Association for Information Systems

Volume 20

Article 15

July 2007

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Recommended Citation

Mennecke, Brian E.; Terando, William D.; Janvrin, Diane J.; and Dilla, William N. (2007) "It's just a game, or is it? Real money, real income, and real taxes in virtual worlds," *Communications of the Association for Information Systems*: Vol. 20 , Article 15.

DOI: 10.17705/1CAIS.02015

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Communications of the **I**nformation **S**ystems
Association for **I**nformation **S**ystems

IT'S JUST A GAME, OR IS IT? REAL MONEY, REAL INCOME, AND REAL TAXES IN VIRTUAL WORLDS

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ABSTRACT

Virtual worlds like Second Life offer players opportunities to earn real-world income through their activities in the game. It will not be long before governments begin to establish policies and regulations regarding the income generated by players of these game environments. This paper examines the issue of taxes in virtual world games. Two alternative places for recognizing income could be established by regulators: 1) at the point when in-game transactions take place; or 2) when players convert game assets into real-world currency. We argue for realization of income, and therefore taxation, at the exchange. We expect that burdensome policies such as requiring game operators to monitor and report taxable activities to the authorities will dissuade game play and likely result in the collapse of these vibrant economies. Therefore, our recommendation is that the IRS should establish specific rules that inform players about how they should calculate income and work with game operators to inform participants of both the rules and consequences for non-compliance.

Keywords: virtual worlds, massively multiplayer online games (MMOG), Second Life, taxation policy

I. INTRODUCTION

On April 15, 2004, I will truthfully report to the IRS that my primary source of income is the sale of imaginary goods and that I earn more from it, on a monthly basis, than I have ever earned as a professional writer. (Julien Dibbel, 2004; <http://www.juliandibbell.com/playmoney/>)

Given the exponential growth in virtual world games such as World of Warcraft and Second Life, we examine the question of whether income from virtual worlds should be taxed, and if so, when. Although currently the IRS has no policy specifically addressing the role of taxes in virtual world games, the U.S. Congress and other governmental entities are now beginning to consider the appropriateness of taxing the real-world income players earn from online games. Dan Miller, the senior economist for the Congressional Joint Economic Committee, recently noted, "Given growth rates of 10 to 15 percent a month, the question is when, not if, Congress and IRS start paying

attention to these issues" [Bangeman 2006]. Clearly, as gaming communities continue to grow, so will the potential for greater real-world income to be extracted from these games.

The term *virtual worlds* describes computer-generated, immersive environments in which participants engage in interaction for social, entertainment, educational, and commercial endeavors. A variety of genres of massively multiplayer online (i.e., MMO) virtual environments exist and these have gained very large followings. For example, as of June 2007, Second Life had almost 8 million subscribers, up from several hundred thousand just a year earlier [Second Life 2007]. While most people consider MMO activities to focus on fantasy or role playing gaming (e.g., World of Warcraft, EverQuest, Final Fantasy, and similar game environments), an increasing number of virtual worlds focus on enabling socialization, building of communities of shared interest, and developing commercial activity (i.e., Massively Multiplayer Online Social Games, or MMOSGs).

Second Life, as the most popular social game, was built with the goal of enabling participants to socialize, build local and regional environments, and engage in an in-world virtual economy that revolves around the purchase and sale of user-created content (see Figure 1). We consider Second Life and similar economically driven games to be in a category by themselves, which we label Massively Multiplayer Online Economic Games (i.e., MMOEGs). Regardless of the focus of any particular game, what is common to the MMOEG environment is the fact that economies have arisen inside the game. These economies revolve around virtual objects that participants have created, built, and maintained exclusively within the game environment. A Second Life participant can build a virtual object like a motorcycle, sell it to another participant using the currency of the game, Linden dollars, and spend these earnings on a new virtual outfit for his or her in-game persona (i.e., his or her avatar).



Figure 1. A Business District in Second Life

The fact that MMOEG participants engage in virtual commerce does not, by itself, appear to have implications for tax policy. However, these game-related transactions often do not stop at the borders of the game environment. Second Life participants can convert Linden dollars (Linden\$), the game's virtual currency, into legal, real-world currency by trading with other players who are interested in purchasing Linden\$ at the LINDEX (the Linden Lab dollar exchange). This is, of course, a two-way exchange: for every participant who wishes to convert Linden\$ there needs to be an individual with real-world currency who is seeking to buy Linden\$. The LINDEX functions much like a real-world currency exchange by bringing new wealth into the boundaries of the game.

The LINDEX thus allows participants to convert profits earned within the game environment into negotiable currency outside of the game. In fact, a number of people have gained notoriety for generating substantial amounts of real-world income through the sale of virtual goods and services. Anshe Chung, for example, is a well-known land developer in Second Life who has developed her own continent (normally, land parcels are allotted in islands) and makes her real-world income by developing land, selling and leasing parcels and structures, and engaging in other commercial activities exclusively within the virtual world [Sloan 2005]. Chung's self-reported net worth in the game exceeds \$1 million. [Chung 2007]. Therefore, the fact that people are engaging in activities in virtual worlds that generate substantial real-world income has real implications for tax policy.

In this paper, we discuss the tax policy implications of creating virtual worlds where economies that enable real-world wealth creation exist. We also provide a summary of why, how, and where real-world income could be realized in virtual worlds and discuss some of the tax issues facing game operators, game players, and regulators. Eventually, the tax man is coming to virtual worlds. Therefore, it is important to explore the issues that will define when, where, and how taxes will affect game operators, game players, and others interested in playing MMOEGs.

II. WILL THE IRS COME AFTER YOUR AVATAR?

Many online games are designed for instant gratification and do not allow players to generate in-game wealth or resources. Clearly, these are not the focus of attention of legislators or regulators. What is of interest are games that allow players to accumulate in-game assets that may be converted into real-world currency. In these environments, players trade in-game with the goal of generating real-world returns. For every player willing to spend time building up these resources, there are likely to be other players who want a quick fix and who will be willing to pay for the ready-to-go, in-game resources. This may seem to be hard to fathom for those not experienced with online games, but it happens daily. In fact, several Web sites devoted to brokerage activities exclusively for virtual world game environments exist. For example, IGE (IGE.com) describes itself as:

...a diversified service provider operating the world's largest secure network of buying and selling sites for massively multiplayer online game (MMOG) virtual currency and assets on the Internet. (<http://www.ige.com/about>)

With an active market for virtual world goods and services, there is a potential for taxable income. Where there is potential for taxable income, the tax man will surely soon follow.

There is much diversity among MMOGs. Castronova [2004] identifies two types of games: closed (i.e., structured) and open (i.e., unstructured) games. Structured games, like World of Warcraft, have end-user license agreements (EULA) that allow in-game trade of goods and services but that specifically forbid users to convert virtual assets into real-world currency. While sites like IGE function as a broker between game players for conducting out-of-game transactions, these transactions are neither endorsed nor encouraged by the game operators. In unstructured games, like Second Life, the EULA allows or encourages trade inside of the game by granting participants intellectual property (IP) rights to their self-created virtual assets. Participants may also trade outside of the game using a currency exchange, such as Second Life's LINDEX. Since

the EULAs for unstructured games like Second Life explicitly allow and encourage activities that can result in real-world income, unstructured games represent the most likely environments where the IRS would initially impose tax regulations.

III. TAXES? IT'S JUST A GAME!

In one of the first scholarly papers on the taxation of unstructured virtual worlds, Lederman [2007] suggests that the income generated from the sale of virtual goods and services be included in gross income for federal income tax purposes consistent with IRC Section 61 because: (1) each participant has property rights associated with his or her underlying virtual self-created property; and therefore, (2) any "in-game" sale or exchange represents a *realization* event and should be taxed. Although the question of income realization is indisputable, the more challenging question to address is when this income should be recognized. Income could be recognized when the virtual assets or services are sold in-game, as Lederman [2007] suggests, or when the participant converts in-game profits into real-world currency. Both options might be justified using existing tax policy, depending on the conditions under which the game is played. Nevertheless, it may not be clearly discernable which alternative is preferred. Perhaps more importantly, which alternative is more practical?

While Lederman's assertions about the generation, ownership, and transfer of intellectual property in-game are accurate, these factors, by themselves, are not the only items that should be considered in evaluating when virtual income should be recognized for federal income tax purposes. Another factor to consider is whether a participant's accumulation of virtual assets is subject to a "substantial risk of forfeiture." The fact that any gain or loss occurs in the game will be irrelevant if the game imposes restrictions on players that make it difficult to or impossible to convert in-game income to real-world currency. In other words, if a "substantial risk of forfeiture" exists, then any income that a player generates will be held in a currency that is essentially worthless until or unless it is redeemed for USD or other real-world currency.

In the case of Second Life, which is one of the least restrictive virtual world game environments, this risk of forfeiture arises from two possible sources. First, no buyer of game currency may exist. Second Life's game operator, Linden Linden Lab, does not cash players out of the game; rather, players pull real-world currency out of the game by exchanging Linden dollars for real-world currency at the LINDEX. Due to the continued growth of Second Life, the demand for Linden dollars has, to date, kept up with the supply. However, this demand may not continue indefinitely into the future.

Second, the restrictions imposed by game EULAs constitute a risk of forfeiture of game earnings. For example, the LINDEX places daily and monthly limits on the amount of Linden dollars that a participant can exchange for USD. These limits vary based on the player's level in the game and his or her status (e.g., enterprises and business owners have higher limits than individuals). Nevertheless, restrictions on the real-world income that players earn suggest that at least part of the income generated during in-game transactions might, at any point in time, be at risk of forfeiture.

Thus lies the crux of the problem with Lederman's proposal that profits be taxed in-game, because a risk of forfeiture implies that profit generating transactions in-game merely *appear* to represent a taxable event. Although Second Life looks and acts a lot like a real-world economy, the suggestion that in-game income should be realized at the point of transaction is not justified because players of Second Life may not be able to convert Linden dollars to real-world currency as quickly as they would like to, if at all. Because of these risks, it is more appropriate to specify the point of income recognition to be when the player converts undistributed in-game profits into real-world currency.

IV. THE IMPLICATIONS OF TAXING A GAME

What will happen if Congress or regulatory agencies tax income from games such as Second Life? There are interesting potential implications for taxing authorities, game operators, and game players. From the taxing authority perspective, how would the IRS enforce compliance with tax policy? The IRS may elect to require game operators such as Linden Linden Lab to track economic activity and issue participants a Form 1099 (i.e., report of miscellaneous income) when they sell virtual assets or convert these assets to real-world currency. Interestingly, many bloggers and commentators have made assertions that assume that 1099s will be part of the tax policy that will be promulgated by the IRS for game income [Terdiman 2005]. In spite of this, 1099s are not the only option for tax compliance. Voluntary reporting is a viable and commonly used alternative approach. In fact, the present de facto approach for tax compliance is voluntary reporting.

What are the pros and cons of each alternative? By providing the IRS with a record of earned game income, 1099 forms should increase taxpayer compliance. Additionally, shifting the burden of record keeping to game operators may improve reporting accuracy because 1099 forms may make record keeping easier for players who might otherwise have difficulty tracking their transactions. While game operators may incur additional costs if they are required to maintain 1099 records, many game operators, such as Linden Linden Lab, already routinely capture in-game transactions. Thus, shifting record keeping to game operators may not be overly burdensome.

While requiring game operators to report to the Treasury participant in-game income may, on the surface, seem to be a logical solution, associating 1099 forms with game play may have regressive effects on player behavior. If the IRS adopts Lederman's recommendation requiring users to recognize income when the transaction occurs within the game, players may change the medium of exchange. For example, instead of exchanging Linden dollars for a good or service, players may work out some form of barter. In addition, some players might engage in exchange using other, out of game media or exchanges such as a Web portal or peer-to-peer exchange. Alternatively, if the IRS determines that income is recognized when LINDEX transactions occur and issues 1099 forms at the exchange, fewer players would use the exchange to transfer funds into and out of the game. Of course, this may lead to a devaluation of the Linden currency, currency inflation, and the eventual collapse of the game economy. In summary, regardless of where it takes place, formalizing income-generating transaction reporting may result in overhead for the game operators, changes in game player behavior, and potential regressive effects for the game economy.

Is the other alternative for tax compliance, self reporting, a workable solution? Currently, few players comply by self-reporting taxable game income. In fact, many players are likely not aware of the fact that game income is taxable. This may be due, in part, to the fact that the IRS has not provided any specific policies, regulations, or guidance concerning income from games like Second Life, and Linden Linden Lab does not provide specific guidance to players about tax policies or compliance requirements. While the tax laws certainly apply to players of Second Life, the scant attention paid to this economy by the IRS suggests that few players have incentive to comply.

Would compliance improve if the IRS promulgated regulations or guidance specifically for games like Second Life? Probably so, but compliance may not improve significantly unless taxpayer penalties for failing to disclose Second Life income increase. For example, consider the IRS's approach to barter transactions. The IRS has established substantial penalties, up to \$100,000 per year, for small businesses who fail to report barter transactions on a timely basis [Internal Revenue Service 2006]. The IRS designed these penalties to encourage compliance with existing tax policy by presenting taxpayers with negative consequences that are substantial enough to deter non-reporting. Thus, the threat of incurring penalties for unreported income is a powerful incentive that will likely result in substantial compliance.

For self-reporting to be effective, Linden Linden Lab and other game operators would need to inform their players of the tax laws regarding income recognition. The current information on taxes in Second Life simply states that players should check with their local taxing authority. Alternately, participants could be informed of tax guidelines when they enroll in the game, engage in LINDEX transactions, and search game FAQs. Of course, for this information to accomplish its objective of obtaining taxpayer compliance, it will need to be fairly specific. Thus, IRS guidelines should not only inform players about when and how game income is recognized, but also clarify the consequences of failing to report income. Our belief is that self-reporting guidance can work with games like Second Life and yet allow the games to go on without imposing significant burdens on players and operators.

V. CONCLUSION

While Second Life and other MMOEGs primarily focus on entertainment and socialization, players can earn real-world taxable income. While the number of individuals earning substantial income from these environments is currently small, the number of participants and the amounts they earn is expected to grow quickly. For example, Gartner analysts recently predicted that approximately 80 percent of Internet users will have a "second life" by 2011 [Gartner 2007], suggesting that the number of players in these games and the opportunity to earn income will grow dramatically. In-game regulation and monitoring of taxable transactions is one way to ensure that participants pay their taxes, but such activities may discourage participation and eventually harm these virtual economies. Thus, we urge the IRS to maintain a largely hands-off policy by promulgating guidelines for players and requiring game operators to make players aware of these guidelines.

This discussion has taken a U.S. taxation perspective. However, Second Life is a truly international environment, with approximately 75 percent of users living outside the United States [Second Life 2007]. Other countries, most notably the United Kingdom [Wallop 2007] and Australia [Miller 2006] have also shown interest in taxing proceeds from MMOGs. Many of the taxation issues discussed here apply in other national environments. Nevertheless, tax policies do differ in important ways around the world. Imposing a heavy tax burden on players in one country relative to others may have profound and unforeseen implications on game play and user behavior throughout the world. Thus, it is important to consider not only taxation implications within a given country, but also how a given policy might affect transactions with players in other countries. By providing guidance while, at the same time, letting the games play out, the players, game operators, and the tax man will benefit.

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Communications of the Association for Information Systems

ISSN: 1529-3181

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