

NOTE

VIRTUAL ECONOMIES VIRTUALLY UNREGULATED: HOW CLEAR TAXPAYER GUIDANCE CAN MITIGATE TAX COMPLIANCE RISKS

I. INTRODUCTION

With the national debt rapidly approaching \$18 trillion,¹ the need for the U.S. government to increase revenue has soared to new heights.² In light of this fiscal crisis, the government has consistently sought ways to increase revenue through its taxing power by: increasing marginal tax brackets;³ implementing new taxes;⁴ and imposing additional reporting requirements to foster compliance.⁵ Despite these initiatives, the government has failed to provide clear and comprehensive guidance to taxpayers and practitioners regarding tax consequences arising from virtual economies and virtual currencies,⁶ multi-billion dollar industries, and growing sources of noncompliance with the existing tax code.⁷

Virtual worlds provide a continuous and growing source of entertainment for individuals, primarily in the form of simulated interactions between characters in constantly changing environments.⁸

1. USDEBTCLOCK.ORG, <http://www.usdebtclock.org> (last visited Nov. 23, 2014) (tracking the national debt in real-time).

2. See *Borrowing and the Federal Debt: Federal Budget 101*, NAT'L PRIORITIES PROJECT, <https://nationalpriorities.org/budget-basics/federal-budget-101/borrowing-and-federal-debt> (last visited Nov. 23, 2014) (explaining that the federal deficit increases when expenditures exceed revenues).

3. See William Perez, *Tax Rates for the 2013 Tax Year*, ABOUT.COM, <http://www.taxes.about.com/od/Federal-Income-Taxes/qt/Tax-Rates-For-The-2013-Tax-Year.htm> (last visited Nov. 23, 2014) (pointing out that the new top tax bracket is 39.6%).

4. See Bonnie Lee, *New for 2013: Additional Medicare Tax*, FOX BUS. (Sept. 12, 2013), <http://www.foxbusiness.com/personal-finance/2013/09/12/new-for-2013-additional-medicare-tax> (discussing the imposition of an additional Medicare tax).

5. See 26 U.S.C. § 6050W(a) (Supp. II 2006) (creating reporting requirements for third-party payment facilitators).

6. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-516, VIRTUAL ECONOMIES AND CURRENCIES: ADDITIONAL IRS GUIDANCE COULD REDUCE TAX COMPLIANCE RISKS 15-16 (2013).

7. See *id.* at 12-14.

8. Leandra Lederman, "Stranger Than Fiction": *Taxing Virtual Worlds*, 82 N.Y.U. L. REV.

Scripted virtual worlds provide social havens for players seeking to express themselves in contexts other than everyday life, enabling them to quest, raid, and band together with other players to achieve common goals.⁹ On the other hand, unscripted virtual worlds offer minimal guidance to participants, and instead, focus on merely providing a simulated world, leaving the level of interaction purely up to the individual.¹⁰ Regardless of which type of virtual world one chooses to engage in, barter transactions, exchanges, prizes, in-game windfalls, and sales of virtual goods for real currency may give rise to potential tax consequences.¹¹

Aside from the issue of virtual world transactions, stand-alone virtual currencies also present significant problems for regulatory authorities.¹² It has been suggested that forms of virtual currency, such as Bitcoin,¹³ “[may] replace tax havens as the weapon-of-choice for tax-

1620, 1625-26 (2007).

9. William E. Arnold, IV, Note, *Tax Enforcement in Virtual Worlds—Virtually Impossible?*, 40 SYRACUSE J. INT’L L. & COM. 187, 191-92 (2012).

10. Adam Chodorow, *Tracing Basis Through Virtual Spaces*, 95 CORNELL L. REV. 283, 289 (2010).

11. See *id.* at 290 (identifying a new issue of whether virtual income should affect one’s tax liability).

12. Laura Barnes, *Bitcoin: Everything You Need to Know About the Virtual Currency*, PC RETAIL (Oct. 24, 2013, 9:00 AM), <http://www.pcr-online.biz/news/read/bitcoin-making-a-virtual-mint/032266> (noting that the anonymity aspect of Bitcoin can increase the possibility of tax evasion).

13. See *Bitcoin*, R/BITCOIN, <http://www.reddit.com/r/Bitcoin> (last visited Nov. 23, 2014) (“Bitcoin is the currency of the Internet: a distributed, worldwide, decentralized digital money.”); *Bitcoin Is an Innovative Payment Network and a New Kind of Money*, BITCOIN.ORG, <https://www.bitcoin.org/en> (last visited Nov. 23, 2014) (touting Bitcoin as “an innovative payment network and a new kind of money”); Raghu Kumar, *Bitcoin Explained in Layman’s Terms*, NDTV PROFIT (Dec. 27, 2013, 7:46 PM), <http://www.profit.ndtv.com/news/your-money/article-bitcoin-explained-in-laymans-terms-376029> (explaining that Bitcoin is a form of virtual currency used for electronic purchases or transfers that does not require any physical exchange). Due to their decentralized nature and worldwide accessibility, Bitcoins are rapidly growing in popularity, with many massive companies, such as Reddit, WordPress, and Overstock.com, accepting them as payment. Kumar, *supra*; see also *Bitcoin on Overstock.com*, OVERSTOCK, <http://www.overstock.com/bitcoin> (last visited Nov. 23, 2014) (“You can now buy thousands of Overstock.com products with Bitcoins!”); *Support*, WORDPRESS.COM, <http://www.en.support.wordpress.com/bitcoin> (last visited Nov. 23, 2014) (“Bitcoin is an alternative to PayPal and credit cards as a form of payment in the WordPress.com Store.”). Unlike traditional forms of payment, such as credit cards, there are little to no fees involved in Bitcoin transactions because of its person-to-person nature, thus making it an attractive option for sellers. Kumar, *supra*. But see Jonathon M. Trugman, *Welcome to 21st-Century Ponzi Scheme: Bitcoin*, N.Y. POST (Feb. 15, 2014, 5:08 PM), <http://www.nypost.com/2014/02/15/welcome-to-21st-century-ponzi-scheme-bitcoin> (criticizing Bitcoin’s legitimacy and claiming that “a currency built by hackers and anonymous code-writing anarchists offers a pretty weak alternative to cash, credit cards, or PayPal”). For a more comprehensive listing of organizations accepting Bitcoin, see *Places That Accept Bitcoin*, SPENDBITCOINS, <https://spendbitcoins.com/places> (last visited Nov. 23, 2014) (containing over 400 pages of companies that accept Bitcoins, broken down by category).

evaders,” further exacerbating the already difficult task of identifying and reporting taxable transactions from virtual worlds.¹⁴ In an effort to combat this type of activity, the government is actively issuing regulatory guidance to persons using, administering, or exchanging virtual currencies.¹⁵

Although Congress is certainly aware of the problems involving the tax consequences arising from transactions within virtual worlds—and has been looking into the problem since at least 2006—little has actually been accomplished in terms of disseminating information to tax professionals and the taxpaying public.¹⁶ In May 2013, nearly seven years later, the Government Accountability Office (“GAO”) issued a report to the U.S. Senate Committee on Finance, which concluded that the extent of tax noncompliance is unknown, and that the Internal Revenue Service (“IRS”) “has not issued guidance specific to virtual currencies used outside of virtual economies.”¹⁷ As such, the GAO recommended:

To mitigate the risk of noncompliance from virtual currencies, the Commissioner of Internal Revenue should find relatively low-cost ways to provide information to taxpayers, such as the web statement IRS developed on virtual economies, on the basic tax reporting requirements for transactions using virtual currencies developed and used outside virtual economies.¹⁸

Looking at the above statement from the GAO, it becomes evident that the IRS must implement additional regulation and provide clearly articulated guidance if it intends to ascertain and reduce noncompliance.¹⁹ Since levels of voluntary compliance with the Internal Revenue Code (“IRC” or “Code”) are, historically speaking, quite high,

14. Paul L. Caron, *Marian Presents Are Cryptocurrencies ‘Super’ Tax Havens? Today at Loyola-L.A.*, TAXPROF BLOG (Oct. 21, 2013), http://www.taxprof.typepad.com/taxprof_blog/2013/10/marian-presents.html.

15. See DEP’T OF THE TREASURY FIN. CRIMES ENFORCEMENT NETWORK, FIN-2013-G001, APPLICATION OF FINCEN’S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES 1-2 (2013), available at www.fincen.gov (providing interpretive guidance to clarify the application of the Bank Secrecy Act to “persons creating, obtaining, distributing, exchanging, accepting, or transmitting virtual currencies”).

16. See Ken Newquist, *Reuters: US Congress Launches Probe into Virtual Economies*, NUKETOWN (Oct. 18, 2006), <http://www.nuketown.com/node/2104> (pointing out that the Joint Economic Committee is looking at the public policy questions raised by virtual economies, including taxes, barter exchanges, and acquisitions of wealth).

17. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 12, 16.

18. *Id.* at 17.

19. *Id.*

it follows that providing more information to taxpayers is likely to lead to increased conformity.²⁰

This Note addresses the GAO report's recommendation to the IRS by proffering solutions to disseminate information to taxpayers, increase regulation, and, thus, mitigate noncompliance.²¹ With this objective in mind, Part II provides the necessary background information about the different types of virtual worlds, closed versus open-flow virtual currency systems, how they operate, and the user experience for virtual world participants.²² Part III explores the specific tax issues surrounding virtual transactions, including: the difficulty in calculating basis; determining realization events; and determining how existing laws relate to these problems.²³ Part IV evaluates previously offered solutions to problems in one or more of these specific areas, and then presents an alternative solution to mitigate tax noncompliance.²⁴ This Note proposes that the government should take a three step approach to ensure compliance with existing revenue laws: (1) disseminating information to taxpayers through the use of virtual world splash pages; (2) increasing awareness among active tax practitioners through the continuing professional education requirements; and (3) developing a federal virtual currency exchange that applies to virtual world operators and virtual currency transactions that meet a minimum threshold.²⁵

II. A BRIEF PRIMER ON VIRTUAL WORLDS AND VIRTUAL CURRENCY SYSTEMS

By the end of 2010, the total number of registered accounts for all virtual worlds exceeded one billion.²⁶ In 2011, the revenue of the third party gaming service industry was estimated at \$3 billion.²⁷ In addition, the total value of Bitcoin, the most prominent virtual currency that exists independent of a virtual world, is estimated at \$2.6 billion and growing,

20. See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO/T-GGD-95-176, TAXPAYER COMPLIANCE: REDUCING THE INCOME TAX GAP 4, 6 (1995), available at <http://www.gao.gov/assets/110/106058.pdf> (estimating that the voluntary compliance rate for taxpayers ranged from 81.0% to 84.6% from 1973 to 1992).

21. See *infra* Part IV.B.

22. See *infra* Part II.

23. See *infra* Part III.

24. See *infra* Part IV.

25. See *infra* Part IV.B.1–3.

26. *Virtual World Registered Accounts Breakthrough 1bn*, KZERO WORLDWIDE, <http://www.kzero.co.uk/blog/virtual-world-registered-accounts-breakthrough-1bn> (last visited Nov. 23, 2014).

27. Vili Lehdonvirta, *World Bank Virtual Economy Report: Secondary Markets Worth \$3 Billion*, VERN (Apr. 7, 2011), http://virtualeconomyresearchnetwork.wordpress.com/2011/04/07/world_bank_virtual_economy_rep.

as of April 2013.²⁸ Accordingly, the marketplace involving virtual world and currency transactions represents a significant opportunity for the IRS to capture tax dollars.²⁹ Depending on the type of virtual world, the tax consequences may be quite different.³⁰

Virtual worlds may be generally categorized as either structured or unstructured.³¹ Structured virtual worlds are best known in the fantasy role-playing game context, where players are provided with structured game content, such as a set of objectives or quests; unstructured worlds take a minimalist approach and provide no such instructions.³² Unstructured worlds merely provide an interactive environment with no clearly defined objectives, allowing players to interact as they see fit.³³ As such, the reason for playing each particular game depends on the nature of the game—whether it provides any set of objectives—and an individual’s subjective intent.³⁴ For example, one person may play World of Warcraft,³⁵ the most popular structured virtual world, primarily to enjoy the aesthetic and narrative qualities of the game, while another

28. Jay Sayta, *Currency of the Year Bitcoin Gains Popularity for Online Gaming Transactions, Will the Indian Government Regulate and Prohibit Bitcoin Transactions?*, GLAWS.IN (Apr. 17, 2013), <http://glaws.in/2013/04/currency-of-the-year-bitcoins-gain-popularity-for-online-gaming-transactions-will-the-indian-government-regulate-and-prohibit-bitcoin-transactions>.

29. See *Using Virtual Currency Can Have Real World Tax Consequences*, LAW OFF. JENNY C. LIN (July 30, 2013), <http://www.jcllawoffice.com/using-virtual-currency-can-have-real-world-tax-consequences> (discussing how “the general rules of taxation” make it clear that the examples provided by the GAO report may result in taxable income to the parties).

30. See Lederman, *supra* note 8, at 1658 (summarizing that different transactions should be taxed differently).

31. Chodorow, *supra* note 10, at 288 n.14 (citing Bryan T. Camp, *The Play’s the Thing: A Theory of Taxing Virtual Worlds*, 59 HASTINGS L.J. 1, 4-8 (2007)); Steven Chung, Note, *Real Taxation of Virtual Commerce*, 28 VA. TAX REV. 733, 737 (2009).

32. Lederman, *supra* note 8, at 1626-27; Arnold, *supra* note 9, at 190-92.

33. Chodorow, *supra* note 10, at 289.

34. See Arnold, *supra* note 9, at 191-92 (gaming allows players to develop their identities).

35. *What Is World of Warcraft*, WORLD WARCRAFT, <http://us.battle.net/wow/en/game/guide> (last visited Nov. 23, 2014) (“World of Warcraft is an online game where players from around the world assume the roles of heroic fantasy characters and explore a virtual world full of mystery, magic, and endless adventure.”). As the manufacturer of the game describes:

Essentially, the core gameplay of World of Warcraft revolves around fighting monsters and completing quests. You will encounter thousands of non-player characters (NPCs), computer-controlled characters who may need your help with tasks ranging from the mundane (such as delivering a letter) to the truly heroic (rescuing a dwarven princess from the evil Dark Iron Clan, for example). More often than not, these quests will put you right in harm’s way, and you’ll find yourself squaring off against deadly monsters. You will be able to deal with most monsters you encounter by yourself, but the true challenges and the big payoffs await in the world’s many dungeons and raids, which can only be conquered by groups of heroes working together as a team.

Id.

may play Second Life, the most popular unstructured world,³⁶ with an eye toward accessions of virtual wealth.³⁷

A. Virtual Worlds

In order to identify several of the tax issues that arise in the virtual world context, it is first essential to understand what constitutes a virtual world, how such worlds operate, and the vast distinctions between them. Accordingly, Subpart A.1 discusses what a virtual world is, while Subpart A.2 delves into the major categorical archetypes that exist.³⁸ Subsequently, this Note explores the potential ramifications of how virtual worlds are classified.³⁹

1. What Is a Virtual World?

Virtual worlds are simulated visual environments that allow users to interact with each other and characters in a persistent fantasy world from a first-person perspective on their computer.⁴⁰ Users create avatars, which are visual representations of themselves as humans, animals, or another type of creature, depending on the parameters of the virtual world.⁴¹ Depending on the type and extent of the tasks or actions performed within the digital environment, the virtual world may be considered structured or unstructured.⁴²

36. See Lederman, *supra* note 8, at 1627 (“Second Life . . . has over 10 million residents . . .” (internal quotation marks omitted)).

37. Nell A. Beekman, *Virtual Assets, Real Tax: The Capital Gains/Ordinary Income Distinction in Virtual Worlds*, 11 COLUM. SCI. & TECH. L. REV. 152, 155-56 (2010), available at <http://www.stlr.org/cite.cgi?volume=11&article=6>; Lederman, *supra* note 8, at 1630. The aesthetic appeal and literary character of virtual worlds draws participants from a vast array of cultural and geographical backgrounds. See BONNIE A. NARDI, MY LIFE AS A NIGHT ELF PRIEST: AN ANTHROPOLOGICAL ACCOUNT OF WORLD OF WARCRAFT 8 (2010) (“[World of Warcraft] is a virtual experience like reading a book or watching a movie, but also an active experience like playing a sport. The digital universe couples the richness of the experience of viewing the action in a film or play with the participatory experience of athletics.”). In contrast, unstructured games, such as Second Life, focus on content creation and monetization. See *15 Games Like Second Life*, GAMES FINDER, <http://www.gameslikefinder.com/games-like-second-life> (last visited Nov. 23, 2014) (identifying and ranking games that closely mirror Second Life’s social and real money profiteering aspects, including Planet Calypso, The Sims FreePlay, IMVU, Twinity, and several others). Since there is a financial component to these games, they tend to target more mature audiences. See *id.*

38. See *infra* Part II.A.1–2.

39. See *infra* Part IV.A.3.

40. Beekman, *supra* note 37, at 154; Lederman, *supra* note 8, at 1625.

41. Lederman, *supra* note 8, at 1625; see also *Tax Consequences of Virtual World Transactions*, IRS, <http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Tax-Consequences-of-Virtual-World-Transactions> (last updated Aug. 20, 2014) (“Online games create computer-generated settings for multiple users to interact as characters called avatars.”).

42. Beekman, *supra* note 37, at 155; Chung, *supra* note 31, at 737.

Regardless of the type of virtual world, the acquisition of digital property or items within the game often represents a significant part of the overall user experience.⁴³ Whether the objective is obtaining a magical sword to slay a fire-breathing dragon, or purchasing virtual real estate to host an elite social function, these accessions represent wealth, status, and power to the rest of the virtual world community.⁴⁴ Many of these items may be “earned” by completing quests or tasks within the game, and others may simply be found by wandering the virtual landscape.⁴⁵ Additionally, a defeated monster or creature may leave a powerful item behind, often referred to as a “drop.”⁴⁶ Depending on how the game is developed, characters may exchange these items with each other via an in-game auction house or through a simple negotiation.⁴⁷ Furthermore, some game worlds facilitate the exchange of virtual items for real currency, while others expressly prohibit doing so through terms of service (“TOS”) agreements.⁴⁸ Naturally, the process by which one acquires or exchanges virtual property may give rise to a taxable consequence.⁴⁹

2. Types of Virtual Worlds

Virtual worlds typically fall into one of two categories: structured or unstructured.⁵⁰ Although some scholars refer to these worlds as scripted or unscripted, the distinguishing characteristics are largely the

43. Lederman, *supra* note 8, at 1628.

44. See Andrea Vanina Arias, Comment, *Life, Liberty, and the Pursuit of Swords and Armor: Regulating the Theft of Virtual Goods*, 57 EMORY L.J. 1301, 1306 (2008) (describing different activities players can have their avatars perform). Titles, ranks, and achievements, earned through player versus player combat or content exploration, are just as much indicators of status as are incredibly rare or powerful items. Tim, *How to Get the Crusader Title in World of Warcraft*, WORLD WARCRAFT POWER GUIDES (July 21, 2011, 11:29 AM), <http://www.warcraftpowerguides.blogspot.com> (“There’s no question that players look at other players who have earned their Crusader title with respect. It has the same effect of a player who is decked out in many hard-to-get items.”).

45. Lederman, *supra* note 8, at 1628.

46. See *id.*

47. Ethan E. White, *Massively Multiplayer Online Fraud: Why the Introduction of Real World Law in a Virtual Context Is Good for Everyone*, 6 NW. J. TECH. & INTEL. PROP. 228, 230 (2008); see also J. Robert Schlingens, Note, *Virtual World, Real Taxes: A Sales and Use Tax Adventure Through Second Life Starring Dwight Schrute*, 11 MINN. J.L. SCI. & TECH. 877, 880 (2010) (“The unscripted nature of [the game] transforms it from a video game into an economic conduit.”).

48. See Lederman, *supra* note 8, at 1634 (“Game companies address the rights and obligations of themselves and players with an array of agreements, including . . . Terms of Service Agreements.”).

49. *Id.* at 1641.

50. Camp, *supra* note 31, at 4.

same regardless of the terminology used.⁵¹ The primary difference is that structured worlds limit the exploration of game play to a predetermined and specific set of circumstances, while unstructured worlds do not.⁵² In contrast, the vast majority of the environment in an unstructured world is completely created by world participants.⁵³

a. Structured Worlds

Structured worlds provide users with predetermined challenges and objectives, generally imposing limitations on what users can do with avatars.⁵⁴ These worlds are best known in the context of Massively Multiplayer Online Role Playing Games (“MMORPGs”), the most popular of which is World of Warcraft.⁵⁵ Through their avatars, players may interact with several non-playable characters that advance the storyline through textual dialogue, and provide players with quests and objectives.⁵⁶ Once the player completes the requisite activities, the quest can be “turned in” for specific reward items, some of which may be transferrable to other characters.⁵⁷

The primary objective of scripted worlds is character advancement.⁵⁸ Players use the tools and abilities that are given to them

51. Arnold, *supra* note 9, at 190. Professor Leandra Lederman uses the terms “game worlds” and “unscripted worlds,” instead of structured and unstructured. Lederman, *supra* note 8, at 1628-30.

52. Beekman, *supra* note 37, at 155-56.

53. Camp, *supra* note 31, at 7; Chodorow, *supra* note 10, at 289; David J. Mack, Comment, *iTax: An Analysis of the Laws and Policies Behind the Taxation of Property Transactions in a Virtual World*, 60 ADMIN. L. REV. 749, 753 (2008) (“Individual users have created nearly all the objects in *Second Life*, from the clothing to the gardens and even the buildings themselves.”).

54. Beekman, *supra* note 37, at 156.

55. Lederman, *supra* note 8, at 1626. By the end of 2013, World of Warcraft boasted a subscription base of 7.8 million paying members. Eddie Makuch, *World of Warcraft Subscriptions on the Rise, Ended 2013 at 7.8 Million*, GAME SPOT (Feb. 6, 2014), <http://www.gamespot.com/articles/world-of-warcraft-subscriptions-on-the-rise-ended-2013-at-7-8-million-1100-6417575> (noting that World of Warcraft is still growing nine years after its initial release, although down from its peak of 12 million subscribers in 2010). Other popular MMORPGs include Runescape, League of Legends, Lineage 2, Guild Wars 2, and Aion. See *The Top 10 MMORPGs of 2013 with Most Players World Wide!*, BADOSOFT BLOG (Jan. 31, 2013, 1:28 PM), <http://www.badosoft.com/blog/top-10-most-played-mmorpgs.php> (listing the MMORPGs with the most participants as of 2013).

56. Camp, *supra* note 31, at 4.

57. *Id.* at 4-5.

58. Arnold, *supra* note 9, at 190. Although the manner of character advancement differs between games, players typically endeavor to achieve some kind of measurable progress with each play session. Christina Lauro, *MMO Mechanics: Comparing Vertical and Horizontal Progression*, MASSIVELY (Feb. 5, 2014, 4:00 PM), <http://www.massively.joystiq.com/2014/02/05/mmo-mechanics-comparing-vertical-and-horizontal-progression> (explaining the difference between vertical and horizontal progression). Vertical progression refers to the traditional grind of leveling and gearing characters, whereas horizontal progression focuses on developing a wide range of

when an avatar is created to navigate the world, gain experience, obtain equipment, and become stronger by bolstering a number of character attributes.⁵⁹ As part of a structured world, MMORPG designers typically present enemies or obstacles that require collaborative efforts to defeat, often referred to as a raid.⁶⁰ In addition to creating a challenging and heroic atmosphere, this is done largely as part of a subscription-based revenue scheme.⁶¹ Since players are often paying a monthly rate for additional content and updates, designers of persistent worlds generally control the pace at which a character can gain experience or increase in level.⁶² In turn, character levels and equipment serve to define the extent to which a character can participate in game content.⁶³ The more powerful the avatar, the more game content is typically available to that player within the MMORPG world.⁶⁴

b. Unstructured Worlds

In sharp contrast, unstructured worlds allow users to explore the persistent world without a predefined set of objectives, and create an atmosphere of exploration and freedom.⁶⁵ Similar to MMORPGs, though, users create avatars that enable them to explore and interact with the virtual world in a number of ways.⁶⁶ One of the most popular and well-known unstructured worlds is Second Life,⁶⁷ where players can

character attributes. *Id.* Although World of Warcraft massively popularized the vertical progression approach to gameplay, some have criticized its mechanics, claiming that it is “quite odd and counterintuitive to aim for shiny new equipment instead of advanced skills” that horizontal progression platforms encourage. *Id.*

59. Arnold, *supra* note 9, at 190-91.

60. *Id.* at 191-92.

61. White, *supra* note 47, at 230; *see also* Lederman, *supra* note 8, at 1649 (explaining that users generally pay to participate in virtual worlds).

62. Lederman, *supra* note 8, at 1649; *cf.* White, *supra* note 47, at 230 (discussing how players can obtain in-game currency or items). The rate of progression in an MMORPG is critical. Josh Bycer, *Player Controlled Progression*, GAMASUTRA (July 3, 2013, 2:00 PM), http://www.gamasutra.com/blogs/JoshBycer/20130703/195574/Player_Controlled_Progression.php. If an avatar’s power curve increases too slowly, players may find content repetitive and uninteresting. *Id.*

63. *See* Lederman, *supra* note 8, at 1628.

64. *See id.*

65. Beekman, *supra* note 37, at 155-56.

66. Arnold, *supra* note 9, at 192.

67. Beekman, *supra* note 37, at 155; *see also* *What Is Second Life?*, SECOND LIFE, <http://www.secondlife.com/whatis/?lang=en-US> (last visited Nov. 23, 2014) (“Second Life is a 3D world where everyone you see is a real person and every place you visit is built by people just like you.”).

engage in a variety of activities from socializing with others to engaging in virtual real estate transactions.⁶⁸

Although character advancement is important in unstructured worlds, players do not create avatars for the purpose of battling monsters, gaining experience, or performing quest activities.⁶⁹ Rather, the focus in Second Life and other unstructured worlds is primarily social, instead of fantasy-based.⁷⁰ To facilitate this experience, the developer of Second Life has created an environment that resembles the real world and enables users to build virtual residences, establish career paths, attend concerts, and earn and spend its proprietary in-game currency.⁷¹ Interestingly, Second Life has allowed several mass media outlets and popular retail companies to establish an advertising presence within the world.⁷² Moreover, several countries have created in-game embassies to foster exchanges of information and promote tolerance; churches and other religious organizations are holding services within the game to accomplish the same objective.⁷³ This further emphasizes the difference between task-oriented worlds and the laissez-faire attitude of unstructured virtual world designers.⁷⁴

B. Virtual Currency

Before tackling any tax compliance or regulatory challenges, it is necessary to understand how virtual currency operates as a medium of exchange, and whether such currency exists either independently or purely within the confines of an in-game world. Accordingly, Subpart B.1 discusses the controversial nature of independent virtual currency.⁷⁵ Subpart B.2 focuses on the three categorical distinctions between virtual currency systems as identified by the GAO.⁷⁶

1. What Is Virtual Currency?

Government regulations define real currency as “[t]he coin and paper money of the United States or of any other country that [1] is designated as legal tender and [2] that circulates and [3] is customarily

68. Beekman, *supra* note 37, at 155.

69. Arnold, *supra* note 9, at 192; Schlimgen, *supra* note 47, at 879-80 (“[T]here are no missions to complete . . . [and] no script or storyline to follow in Second Life . . .”).

70. Arnold, *supra* note 9, at 192.

71. *Id.*; Schlimgen, *supra* note 47, at 880; *see infra* note 115.

72. Arnold, *supra* note 9, at 192; *see Home*, SECONDADS.COM, <http://www.secondads.com> (last visited Nov. 23, 2014) (offering advertising services within Second Life).

73. Arnold, *supra* note 9, at 192-93.

74. *See* Lederman, *supra* note 8, at 1626-27.

75. *See infra* Part II.B.1.

76. *See infra* Part II.B.2.

used and accepted as a medium of exchange in the country of issuance.⁷⁷ Although there is no legal definition of virtual currency,⁷⁸ it is essentially a medium of exchange that lacks some characteristics of real currency, yet still operates like real currency in certain environments.⁷⁹ Of particular importance is the fact that virtual currency lacks legal-tender-status in all jurisdictions.⁸⁰

The concept of virtual currency is quite controversial, in large part due to its anonymity and ability to avoid detection.⁸¹ Bitcoin, perhaps the most well-known and oft-mentioned example of virtual currency, was recently recognized by Germany as a financial instrument or private money.⁸² Like real currency, the value of Bitcoins fluctuate and can be purchased on the open market.⁸³ As such, they can be used for tax and trading purposes within Germany.⁸⁴ Moreover, several online retailers and physical merchants in the United Kingdom are now accepting Bitcoins.⁸⁵ Thailand, however, has recently banned the purchase, sale, and use of Bitcoins, citing a “lack of existing applicable laws, capital controls and the fact that bitcoin straddles multiple financial facets.”⁸⁶

Bitcoins are created through a process called “mining,” in which an individual’s computer is used to complete difficult computational tasks, the reward for which is one Bitcoin.⁸⁷ Developed in 2009 by Satoshi

77. 31 C.F.R. § 1010.100(m) (2012).

78. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 3.

79. DEP’T OF THE TREASURY FIN. CRIMES ENFORCEMENT NETWORK, *supra* note 15, at 1.

80. *Id.*

81. See G.F., *Following the Bitcoin Trail*, *ECONOMIST* (Aug. 28, 2013, 10:29 PM), <http://www.economist.com/blogs/babbage/2013/08/virtual-currency>.

82. Matt Clinch, *Bitcoin Recognized by Germany as ‘Private Money,’* *CNBC* (Aug. 19, 2013, 10:25 AM), <http://www.cnbc.com/id/100971898>.

83. See *MT.GOX*, *BITCOINX* (Apr. 11, 2014), <http://bitcoinx.io/exchanges/mtgox> (“MtGox is the world’s most established Bitcoin exchange. You can quickly and securely trade Bitcoins with other people around the world with your local currency!”); see also *Pricechart*, *BITCOIN CHARTS* (Sept. 12, 2014, 3:24 PM), <http://www.bitcoincharts.com/charts/mtgoxUSD#rg60ztgSzm1g10zm2g25zv> (displaying a graphical representation of the historical value and trading volume of Bitcoin); *Simple Bitcoin Converter*, *PREEV*, <http://www.preev.com> (last visited Nov. 23, 2014) (acting as a real-time Bitcoin to real currency conversion rate calculator).

84. Clinch, *supra* note 82.

85. Barnes, *supra* note 12.

86. Matt Clinch, *Bitcoin Banned in Thailand*, *CNBC* (July 30, 2013, 6:20 AM), <http://www.cnbc.com/id/100923551>.

87. See G.F., *supra* note 81. As *The Economist* explains:

[Bitcoin] relies on a cryptographic process that requires ever-increasing amounts of computational power to produce new units of the currency. The entire thing is based on public-key cryptography, in which a combination of a freely-available “public key” and a secret “private key” allow each owner to keep his funds secure while enabling payments that are irreversible. In the parlance, new [B]itcoins are “mined” by individuals and consortiums that use computers to rifle through an enormous

Nakamoto, the software used for its development has been openly published so that any developer can review or modify its code.⁸⁸ There is no central regulatory authority, and payments come through a peer-to-peer payment network made through a “wallet application” on a smartphone or computer.⁸⁹ Although the code and complete list of Bitcoin transactions are publicly available, the ownership of the Bitcoin keys, to which these transactions are linked, remains anonymous.⁹⁰ Nevertheless, some remain skeptical about the true anonymity of Bitcoin transactions, and the Securities Exchange Commission has warned investors to remain vigilant about Ponzi schemes involving Bitcoins.⁹¹ Even if transactions are not completely anonymous, the complexity of Bitcoins and their relatively clandestine nature make investors an easy target for cyber-criminals due to the lack of existing regulation and oversight.⁹² In November 2013, Bitcoins were valued at over \$1000—a far cry from their value of \$2 in late 2011—but by February 2014, the value of Bitcoins plummeted to \$350, causing many recent investors to incur substantial losses.⁹³

2. Virtual Currency Systems

Depending on how a virtual currency is used to facilitate transactions, it may fall within one of several types of virtual currency systems.⁹⁴ For example, a retailer that accepts Bitcoins as payment for goods or services rendered simply accepts such currency as if it were a credit card or cash purchase.⁹⁵ That vendor may then freely spend those Bitcoins with any other proprietor who accepts them as payment, or sell

mathematical space looking for numbers that fit the algorithm’s requirements.

Id.

88. Barnes, *supra* note 12.

89. *Id.*

90. G.F., *supra* note 81.

91. *Beware of Bitcoin Related Ponzi Schemes, Says SEC*, CNBC (July 23, 2013, 10:33 PM), <http://www.cnbc.com/id/100908719>; Jessica Dye & Jim Finkle, *US Charges Eight in \$45 Million Cybercrime Scheme*, CNBC (May 9, 2013, 2:05 PM), <http://www.cnbc.com/id/100724220>; Fergal Reid & Martin Harrigan, *An Analysis of Anonymity in the Bitcoin System: Bitcoin Is Not Anonymous*, BLOGSPOT.CO.UK (Sept. 30, 2011, 1:20 AM), <http://www.anonymity-in-bitcoin.blogspot.co.uk/2011/07/bitcoin-is-not-anonymous.html>; see *Ponzi Schemes*, SEC.GOV, <http://www.sec.gov/answers/ponzi.htm> (last visited Nov. 23, 2014) (“A Ponzi scheme is an investment fraud that involves the payment of purported returns to existing investors from funds contributed by new investors.”).

92. See *Beware of Bitcoin Related Ponzi Schemes, Says SEC*, *supra* note 91.

93. Trugman, *supra* note 13; see *Beware of Bitcoin Related Ponzi Schemes, Says SEC*, *supra* note 91 (“Less regulatory oversight and supposed greater privacy of virtual currencies . . . could make virtual currencies more attractive to scammers . . .”).

94. See *infra* Part II.B.2.a–c.

95. See Barnes, *supra* note 12.

them on the market to convert them into real currency.⁹⁶ However, virtual currencies that exist only within a digital world, and cannot be readily exchanged for real-world goods or services, fall somewhere within a spectrum of user flexibility that the government has classified as closed-flow,⁹⁷ hybrid,⁹⁸ and open-flow virtual currency systems.⁹⁹

a. Closed-Flow Systems

Most virtual worlds are classified as closed-flow systems.¹⁰⁰ In these economies, virtual currency can only be used to purchase goods or services within the digital world, and there is no interaction between U.S. dollars—or real-world goods and services—and the virtual world.¹⁰¹ Trading in-game assets between players has no inherent value because they cannot be monetized or “cashed out” for dollars or any other government-backed currency.¹⁰² It is, therefore, generally accepted that these types of transactions do not produce taxable consequences because there is no economic benefit.¹⁰³ Scholars have supported this assertion by arguing that players have a mere license to use the objects within a virtual world, thus not constituting those items as property.¹⁰⁴ Therefore, any dispositions of those objects do not constitute realization events that give rise to tax consequences.¹⁰⁵ However, the debate about whether players acquire property rights in digital items within virtual game worlds remains unresolved.¹⁰⁶

b. Hybrid Systems

Hybrid systems allow participants to use virtual currency to purchase virtual goods or services, and, in some instances, may allow the

96. *See id.*

97. *See infra* Part II.B.2.a.

98. *See infra* Part II.B.2.b.

99. *See infra* Part II.B.2.c.

100. Chung, *supra* note 31, at 740.

101. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 4; Moe Harrison, *Virtual Currency 101*, SNI COMPANIES (June 13, 2014), <http://www.snicompanies.com/Blog/ArtMID/1105/ArticleID/49/Virtual-Currency-101> (“In simple terms, virtual currency is currency that exists in electronic form. It is not physical, such as paper money or coins.”).

102. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 4.

103. Chung, *supra* note 31, at 747.

104. Zachery Jones, *Why the IRS Has Not Taxed Income from Virtual World Transactions . . . Yet*, 118 YALE L.J. POCKET PART 142, 143 (2009); Lederman, *supra* note 8, at 1634.

105. Jones, *supra* note 104, at 143; Lederman, *supra* note 8, at 1653-54.

106. *See* Jones, *supra* note 104, at 144 (pointing out that at least one court has already invalidated an arbitration clause in Second Life's TOS agreement, finding it unconscionable).

conversion of real currency into virtual currency.¹⁰⁷ However, the defining feature of the hybrid system is that one or more flows between real currency and virtual currency are closed.¹⁰⁸ Users can purchase virtual currency with real currency, but cannot exchange virtual currency for real currency, or vice versa.¹⁰⁹ This type of system can give rise to taxable transactions.¹¹⁰

Third parties often capitalize on these types of systems, with many offering virtual currency for sale.¹¹¹ While most TOS agreements between virtual world operators and players expressly prohibit these transactions, they nevertheless occur quite frequently.¹¹² In the MMORPG context, “players may use virtual currency to buy new weapons, increase their avatar’s abilities, or unlock new levels or gam[e]

107. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 4.

108. *Id.*

109. *Id.*

110. See *Using Virtual Currency Can Have Real World Tax Consequences*, *supra* note 29. For example, the GAO report provides the following illustration in which Ann, a player of an online game, may have taxable income:

Ann plays an online game and amasses virtual tools that are valuable to her avatar. The online game does not allow users to directly exchange their virtual tools for U.S. dollars, but rather they can do so using a third-party . . . Ann uses a third-party exchange not affiliated with the online game to coordinate the transfer of her virtual tools to another player in exchange for U.S. dollars. The transfer is conducted by the third-party exchange and payment is mediated by a third-party payment network. Ann may have earned taxable income from the sale of these virtual tools.

U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 11. However, while it is commendable that the GAO tried to offer some clarification, this example provides no additional insight into more complex transactions. See *Using Virtual Currency Can Have Real World Tax Consequences*, *supra* note 29 (discussing how the GAO’s examples raise more questions than they answer). Since the value of Ann’s virtual tools are easily measurable, general tax principles imply that she report the compensation as income. See 26 U.S.C. § 61(a) (2012) (defining gross income as “all income from whatever source derived”).

111. See, e.g., *About Me*, MMODAQ, <http://www.mmodaq.tumblr.com/about> (last visited Nov. 23, 2014) (bringing buyers and sellers together for the exchange of virtual world currencies); *Home*, WOWGOLD-SALES, <http://www.wowgold-sales.com> (last visited Nov. 23, 2014) (selling World of Warcraft currency); *MMORPG Gold Prices and Reviews*, MMOBUX, <http://www.mmobux.com> (last updated Aug. 18, 2014) (acting as a comparative shopping engine for proprietary virtual world currencies, game time cards, and character leveling services).

112. See *World of Warcraft Terms of Use*, BLIZZARD ENTMT, http://us.blizzard.com/en-us/company/legal/wow_tou.html (last updated Aug. 22, 2012) (prohibiting the exploitation of the game for any commercial services, including “gathering in-game currency, items or resources for sale outside the [g]ame”). Regardless of this fact, between twenty-five and thirty-five percent of World of Warcraft players purchased gold in 2009. *Can I Get Banned for Buying WoW Gold? Is It Safe to Buy Gold on WoW?*, MMOOPS.COM, <http://www.mmoops.com/can-i-get-banned-for-buying-wow-gold-is-it-safe-to-buy-gold-on-wow> (last visited Nov. 23, 2014). Because of the risk of having an account banned by purchasing virtual currency, real money trading experts tout the importance of purchasing only from reputable vendors. *Id.*

options,” thus explaining why players purchase in-game currency from outside vendors, and why hybrid systems are popular.¹¹³

c. Open-Flow Systems

In an open-flow system, virtual currency can be used to purchase real goods and services and other virtual currency, and can be readily exchanged for U.S. dollars.¹¹⁴ Linden Dollars¹¹⁵ is perhaps the best example of the open-flow system.¹¹⁶ In Second Life, users have the ability to sell their Linden Dollars directly to other players through the LindeX exchange, which is facilitated by a third-party payment network.¹¹⁷ As such, individuals are able to freely exchange real currency for virtual Linden Dollars, and vice versa.¹¹⁸

Bitcoin provides yet another great example of the open-flow system.¹¹⁹ With the total current market value of Bitcoin estimated at approximately \$2 billion, Bitcoin represents the most widely circulated virtual currency available.¹²⁰ The U.S. government has taken note of this fact, explaining in its report that “Bitcoins act as a real world currency in that users pay for real goods and services, such as coffee or web development services, with bitcoins as opposed to U.S. dollars or other government-issued currencies.”¹²¹

III. TAX ISSUES AND NONCOMPLIANCE ARISING FROM VIRTUAL WORLD TRANSACTIONS

This Part broadly addresses the tax issues associated with virtual world transactions, and the vast markets that virtual worlds represent as potential sources of revenue to the IRS.¹²² Subpart A focuses on what is known about the current extent of noncompliance with the Code under its existing structure, and the overall size of the virtual marketplace.¹²³

113. *Virtual Currency*, INTERNET SAFETY PROJECT, <http://www.internetsafetyproject.org/wiki/virtual-currency> (last visited Nov. 23, 2014).

114. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 5.

115. *Id.* Linden Dollars is the proprietary virtual currency used within Second Life. *Id.*

116. *Id.*

117. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 5; Schlimgen, *supra* note 47, at 880 (“The Linden Dollar is accepted throughout Second Life and can be readily converted into US dollars.”).

118. *See* Schlimgen, *supra* note 47, at 880.

119. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 5.

120. Andrew Tarantola, *How to Trade Bitcoin (And If You Should)*, GIZMODO (Jan. 4, 2014, 11:00 AM), <http://www.gizmodo.com/how-to-trade-bitcoin-and-if-you-should-1484488823>.

121. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 5.

122. *See infra* Part III.A–B.

123. *See infra* Part III.A.

Subpart B introduces a recent GAO report, and discusses its findings regarding the purported causes of tax compliance risks involving virtual worlds.¹²⁴ Finally, Subpart C addresses the current state of affairs regarding tax policy in this environment, including concerns about basis calculation, the debate over the acquisition of virtual property rights, and notions of equity.¹²⁵

A. *The Extent of Noncompliance*

The U.S. government is aware that transactions within virtual economies, or those involving virtual currency, may give rise to taxable consequences, but the extent of noncompliance remains largely unknown.¹²⁶ This uncertainty is likely attributable to the complexity of the Code, differing opinions between tax professionals, limited reliable data, and a lack of clear guidance from the IRS.¹²⁷ Nevertheless, with gamers spending over \$2.9 billion on virtual goods in 2012,¹²⁸ the value of Bitcoins in circulation is estimated at \$2.6 billion,¹²⁹ and the third-party gaming services industry valued at \$3 billion,¹³⁰ the IRS certainly has an interest in further investigating the extent of noncompliance.¹³¹

Further exacerbating the noncompliance crisis, as the IRS has noted, the usage of Bitcoins and other virtual currencies is growing at an exponential rate.¹³² The usage of Bitcoins has increased an astounding 75% between July 2013 and December 2013, with an average of 3048 transactions occurring per hour, up from 1708 at the beginning of the same period.¹³³ With over 10,000 businesses accepting Bitcoins, the majority of whose clients are located within the United States, the likelihood of noncompliance is growing.¹³⁴ There are mounting concerns that digital currency may establish itself as a separate asset class, thus attracting the attention of investors looking to further diversify their portfolios.¹³⁵

124. See *infra* Part III.B.

125. See *infra* Part III.C.

126. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 16.

127. *Id.* at 12-14.

128. Alek Felstiner, *Regulating In-Game Work*, J. INTERNET L., Aug. 2012, at 3, 3.

129. Sayta, *supra* note 28.

130. Lehdonvirta, *supra* note 27.

131. See Chung, *supra* note 31, at 747.

132. See 1 NAT'L TAXPAYER ADVOC., 2013 ANNUAL REPORT TO CONGRESS 251 (2013), available at <http://www.irs.gov/pub/irs-pdf/p2104.pdf>.

133. *Id.*

134. *Id.*

135. *Id.* at 252; Lloyd Chin, *Will Bitcoin Become an Investment Asset Class in 2014?*, BITSCAN (Feb. 7, 2014), <http://www.bitscan.com/bitnews/item/will-bitcoin-become-an-investment-asset-class-in-2014> ("There are expectations that bitcoin could turn into an investment asset class in

B. *The Government Accountability Office Report*

In May 2013, the GAO issued a report to the U.S. Senate Finance Committee that described its findings with regard to virtual economies and currencies, ultimately concluding that the IRS should provide guidance to reduce tax compliance risks.¹³⁶ Specifically, the report identified five tax compliance risks involving virtual economies and currencies: (1) lack of taxpayer knowledge regarding tax consequences; (2) uncertainty about how to characterize income; (3) uncertainty about how to calculate basis for gains; (4) challenges with third-party reporting requirements; and (5) the potential for using virtual economies and currencies as vehicles for tax evasion.¹³⁷

Some practitioners have corroborated the GAO's analysis, but criticize its failure to address specific tax-related questions, such as when to recognize gains or losses, and how to determine cost basis.¹³⁸ Understanding the risks that lead to noncompliance is an important first step in promulgating rules to mitigate the effects.¹³⁹ However, what taxpayers really need are clear guidelines and examples to follow when it comes to transactions involving virtual worlds and currencies.¹⁴⁰ Individuals and practitioners have been seeking direct, straightforward answers to questions regarding the calculation of their tax consequences for virtual world transactions for years, and the IRS has yet to provide significant guidance on this issue.¹⁴¹

2014.”); see Dan Primack, *Bitcoin: Silicon Valley's New Version of Real Estate?*, FORTUNE (Mar. 18, 2014, 7:16 PM), <http://fortune.com/2014/03/18/bitcoin-silicon-valleys-new-version-of-real-estate> (explaining Bitcoin arbitrage and that holding “such investments are now in vogue among Silicon Valley venture capitalists and technology executives”).

136. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 17. This sentiment was strongly echoed by the National Taxpayer Advocate in its recent Annual Report to Congress at the end of 2013. See NAT'L TAXPAYER ADVOC., *supra* note 132, at 254 (“It is the government’s responsibility to inform the public about the rules they are required to follow. The lack of clear answers to basic questions such as when and how taxpayer should report gains and losses on digital currency transactions probably encourages tax avoidance.”).

137. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 12-14.

138. See *Using Virtual Currency Can Have Real World Tax Consequences*, *supra* note 29.

139. See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 1.

140. Cf. *id.* at 12-13 (implying that clear guidelines are needed because taxpayers lack knowledge of the tax requirements regarding virtual transactions).

141. Julian Dibbell, *Dragon Slayers or Tax Evaders?*, LEGAL AFF., Jan.-Feb. 2006, at 47, 49. In fact, in its 2013 Annual Report to Congress, the National Taxpayer Advocate clearly acknowledged that “[t]axpayers want to know the tax consequences of digital currency transactions,” and many legitimate business owners, not wanting to be associated with criminals or tax evaders, have “urged the government to issue clear rules about the tax consequences of digital currency transactions.” NAT'L TAXPAYER ADVOC., *supra* note 132, at 252.

C. *The Current State of Affairs*

Despite significant scholarly work regarding the tax issues arising from transactions involving virtual worlds and currencies,¹⁴² the government has accomplished little over the past decade to provide any guidance to taxpayers.¹⁴³ In 2004, an IRS agent responded to a taxpayer's questions regarding the tax consequences of virtual world transactions he engaged in by saying, "there are no regs, there is no code, there are no rulings, to rely upon."¹⁴⁴ With the issuance of the GAO report in 2013, it is evident that the vast majority of issues plaguing both the taxpayers and the IRS in this context remain largely unchanged since 2004.¹⁴⁵

1. Policy Considerations

The policy arguments surrounding tax issues are abundant.¹⁴⁶ As a policy matter, our tax system is fundamentally structured around a taxpayer's ability to pay taxes.¹⁴⁷ The theory is that the more income a person acquires, the easier it is for that person to contribute to the costs of government.¹⁴⁸ For this reason, the United States has adopted a

142. See, e.g., Beekman, *supra* note 37, at 163-65 (focusing on capital gains and ordinary income distinctions); Camp, *supra* note 31, at 44-69 (suggesting different theories for taxing virtual world transactions); Chodorow, *supra* note 10, at 313-25 (providing extensive analysis regarding the determination of cost basis in virtual worlds); Jones, *supra* note 104, at 145-46 (speculating as to why the IRS has not yet taxed virtual world transactions); Lederman, *supra* note 8, at 1658-59 (discussing general policy considerations and analyzing the nature of virtual worlds); Mack, *supra* note 53, at 758-60 (analyzing laws and policies behind the taxation of virtual world transactions); Eric G. Roscoe, *Taxing Virtual Worlds: Can the IRS PWN You?*, PGH. J. TECH. L. & POL'Y, Fall 2011, at 1, 8-13, 33 (summarizing the issues surrounding virtual property taxation and suggesting the imposition of an in-world tax day); Arnold, *supra* note 9, at 203 (explaining the extraordinary difficulties with tax enforcement in virtual worlds).

143. See NAT'L TAXPAYER ADVOC., *supra* note 132, at 255 ("The IRS has not explained how existing rules apply to digital currency transactions with enough specificity to allow taxpayers to be sure they are following them or for IRS employee to enforce them."); U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 15 (acknowledging that the IRS has not provided guidance on reporting requirements for virtual currencies used outside of virtual economies).

144. Dibbell, *supra* note 141, at 49 (describing the author's attempt to establish the tax consequences arising from his virtual world transactions and his conversation with IRS representatives).

145. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 12-14 (outlining the five tax compliance risks); Dibbell, *supra* note 141, at 49 (pointing out the nearly identical issues observed by the GAO nine years later).

146. Roscoe, *supra* note 142, at 8-13.

147. *Ability-To-Pay-Taxation*, INVESTOPEDIA, <http://www.investopedia.com/terms/a/ability-to-pay-taxation.asp> (last visited Nov. 23, 2014) ("The ability-to-pay principle in taxation maintains that taxes should be levied according [to] a taxpayer's ability to pay."); Elizabeth Rosen, *How to Determine Your Income Tax Bracket*, US TAX CTR. (Jan. 31, 2013), <http://www.irs.com/articles/how-determine-your-income-tax-bracket>.

148. *Ability-To-Pay-Taxation*, *supra* note 147; Rosen, *supra* note 147.

bracketed progressive tax system, in which individuals with higher annual income pay an increased share of the tax burden.¹⁴⁹ Accordingly, it is generally preferred to impose taxes on those who clearly recognize gains, because they have the ability to pay, and permit tax deferral when the imposition of a tax would induce a person to sell property in order to pay the tax, because it would erode economic benefit.¹⁵⁰ In essence, there are fundamental notions of fairness that come into play in determining whether the government should be able to force the liquidation of an asset merely because the asset increased in value.¹⁵¹ Moreover, requiring individuals to pay tax on the gain (or permitting a deduction for a decline in value) every year would create tremendous valuation issues that would overwhelm the tax system.¹⁵² These liquidity and valuation concerns provide a strong incentive to defer taxes until certain events trigger the recognition of gains, as codified in § 1001 of the IRC.¹⁵³

With regard to virtual property transactions, there is a strong normative argument that recognizing gains from the acquisition of property within the context of a game is fundamentally at odds with these underlying policies.¹⁵⁴ If a person sells, exchanges, or earns goods within the game, resulting in economic benefit, but never recognizes those gains in the real world, it might not make sense to impose a tax.¹⁵⁵

149. Rosen, *supra* note 147 (“There are currently six marginal income tax brackets and five federal filing statuses. The amount of tax you owe will depend on your filing status and how much taxable income you earn.”).

150. Gerald E. Auten, *Tax Topics: Capital Gains Taxation*, TAX POL’Y CTR., <http://www.taxpolicycenter.org/taxtopics/encyclopedia/Capital-Gains-Taxation.cfm> (last visited Nov. 23, 2014) (“Capital Gains are generally taxed only when ‘realized’ by sale or exchange, however, because estimating the values of many assets would be difficult, taxing income that had not been realized could be viewed as unfair, and paying taxes on accruals could force the liquidation of assets.”).

151. *See id.* Forced liquidation of assets is a serious concern because a taxpayer may not have the financial means with which to pay the tax at the time the increase is assessed. *See* William D. Andrews, *A Consumption-Type or Cash Flow Personal Income Tax*, 87 HARV. L. REV. 1113, 1143 (1974) (“Inclusion of unrealized appreciation in taxable income would create a tax liability without any corresponding immediate source of funds with which to pay the tax.”).

152. Andrews, *supra* note 151, at 1141 (“Comprehensive inclusion of unrealized appreciation in taxable income would entail enormous practical problems.”). In order to assess the tax, property would need to be valued at the end of each taxable year and compared with its value from the previous period. *Id.* Historically, valuation of property is not an issue that taxpayers have handled particularly well. *Id.*

153. 26 U.S.C. § 1001 (2006).

154. Camp, *supra* note 31, at 61-66, 68-69 (“In-world transactions should not be taxed because they produce, at most, imputed income.”); Lederman, *supra* note 8, at 1670 (“There is a strong case from a policy perspective for not taxing in-game receipts and trades within game worlds, including sales within those games for virtual currency.”).

155. Lederman, *supra* note 8, at 1658. Professor Lederman would likely argue that these gains should not be taxed until realized. *See id.* (concluding that merely exchanging and using items

On the other hand, unstructured worlds, such as Second Life, may provide the tools necessary to commoditize virtual worlds and facilitate exchanges of virtual currency into real money, and some have gone so far as to expressly state that participants retain the rights to their digital creations.¹⁵⁶ This dichotomy between virtual worlds appears to be implicitly recognized in the GAO report within its definitions of closed-flow, open-flow, and hybrid virtual economic systems.¹⁵⁷

It is fairly intuitive that a person who earns a living through the sale of virtual property should be required to pay federal income tax on the profits.¹⁵⁸ In that case, the analysis is somewhat simplified because such a person is directly participating in an event where economic benefit is realized, such as auctioning virtual property for real currency or exchanging virtual goods for physical goods and services.¹⁵⁹ However, both the tax questions presented and the purported answers become muddled when an individual obtains virtual property by way of in-world labor, exchanges, and sales for virtual currency, but never recognizes the gains by “cashing-out.”¹⁶⁰

Professor Leandra Lederman has, quite persuasively, illustrated that the primary distinction between what she refers to as “game worlds” and “unscripted worlds” is the ability of the latter to more easily recognize gains because of their unstructured nature.¹⁶¹ Scripted game worlds tend to impose significant restrictions on a player’s ability to exchange virtual goods for real currency.¹⁶² Since operators of game worlds typically generate revenue through monthly subscription fees, they must continually generate new content or else players will seek entertainment

within a game does not constitute a realization event). *But see* Camp, *supra* note 31, at 59-60 (arguing that in-game loot drops should be characterized as imputed income, instead of focusing on realization arguments).

156. Lederman, *supra* note 8, at 1627.

157. *See* U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 4-5. Second Life’s unscripted nature, which openly permits and encourages the exchange of real currency and Linden Dollars, clearly falls within the GAO report’s classification of an open-flow system. *See supra* notes 115-18 and accompanying text. In contrast, games such as World of Warcraft and Guild Wars sufficiently prohibit real-money transactions, thus likening them to the GAO report’s hybrid classification. *See supra* text accompanying notes 107-08; *infra* notes 176-77 and accompanying text.

158. Lederman, *supra* note 8, at 1641.

159. *See* Comm’r of Internal Revenue v. Glenshaw Glass Co., 348 U.S. 426, 431 (1955) (demonstrating that “undeniable accessions to wealth, *clearly realized*” are to be taxed (emphasis added)).

160. *See* Lederman, *supra* note 8, at 1624 (suggesting that the common intuition that the accumulation of assets within a virtual world should not be taxed so long as the assets are not cashed out for real funds may be incorrect).

161. *Id.* at 1641.

162. Arias, *supra* note 44, at 1330-31.

elsewhere.¹⁶³ The amount of content that players can experience in these games is directly proportional to their avatars' power levels, and in-game items enable characters to become more powerful.¹⁶⁴ Thus, the unnatural acquisition of certain items within a game—such as purchasing them using real currency—may enable a player to avoid months of performing monotonous tasks and paying associated subscription fees, which provides a strong incentive for operators of game worlds to prohibit such transactions.¹⁶⁵ In sharp contrast, unstructured worlds take a “hands off” approach to economic regulation, and may even facilitate the exchange of virtual goods for real currency.¹⁶⁶

Nevertheless, the overall picture is unclear as the debate continues regarding virtual property rights and whether to classify in-world property acquisitions as windfalls, self-created property, or imputed income, each of which may have different tax treatment.¹⁶⁷ As the GAO recommends, new regulation would be helpful in providing guidance to taxpayers.¹⁶⁸ When constructing a new tax scheme or applying it to a virtual world, Lederman argues that such a proposed provision “should be equitable, result in minimal deadweight loss, and be possible for the government to implement and enforce.”¹⁶⁹

2. Gross Income, Capital Gains Tax, and the Property Debate

Congress can arguably tax almost anything because the statutory definition of gross income is incredibly broad.¹⁷⁰ As such, economic benefit can be realized in a variety of ways—including trading property

163. See Andrew Jankowich, *EULaw: The Complex Web of Corporate Rule-Making in Virtual Worlds*, 8 TUL. J. TECH. & INTELL. PROP. 1, 12 (2006); Lederman, *supra* note 8, at 1649.

164. Arnold, *supra* note 9, at 190-91; see Arias, *supra* note 44, at 1315-16 (comparing virtual property to physical personal property).

165. See Lederman, *supra* note 8, at 1628-29 (explaining why game world players might spend money on virtual goods).

166. Lederman, *supra* note 8, at 1630; Mack, *supra* note 53, at 753-54.

167. See Lederman, *supra* note 8, at 1643-48 (discussing the possible tax consequences of windfalls and imputed income). Performing tasks for oneself that a taxpayer would otherwise have to pay for constitutes imputed income, and is not included in gross income. See Camp, *supra* note 31, at 37-38 (explaining that when “[p]eople routinely decide to cut their child’s hair, paint their own homes, change the oil in their car . . . there is no attempt to categorize the resulting increase in wealth from these self-benefiting activities as gross income”). However, it is still unclear as to whether loot drops fall within the imputed doctrine. See Lederman, *supra* note 8, at 1644-45 (disagreeing with Camp’s analysis and arguing that loot drops require the efforts of the game publisher in order for the taxpayer to receive them).

168. U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 17.

169. Lederman, *supra* note 8, at 1658.

170. 26 U.S.C. § 61(a) (2012) (defining gross income as “all income from whatever source derived”); see also *Comm’r of Internal Revenue v. Glenshaw Glass Co.*, 348 U.S. 426, 429 (1955) (noting that this statutory language represents the “full measure of [Congress’s] taxing power”).

for other property or services—and thus, be taxed.¹⁷¹ However, income must be clearly realized before it should be reported.¹⁷² It can be fairly deduced that an individual earning a living by equipping virtual characters with digital armor and selling them for cash meets the definition of “clearly realized.”¹⁷³ However, the question of realization becomes far more muddled when it involves the exchange of virtual assets for virtual assets in a world where the TOS agreement prohibits the sale of virtual goods for real currency.¹⁷⁴

Nevertheless, sales of virtual items are commonplace among participants, even where expressly prohibited, and represent what are probably the simplest examples of clearly realized income.¹⁷⁵ These transactions, often referred to as Real Money Trades (“RMT(s)”), occur when two players agree to an exchange, the buyer pays the seller using real currency outside of the game, and the seller then transfers the sold item to the purchaser’s avatar in the virtual world.¹⁷⁶ Such transactions are contemplated by game designers, and, because of the threat that they pose to organic character development and natural game progression (acquiring powerful items without putting in the work undermines the effort of regular players), many expressly prohibit such transactions.¹⁷⁷

Therefore, both game developers and participants have a strong incentive to argue that property rights are not acquired in virtual goods, but for different reasons.¹⁷⁸ The developers, by supporting this contention, are taking the position that players are paying for a mere

171. See G. Martin Bingisser, *Federal Tax Consequences of Virtual World Transactions*, SHIDLER J.L. COM. & TECH., Fall 2008, at ¶¶ 1, 8; Arnold, *supra* note 9, at 209.

172. *Glenshaw Glass Co.*, 348 U.S. at 431.

173. See Dibbell, *supra* note 141, at 48 (explaining that the author was earning an income from the sale of virtual goods in 2004 and paid taxes).

174. See Lederman, *supra* note 8, at 1634.

175. Chodorow, *supra* note 10, at 289; Dean, *Quit Your Job! Virtual Item Sales Is Where It's At!*, NEXTPOWER UP (Dec. 21, 2012, 6:55 PM), <http://www.nextpowerup.com/news/326/quit-your-job-virtual-item-sales-is-where-its-at.html>.

176. Chung, *supra* note 31, at 740.

177. *Id.* at 741-43. For example, prominently displayed on its website, Guild Wars states the following regarding RMTs:

It is our goal to provide an enjoyable experience to every Guild Wars player. That's why we take the topic of real-money trading (buying and selling gold or in-game items for real-world money) very seriously. Every week, we ban thousands of accounts used by real-money trading companies, because those companies harm the game for other players by running large networks of bots to farm gold and items, spamming chat channels with their advertisements, and even attempting to steal login credentials from unsuspecting players.

Real-Money Trading Policy, GUILD WARS, <http://www.guildwars.com/support/rmt/rmt-en.php> (last visited Nov. 23, 2014).

178. See Chung, *supra* note 31, at 741. Administrators are concerned with preventing RMT fraud, while many players are concerned about diluting the in-game experience. *Id.*

license to use the items within the game, and thus attempting to sell such items for real currency violates the TOS and licensing agreements.¹⁷⁹ Banning players who abuse the TOS agreement protects the experience for other players, discourages cheating, and safeguards profitability.¹⁸⁰ Players, on the other hand, would be well served by this argument because it eliminates the likelihood that barter exchanges of virtual goods will lead to taxable income.¹⁸¹

The capital gains framework is used by the IRS to tax property,¹⁸² and the gain or loss is determined by comparing an asset's selling price with its purchase price.¹⁸³ Because this is the structure used for real-world property, it has been suggested that it is the best choice for taxing virtual property transactions, as well.¹⁸⁴ However, whether individuals acquire property rights to virtual goods is still subject to significant debate.¹⁸⁵ If virtual world participants assent to the TOS drafted by the operator to obtain a license to play, and such agreements are upheld by the courts, players may have no property rights in the virtual goods that they acquire.¹⁸⁶ As Lederman astutely points out, "[r]edistributing possession among those with the usage rights is not a disposition of property," and is not a realization event for federal income tax purposes.¹⁸⁷ Other scholars have challenged the feasibility of this idea because the operators of virtual worlds would need to document an abundance of transactions.¹⁸⁸ Simply put, requiring virtual world operators to collect and store transactional data would so severely burden them that it would effectively regulate them out of existence.¹⁸⁹

179. Lederman, *supra* note 8, at 1634.

180. Dan Enlow, *World of Warcraft Gold Alert: WoW Gold Sellers Beware*, PRWEB (July 30, 2006), <http://www.prweb.com/releases/2006/07/prweb418281.htm>. Violating the TOS or an end-user license agreement typically results in the termination of a user's account. Chung, *supra* note 31, at 742; Roscoe, *supra* note 142, at 16.

181. Bingisser, *supra* note 171, at ¶ 9. Gross income includes any "[g]ains derived from dealings in property." 26 U.S.C. § 61(a)(3) (2012). Thus, if players are successful in arguing that they have an exclusive license to use virtual items, rather than acquiring property rights in them, exchanges of such items may not be taxable. Jones, *supra* note 104, at 143.

182. Arnold, *supra* note 9, at 208.

183. 26 U.S.C. § 1001(a) (2001); Arnold, *supra* note 9, at 208.

184. Arnold, *supra* note 9, at 208.

185. See Jones, *supra* note 104, at 143 (arguing that virtual goods are not property without the right to exclude them from others, and that virtual world TOS agreements deny such rights to participants). Since a virtual world operator can delete or modify the entire world on a whim, players have a mere license and no property rights. *Id.*

186. See *id.*

187. Lederman, *supra* note 8, at 1654.

188. See Mack, *supra* note 53, at 762; see also Arnold, *supra* note 9, at 210 (agreeing with the argument that implementing a capital gain tax in a virtual world would be infeasible).

189. See Arnold, *supra* note 9, at 212 (suggesting that overregulation would reduce profitability and make the business model unattractive to operators).

3. The Challenge of Tracking Basis in Virtual Worlds

The basis problem is directly related to the capital gains issue because tracking basis is necessary for the calculation of any capital gains tax consequence.¹⁹⁰ Basis is essentially the cost of property purchased, and exists to prevent taxpayers from being subject to double taxation.¹⁹¹ For example, purchasing a physical sword for \$100 and selling it for \$200 results in a taxable gain of \$100, the same result as an investor purchasing Apple stock at \$500 and selling it for \$600.¹⁹² There are, however, significant differences between transactions that occur in virtual worlds and those that occur in the real world that make tracking an item's cost basis difficult.¹⁹³

As mentioned previously, there is little doubt that the sale of a virtual item for real currency is a taxable exchange.¹⁹⁴ However, determining the amount of tax payable depends on the item's cost basis, and tracking basis can become complicated, since most virtual worlds employ their own proprietary currency that may or may not be exchanged into real currency.¹⁹⁵ Referring to the classifications from the GAO report, this scenario typically incorporates hybrid or open virtual currency systems because real currency is being used on both ends of the transaction.¹⁹⁶ That is, in-game currency is purchased for real dollars, items are sold for real currency, or both.¹⁹⁷ Although the hybrid system has, by its very definition, at least one of the avenues of exchanges closed off, clandestine RMTs often occur outside of the virtual world that effectively morph it into an open system for transactional purposes.¹⁹⁸

Consider, for example, the following hypothetical illustration to demonstrate the complexity of a scenario in which questions regarding basis may need to be resolved.¹⁹⁹ In a hybrid system, Charlie purchases

190. Chodorow, *supra* note 10, at 292 (noting that regardless of how virtual world transactions are resolved, taxpayers and the IRS will have to tackle the problem of calculating and tracking basis through virtual worlds).

191. *Id.*

192. See 26 C.F.R. § 1.1001-1 (2007). Amount realized from the sale or disposition of property is the money received plus the fair market value of any property received. *Id.* Thus, the amount realized would be \$200, and the gain of \$100 would be calculated by subtracting the basis (cost) of \$100 from the amount realized. See *id.*

193. Chodorow, *supra* note 10, at 297-99.

194. Arnold, *supra* note 9, at 209.

195. See *supra* Part II.B.2.a (discussing closed-flow systems).

196. See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 4-5 (discussing the virtual currency systems).

197. *Id.*

198. *Id.*

199. See Chodorow, *supra* note 10, at 293 (discussing how calculation of basis can be quite complex, especially if it involves a tax-free exchange).

100 platinum coins from a third-party vendor for \$4.90, in direct violation of the virtual world's TOS agreement.²⁰⁰ He then purchases a hypothetical Sword of Chivalry for 85 platinum coins from an in-game vendor,²⁰¹ equips it, and engages in a series of quests in which Charlie receives a reward of 80 platinum coins for his efforts.²⁰² Later that day, Charlie stumbles across an ancient shield while roaming the landscape, and trades it to another player for another Sword of Chivalry, which he believes to be worth significantly more.²⁰³ Having no use for duplicate items, Charlie sells one of the Swords of Chivalry for 90 platinum coins and, in turn, sells the coins to his friend John for \$4.90, since the fair market value for platinum coins has increased.²⁰⁴

This scenario creates a whole host of issues regarding basis, the majority of which are beyond the scope of this Note.²⁰⁵ However, the illustration represents some of the challenges facing taxpayers and tax practitioners for which the IRS should provide guidance.²⁰⁶ The minimal information that has been provided to taxpayers lacks the requisite specificity to be particularly useful to taxpayers or IRS employees.²⁰⁷

IV. A NEW APPROACH TO DISSEMINATING INFORMATION TO TAXPAYERS

Scholars have largely focused on tackling the numerous substantive tax issues plaguing virtual worlds—such as when to impose a tax, what type of tax to implement, and how to calculate basis—rather than offering practical ways to disseminate information to taxpayers and tax professionals about the IRC and its implications on virtual world transactions.²⁰⁸ This Part begins by briefly analyzing previously suggested solutions, and then introduces a new, multi-tiered approach to

200. *See id.* at 288-89 (explaining that game developers generally retain all property rights in virtual goods and ban players who violate the terms).

201. *See id.* at 289 (describing the practice of obtaining virtual goods and then selling them to other players that chose not to acquire the virtual wealth and experience on their own).

202. *See* Roscoe, *supra* note 142, at 3 (noting that players can often participate in battles or quests to receive virtual rewards, including currency).

203. *See id.* Assuming that players acquired at least some property rights in their virtual goods, this would be considered a barter exchange, and the fair market value of the shield would be includible in Charlie's gross income. *See* 26 U.S.C. § 61(a)(3) (2012).

204. *See* Chodorow, *supra* note 10, at 317. This part of the hypothetical illustrates the issue of determining which coins are actually being sold, the ones he earned from questing or the ones he received from selling the extra sword he traded for. *See id.*

205. *Id.* at 318 (discussing the problems of tracing basis for virtual transactions).

206. *See* U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 13 (identifying that taxpayer uncertainty over how to calculate basis is a major cause of noncompliance).

207. *See* NAT'L TAXPAYER ADVOC., *supra* note 132, at 255.

208. *See infra* Part IV.A.

reducing tax noncompliance in the context of virtual economies.²⁰⁹ Critically evaluating the challenges associated with various proposals offers significant insight into why the IRS has not yet developed its own solution.

A. *Previously Proffered Solutions*

As mentioned, authors have previously focused on providing solutions for specific tax questions, such as calculating basis in virtual spaces or dealing with the insurmountable issue of requiring virtual world operators to track billions of transactions.²¹⁰ Although these pieces tend to focus on substantive issues rather than the communication of information to taxpayers, analyzing their arguments provides critical insight into the challenges faced by the IRS and virtual world operators.²¹¹

1. Implementing a Sales-and-Use Tax Structure

It has been suggested that the most obvious solution is to tax virtual property transactions through the capital gains framework,²¹² but that doing so would create “a slew of evaluation issues that do not exist in the real world.”²¹³ Although technically the correct way to calculate the tax consequence arising from the sale of virtual property, it is noted that it would be inefficient and would unduly burden operators of virtual worlds.²¹⁴ In order to accurately determine basis, and thereby the tax consequence upon disposition of a virtual item, the burden of logging an extraordinary amount of transactions would have to be imposed on virtual world operators.²¹⁵ Accordingly, the IRS might find itself in a tricky situation, where implementing significant regulations makes virtual world transactions less attractive, and therefore leads to increased compliance, but an overall decrease in tax revenue collected.²¹⁶ Instead, a sales-and-use tax is proposed,²¹⁷ which would eliminate reporting requirements and remit a percentage of every in-game transaction directly to the IRS.²¹⁸

209. See *infra* Part IV.A–B.

210. See *supra* notes 208–09.

211. See, e.g., *infra* Part IV.A.1 (summarizing the conclusion that the obvious solution involving the capital gains framework leads to valuation issues).

212. Mack, *supra* note 53, at 762.

213. *Id.*

214. *Id.* at 762–63.

215. *Id.* at 762.

216. Arnold, *supra* note 9, at 212.

217. Mack, *supra* note 53, at 763.

218. *Id.* at 763–64.

It has been pointed out that the sales-and-use tax structure suffers from the same valuation issues that plague the capital-gains framework.²¹⁹ In other words, determining the fair market value of the virtual currency being exchanged in a transaction is a prerequisite to determining the amount being withheld—even if it is only a percentage—and is extraordinarily difficult.²²⁰ If a sales-and-use tax of 3% is imposed on a transaction involving 1000 platinum coins, the value of 30 platinum coins must be known in order to determine an exact dollar amount to be remitted to the IRS.²²¹ A way around this problem is to actually transfer the 30 platinum coins directly to the IRS.²²² However, it would then require the IRS to convert them back into real currency in a separate transaction.²²³ This would become an administrative nightmare, as the exchange rate of the coins might be in a constant state of flux.²²⁴ Even assuming this works for open-flow systems where the market value of virtual currency is known, such as Linden Dollars, it is hardly feasible for hybrid and closed-flow system transactions, where the fair market value of the currency is largely unknown and fluctuates daily.²²⁵

2. The In-Game Tax Day

Interestingly, Eric Roscoe proposes a creative solution in which operators of virtual worlds impose an in-game tax day.²²⁶ However, it is certainly debatable that “the IRS could easily incentivize the payment of taxes in Second Life” by giving the player a unique digital item.²²⁷ Since participants of unscripted worlds generally play for social interaction or entertainment,²²⁸ the purported in-game item to be given must have some perceived value if it is to induce any type of behavior.²²⁹ If everyone that pays taxes is given a unique item, then there is essentially nothing unique about it.²³⁰ With that being the case, there is likely insufficient

219. Arnold, *supra* note 9, at 210-11.

220. *Id.* at 211 (“[I]t is extremely difficult to determine a fair market value for virtual items based on the instability and fluctuations of virtual markets.”).

221. See Roscoe, *supra* note 142, at 9 (discussing how determining fair market value is a question of fact, and can be quite difficult).

222. Mack, *supra* note 53, at 763-64.

223. See *id.* at 764.

224. Arnold, *supra* note 9, at 211.

225. Chung, *supra* note 31, at 760.

226. Roscoe, *supra* note 142, at 33.

227. *Id.*

228. See Lederman, *supra* note 8, at 1630.

229. *Perceived Value*, INVESTOPEDIA, <http://www.investopedia.com/terms/p/perceived-value.asp> (last visited Nov. 23, 2014); see Lederman, *supra* note 8, at 1630.

230. See Matt Johnson, *Economic Basics: Supply and Demand*, SOPHIA LEARNING,

social or economic value associated with the item to offset the costs of paying in-world taxes.²³¹

In the context of game worlds, players usually assign the greatest value to items that enable their avatars to become more powerful and, in turn, allow them to experience additional content.²³² Providing exclusive in-game items for such a tax day is at odds with the desire of game developers to prohibit access to virtual items that are disproportionate in power level to the difficulty in obtaining them.²³³ As previously mentioned, the success of game developers' subscription-based revenue models rests with the needs of players to experience maximum game content.²³⁴ If the digital item provided is too powerful, it may undermine the ability of the developer to control the pace of character advancement.²³⁵ However, if the item is not potent enough, it is likely to provide little incentive, if any, for a player to dispose of hard-earned virtual assets to pay taxes in the absence of any consequences.²³⁶

3. The Game-World/Commerce-World Distinction

Lederman suggests that the style of gameplay within a virtual world, and whether it is designed to support commerce, should factor into the analysis because of realization issues.²³⁷ Thus, she approaches the analysis at a threshold level, choosing to focus on the nature of the virtual world itself, rather than on the type of tax, or how to implement it.²³⁸ Her distinction between game worlds and unscripted worlds is keen, and bears a striking resemblance to the GAO's recent description

<http://www.sophia.org/tutorials/economic-basics-supply-and-demand> (last visited Nov. 23, 2014) (explaining the relationship between supply, demand, and price). In that case, demand would probably be low and render the item near valueless. *Id.*

231. *See id.* In Roscoe's solution, the supply would essentially be unlimited, because anyone who wanted a "unique" item would have access to one, thereby destroying any scarcity in the marketplace, obliterating perceived value, and reducing the likelihood that it will incentivize anyone to pay taxes. *See* Roscoe, *supra* note 142, at 33; Johnson, *supra* note 230.

232. *See* Lederman, *supra* note 8, at 1628, 1638.

233. *See id.* at 1637-38 (explaining that game developers have an incentive to control players' ability to explore game content). This incentive to control the pace of game exploration is directly linked with monetization. *See* Eddie Makuch, *You Can Now Pay \$60 for a Level 90 World of Warcraft Character*, GAMESPOT (Mar. 10, 2014), <http://www.gamespot.com/articles/you-can-now-pay-60-for-a-level-90-world-of-warcraft-character/1100-6418216> (explaining that World of Warcraft level ninety character boosts are available to purchase for sixty dollars, ensuring that the value of leveling will not be diminished).

234. *See supra* text accompanying notes 163-65.

235. Lederman, *supra* note 8, at 1637-38 (demonstrating that an overly powerful in-game weapon might cause problems by restricting the exploration of content).

236. *Id.* at 1628.

237. *Id.*

238. *See id.* at 1641.

of closed-flow and open-flow systems, respectively.²³⁹ It makes sense to approach virtual world tax issues in this manner because any proposed solution must take into account the practical applications in addition to policy issues.²⁴⁰ Such valuation and administrative difficulties are serious concerns.²⁴¹ Taxing transactions in worlds such as Second Life, which are generally open-flow systems with readily available values for their virtual currencies, and exempting from taxation transactions occurring in game worlds, which are generally closed-flow systems, makes it significantly easier to disseminate guidance to taxpayers about when tax issues may arise from online gameplay.²⁴²

From a policy perspective, there is a strong argument that in-game transactions should not be taxed unless virtual items are cashed out for real-world profits.²⁴³ Creating a default rule that barter transactions within game worlds are not taxable creates the kind of uniformity that consumers and tax practitioners can embrace in tax planning and preparation decisions.²⁴⁴ However, Lederman concludes that existing tax laws may be insufficient to deal with in-game exchanges of virtual world goods, depending on whether courts recognize the accession of virtual property rights for players.²⁴⁵ If courts subscribe to the licensing theory proffered by virtual world operators, participants will not acquire property rights and will not be taxed on in-game barter transactions.²⁴⁶

B. New Ways to Disseminate Information to Taxpayers About Virtual Currency Transactions

As demonstrated above, the majority of literature in the area of virtual world taxation has focused on whether to tax virtual world transactions at all and, if so, what type of tax to implement and how to

239. Compare *id.* at 1628 (“Such a journey requires a character to obtain certain items, such as weapons and protective armor, in order to succeed and attain higher levels.”), with U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 4 (“In a ‘closed-flow’ virtual currency system . . . [v]irtual tools amassed by players can be traded in a game for other-in-game assets or to advance to higher play levels . . .”).

240. Arnold, *supra* note 9, at 211 (“Though administrative matters may seem insignificant, the I.R.S. has continually made decisions based solely on this aspect.”).

241. *Id.*

242. See Lederman, *supra* note 8, at 1665.

243. *Id.*

244. See U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 6, at 13.

245. See Lederman, *supra* note 8, at 1631 (concluding that whether virtual items constitute property affects tax consequences).

246. See *id.* at 1654. On the other hand, the courts could determine that players do acquire property rights. See Jones, *supra* note 104, at 144 (“The argument that [virtual world transactions] are not realization events would fail if virtual items were considered property.”).

collect it.²⁴⁷ Regardless of how the virtual property debate manifests itself, the IRS must provide additional guidance to taxpayers and tax professionals if it is to successfully mitigate the risk of noncompliance with the Code, as the GAO's report notes.²⁴⁸ This Subpart focuses on how to effectively and efficiently disseminate information to taxpayers and practitioners regarding potential tax consequences that may arise from participation in virtual worlds.²⁴⁹ It is assumed that, at the very least, all transactions in which virtual items or currency are exchanged for real currency are triggering events in which economic benefit is clearly realized, and, thus, subject to taxation.²⁵⁰

This proposed solution takes a three-pronged approach to circulating information in an attempt to foster compliance.²⁵¹ The first prong focuses on directly disseminating information to taxpayers using splash pages, similar to the screens where TOS and licensing agreements are displayed.²⁵² The second prong turns to the educational framework of active tax practitioners who are familiar with the Code, but are not necessarily thinking about tax consequences in the context of virtual worlds.²⁵³ As such, the primary objective is to educate and incentivize practitioners to ask pertinent questions when assisting taxpayers with return preparation.²⁵⁴ Finally, the third prong discusses the creation of a virtual currency exchange to facilitate the government in regulating significant transfers of virtual currencies at a threshold level, without having to impose unmanageable burdens on virtual world operators.²⁵⁵

1. Disseminating Information to Taxpayers by Requiring Virtual World Splash Screens

The U.S. tax system is one of self-assessment and voluntary compliance.²⁵⁶ In fact, a taxpayer who is aware of an error or omission on a previously filed return is under no legal obligation to amend that

247. Chodorow, *supra* note 10, at 290; *see supra* Part IV.A.

248. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 17.

249. *See infra* Part IV.B.1–2.

250. *See* 26 U.S.C. § 61 (2012); *see also* *Comm'r v. Glenshaw Glass Co.*, 348 U.S. 426, 431 (1955) (holding that economic benefit must be clearly realized to be included in gross income).

251. *See infra* Part IV.B.1–3.

252. *See infra* Part IV.B.1.

253. *See infra* Part IV.B.2.

254. *See* Bingisser, *supra* note 171, at ¶ 26 (“Practitioners should be aware that virtual world transactions could results [sic] in real world tax consequences even though no real money is exchanged.”).

255. *See infra* Part IV.B.3.

256. LEANDRA LEDERMAN & STEPHEN W. MAZZA, *TAX CONTROVERSIES: PRACTICE AND PROCEDURE* 10 (3d ed. 2009).

return.²⁵⁷ Similarly, tax preparers who become aware of an error or omission on a client's return have a duty to inform the client of the consequences of such noncompliance, but are not legally obligated to take any corrective action.²⁵⁸ The vast majority of taxpayers, however, comply with the IRC despite its complexities and the minimal chance of audit.²⁵⁹ Thus, it stands to reason that providing additional information to taxpayers regarding potential tax consequences from virtual world transactions is likely to lead to significant increases in compliance with the Code.²⁶⁰

Splash screens have been used for years to provide information to consumers, ranging from TOS and licensing agreements, to basic company contact information.²⁶¹ In its simplest form, the user of a piece of software is presented with a screen upon execution of a computer program that displays information the developer deems important.²⁶² For example, when a player begins loading World of Warcraft, she is presented with a screen that displays the full TOS agreement, and she must accept those terms prior to playing.²⁶³ If the terms are not accepted, she cannot advance beyond that screen.²⁶⁴

Congress could empower the Treasury Department to issue regulations providing that virtual world proprietors must create a virtual roadblock, splash page, or other means of disclosing to individuals that

257. Jay A. Soled & Leonard Goodman, *Tax Return Preparation Mistakes*, J. ACCT., June 2010, at 62, 63.

258. 31 C.F.R. § 10.21 (2011).

259. LEDERMAN & MAZZA, *supra* note 256, at 11 (noting that the overall voluntary compliance rate for federal taxes is estimated at 83.7%).

260. See NAT'L TAXPAYER ADVOC., *supra* note 132, at 252 (finding that "[t]axpayers want to know the tax consequences of digital currency transactions"); U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 13 ("The unsophisticated taxpayer may not properly identify income earned through virtual economies or currencies, such as virtual online game assets exchanged for real world currency, as taxable income.").

261. See *How to Create a Splash Screen*, ORACLE, <http://docs.oracle.com/javase/tutorial/uiswing/misc/splashscreen.html> (last visited Nov. 23, 2014) (common uses of splash screens include advertising products, displaying program launch information, and providing information to users); cf. Jennifer Kyrmin, *Splash Pages: Pros and Cons*, ABOUT.COM, <http://www.webdesign.about.com/od/navigation/a/aa020303a.htm> (last visited Nov. 23, 2014) (explaining that splash pages can be a very popular method of conveying information).

262. Kyrmin, *supra* note 261; see also Whitson Gordon, *Start Microsoft Office Programs Without the Splash Screen*, LIFEHACKER (Jan. 20, 2012, 7:30 AM), <http://www.lifehacker.com/5877847/start-microsoft-office-programs-without-the-splash-screen> (providing a prime example of how a splash screen looks and the information it conveys).

263. Claire Dowler, *Copy That, COMMUNICATE THIS* (Mar. 17, 2012), <http://www.clairedowler.wordpress.com/category/copyright>.

264. Jeff Sauro, *Do Users Read License Agreements?*, MEASURING USABILITY (Jan. 11, 2011), <http://www.measuringability.com/blog/eula.php> (noting that the software typically does not load unless you accept the TOA).

in-world transactions could lead to real-world consequences.²⁶⁵ Although different in subject-matter, the idea is not that dissimilar from the Surgeon General's warning on nicotine products, or regulation requiring chain restaurants and vending machines to disclose the calorie content of their menu items.²⁶⁶ Some people, faced with this additional information, make different decisions than they would have normally made absent the information.²⁶⁷ At least one study has indicated that mandatory disclosure laws have reduced the calorie intake of Starbucks customers in New York City by six percent.²⁶⁸ Thus, there is evidence that a regulation providing access to additional information can significantly influence consumer behavior.²⁶⁹ Since one of the prime causes of noncompliance stems from a consumer's lack of information, increasing the knowledge base and awareness of individuals can, at minimum, put consumers on notice that their virtual actions might have tax consequences.²⁷⁰

As the GAO's report notes, the IRS has already posted information on its website regarding the tax consequences of virtual transactions.²⁷¹ However, there is a significant difference between a consumer being provided with information and a consumer being forced to seek it out elsewhere.²⁷² The aforementioned six percent drop in caloric intake at Starbucks did not stem from access to the information, which was available on the Internet for years, but from the prominent placement of

265. See 26 U.S.C. § 7805(a) (2012).

266. See SAMBROOK RESEARCH INT'L, A REVIEW OF THE SCIENCE BASE TO SUPPORT THE DEVELOPMENT OF HEALTH WARNINGS FOR TOBACCO PACKAGES 10 (2009), available at http://ec.europa.eu/health/tobacco/docs/warnings_report_en.pdf (finding that warning labels on tobacco products are effective at educating consumers and lead to an increased motivation to quit smoking); *Law Calls for Calorie Counts on Vending Machines*, WEBMD, <http://www.webmd.com/health-insurance/20131230/calories-vending-machines> (last visited Nov. 23, 2014).

267. See SAMBROOK RESEARCH INT'L, *supra* note 266, at 10; Angela Herrington, *Calorie Posting and Its Impact*, REG BLOG (Aug. 31, 2011), <http://www.regblog.org/2011/08/calorie-posting-and-its-impact.html>.

268. Herrington, *supra* note 267. But see *Mandatory Calorie Postings at Fast-Food Chains Do Not Influence Food Choice*, SCIENCE DAILY (Nov. 15, 2013), <http://www.sciencedaily.com/releases/2013/11/131115154458.htm> (reporting that New York University researchers found that "[p]osting the calorie content of menu items at major fast-food chains . . . does not change purchasing habits or decrease the number of calories that those customers consume").

269. See generally SAMBROOK RESEARCH INT'L, *supra* note 266; Herrington, *supra* note 267.

270. See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 12-13 (explaining that lack of taxpayer knowledge regarding tax requirements is a major factor leading to noncompliance).

271. *Id.* at 15.

272. See ROBERT WOOD JOHNSON FOUND., IMPACT OF MENU LABELING ON CONSUMER BEHAVIOR: A 2008-2012 UPDATE 2 (2013), available at <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf406357> ("Customers rarely seek out nutrition information from sources not available at the point of purchase . . . but they do see menu labels at the point of purchase and those labels increase their awareness of nutritional information.").

such information in the most relevant of settings (placing it right in front of the consumer's face at the point of sale).²⁷³ To create a comparable effect, virtual world operators could be required to provide a splash page upon program execution that states the following, or something similar:²⁷⁴

Due to government regulations, please be advised that selling virtual goods or providing in-game services for real currency may result in a taxable event. Please consult your advisor or tax professional prior to engaging in this type of behavior. For additional information, see <insert relevant government website here>.

While many users choose to ignore the splash page and immediately click through without reading it, a select percentage will always scrutinize its content.²⁷⁵ However, unlike End-User License Agreements or privacy policies, which are often filled with confusing legalese,²⁷⁶ the proposed splash page would only have a few sentences written in plain English, and displayed in large, easy-to-read font, coupled with a link to a government website with more information.²⁷⁷ Implementation would be relatively simple, merely requiring virtual world operators to create an additional page that appears during the loading process.²⁷⁸

2. Promote Awareness of Virtual Currency Transactions Among Tax Practitioners as Part of the Continuing Education Package

With over eighty percent of American households using the services of a tax preparer or tax software, the government has a strong incentive to ensure that such preparers are knowledgeable and provide proper advice.²⁷⁹ The IRS already has, at its disposal, a number of tools designed to educate active tax professionals, including forums, videos,

273. *Id.* at 3. Studies have shown that between one-half and two-thirds of customers report seeing calorie information after posting it on point of purchase locations. *Id.* at 4. Similarly, splash screens can be quite effective at providing information to consumers at a critical point—just prior to playing. See Gordon, *supra* note 262 (pointing out indirectly that information provided by splash screens are likely to be seen and cannot be avoided without significant program tampering).

274. See 26 U.S.C. § 7805 (2012).

275. Sauro, *supra* note 264.

276. *Id.*

277. See *id.*; text accompanying notes 274-75.

278. See *How to Make a Splash Screen*, DREAM.IN.CODE (Mar. 14, 2009, 3:20 PM), <http://www.dreamincode.net/forums/topic/92856-how-to-make-a-splash-screen> (outlining the process for creating a splash screen).

279. *IRS Proposes New Registration, Testing and Continuing Education Requirements for Tax Return Preparers Not Already Subject to Oversight*, IRS, <http://www.irs.gov/uac/IRS-Proposes-New-Registration,-Testing-and-Continuing-Education-Requirements-for-Tax-Return-Preparers-Not-Already-Subject-to-Oversight> (last updated Aug. 17, 2012).

panels, and live webinars.²⁸⁰ In addition, these tools are available to students and future practitioners through the “Link and Learn” page of the IRS’s website.²⁸¹ What is arguably more important than the existence of these resources, however, is the government’s ability to regulate continuing professional education (“CPE”) requirements.²⁸²

Registered tax preparers, enrolled agents, and individuals with Preparer Tax Identification Numbers, must certify, upon renewal, that they have completed the requisite number of continuing education hours.²⁸³ The IRS dictates what qualifies as CPE, and already requires registered preparers to earn at least three credit hours of federal tax law updates and ten credit hours of federal tax law topics in each registration year.²⁸⁴ Because of this, many third-party companies that offer CPE courses categorize them into one of three categories: Ethical or Professional Conduct; Federal Tax Topics; and Federal Tax Updates.²⁸⁵ Thus, the IRS has the ability to shape the educational requirements of those who practice before it, and should mandate that tax preparers spend at least one to two hours each registration year learning about trends and noncompliance issues involving virtual currencies.²⁸⁶ If the tax dollars at stake from noncompliance are not significant enough to warrant their own category with subtopics, the IRS can at least require that tax preparers complete one virtual currency awareness module.²⁸⁷

280. See *Tax Information for Tax Professionals*, IRS, <http://www.irs.gov/Tax-Professionals> (last updated Aug. 25, 2014) (displaying an abundance of links to bulletin boards, forums, live webinars, IRS statements, public reports, and other additional information useful for tax professionals).

281. See *Link & Learn Taxes*, IRS, <http://www.irs.gov/Individuals/Link-&-Learn-Taxes> (last updated Mar. 10, 2014). This is an interactive, web-based course, that primarily provides training to students and volunteers who participate in the Volunteer Income Tax Assistance Program. *Id.*

282. See 31 C.F.R. § 10.0 (2011). Commonly referred to as Circular 230 by practitioners, Title 31, Section 10 provides regulatory guidance to those who practice before the IRS. *Id.*

283. § 10.6(e). Preparer Tax Identification Numbers are identification numbers that all compensated tax return preparers must use on federal tax returns. *PTIN Requirements for Tax Return Preparers*, IRS, <http://www.irs.gov/Tax-Professionals/PTIN-Requirements-for-Tax-Return-Preparers> (last updated June 30, 2014).

284. §§ 10.6(e)–(f).

285. See, e.g., § 10.6(e)(3); *IRS Continuing Education Courses*, FLA. NAT’L U., <http://www.fnu.edu/irs-continuing-education> (last visited Nov. 23, 2014) (offering multiple courses in these three categories).

286. See §§ 10.6(e)–(f). Enrolled agents, enrolled retirement plan agents, and registered tax return preparers must renew their registration every three years. *Id.* §§ 10.6(d)(2)(v), (d)(3)(ii).

287. See § 10.9 (defining the requirements for continuing education providers, instructor qualifications, and program subject matter). The IRS could promulgate regulation requiring virtual currency training as a prerequisite to status renewal. See 26 U.S.C. § 7805 (2012) (authorizing the Secretary to “prescribe all needful rules and regulations for the enforcement of this title, including all rules and regulations as may be necessary by reason of any alteration of law in relation to internal revenue”).

This is especially important in light of the IRS's Electronic Business and Emerging Issues policy group determining that virtual economies create significant opportunities for the underreporting of income.²⁸⁸ The IRS can continually provide annual updates regarding virtual world and virtual currency transactions to ensure that a growing number of tax professionals are aware of the issues and are capable of having intelligent conversations with their clients about the consequences of such transactions.²⁸⁹ What we want to prevent is the kind of conversation that legal scholar Julian Dibbell had with the IRS agent over the phone.²⁹⁰ If the IRS fails to provide any information in regards to a specific inquiry, it is directly contributing to taxpayer confusion and fostering noncompliance.²⁹¹

3. Establish a Virtual Currency Exchange to Act as a Clearinghouse for Transactions Meeting a Minimum Size

The concept of a clearinghouse²⁹² in the financial world is nothing new.²⁹³ They exist as intermediaries between different firms conducting transactions to mitigate the risk of either party failing to comply with the terms of the agreement.²⁹⁴ The same concept can be used by the government to assist individuals in safely exchanging currency in open-flow and hybrid virtual economic systems, while simultaneously capturing useful information for tax compliance and anti-money laundering purposes, without the creation of burdensome reporting requirements for virtual world operators.²⁹⁵

288. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 15.

289. See, e.g., *Is Your Hobby a For-Profit Endeavor?*, IRS (June 2008), <http://www.irs.gov/uac/Is-Your-Hobby-a-For-Profit-Endeavor%3F> (stating that taxpayers must follow guidelines based on whether their activity is done for profit or as a hobby); *Tax Consequences of Virtual World Transactions*, *supra* note 41 (noting that cyber-economic activities may have real-world consequences).

290. Dibbell, *supra* note 141, at 49 (referring to the conversation he had on the phone with the IRS where he was informed that there was little to no guidance on how to tax virtual bartering).

291. See *id.*

292. *Clearing House*, INVESTOPEDIA, <http://www.investopedia.com/terms/c/clearinghouse.asp> (last visited Nov. 23, 2014). A clearing house is "[a]n agency or separate corporation of a futures exchange responsible for settling trading accounts, clearing trades, collecting and maintaining margin monies, regulating delivery and reporting trading data." *Id.*; *Clearinghouse*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/clearinghouse> (last visited Nov. 23, 2014) [hereinafter MERRIAM-WEBSTER].

293. Ben S. Bernanke, Chairman, Bd. of Governors of the Fed. Reserve, Remarks at the 2011 Financial Markets Conference (Apr. 4, 2011), available at <http://www.federalreserve.gov/newsevents/speech/bernanke20110404a.pdf>. Clearinghouses in the United States date back to at least 1853. *Id.*

294. *Clearing House*, *supra* note 292; MERRIAM-WEBSTER, *supra* note 292.

295. See Schlinggen, *supra* note 47, at 892 (suggesting that creating a system where a tax is imposed at the time of exchange might prevent significant enforcement problems).

From a theoretical perspective, it would be ideal for every virtual world to store the information from every transaction ever completed.²⁹⁶ The information could then be used for countless purposes, including identifying possible trends of taxpayer noncompliance and money laundering.²⁹⁷ However, as many scholars have opined, tracking and storing the data from billions of transactions is virtually impossible, and any regulation requiring operators to do so would almost certainly put all but the largest of them out of business.²⁹⁸ Creating a federal clearinghouse would also alleviate many challenges associated with data storage because the government would be aware of transactions as they occur in real-time, rather than relying on after-the-fact reporting.²⁹⁹ Furthermore, only relevant transactions would take place through the exchange.³⁰⁰ Trading a virtual shield for a virtual sword, for example, would not implicate the exchange because it does not involve currency.³⁰¹

There are, however, several different challenges that this idea poses, namely the initial integration of the exchange and countless virtual worlds.³⁰² To alleviate this burdensome task, and because the purpose is not merely to substitute one massive problem (ongoing data collection) for another (integration with thousands of worlds), the IRS could require that virtual worlds with a minimum threshold user base, such as ten million, to register with the clearinghouse.³⁰³ The regulation could further stipulate that only transactions meeting a certain size must take place within the exchange.³⁰⁴ For example, a purchaser of 50,000 platinum coins for \$2000 would have to register with the exchange,

296. See Chodorow, *supra* note 10, at 292 (implying that tracking transactions would assist in determining basis, and thus, the tax consequences of transactions).

297. Arnold, *supra* note 9, at 210.

298. *E.g., id.* at 210, 212.

299. See *Clearing House*, *supra* note 292 (using an example to show how clearinghouses work in real-time); *Exchanges vs. Clearinghouses (This Is Important)*, ECON. CONTEMPT (Apr. 14, 2010, 4:36 PM), <http://economicsofcontempt.blogspot.com/2010/04/exchanges-vs-clearinghouses-this-is.html> ("Clearinghouses also centralize trade reporting, and can provide any level of post-trade transparency to the [over the counter] derivatives market that your heart desires—same-day trade reporting, including prices . . ."); Miranda Marquit, *What Do Clearing Houses Do?*, INVESTORJUNKIE (Mar. 31, 2014), <http://investorjunkie.com/14202/clearing-houses> (explaining that "it's possible for a clearing house to settle transactions in a matter of seconds" and that they can offer valuation services as well).

300. See *supra* text accompanying notes 243-44.

301. Bingisser, *supra* note 171, at ¶ 11 (suggesting that a like-kind exchange would not be taxed).

302. See Gian Trotta, *Dancing Around EAI 'Bear Traps,'* EBIZQ (Dec. 15, 2003), http://www.ebizq.net/topics/int_sbp/features/3463.html (claiming that seventy percent of all enterprise application integration projects fail due to management issues).

303. See 26 U.S.C. § 7805 (2012).

304. See *id.*; *cf.* 26 C.F.R. §§ 1.6050W-1(a)(1)–(4), (c)(4) (2011).

remit payment, and the coins would be delivered thereafter.³⁰⁵ Existing regulations already use minimum thresholds, such as IRC section 6050W,³⁰⁶ which requires third-party payment facilitators to report the total amount of revenue received by U.S. account holders to the IRS when they receive in excess of twenty thousand dollars in two hundred or more transactions within a calendar year.³⁰⁷

The other obvious concern about this type of system is one of valuation.³⁰⁸ The government would have to first determine the minimum threshold for the transactions that it wants to take place on the exchange, such as exchanges of currency valued in excess of two thousand dollars on the open market.³⁰⁹ Then, the IRS would have to continuously track the value of various virtual currencies relative to the dollar in order to determine whether the regulation applies.³¹⁰ While this creates additional work for the regulators, it nevertheless appears feasible because open-flow and hybrid economic systems already have thriving secondary markets from which the fair market value could be determined.³¹¹

V. CONCLUSION

The government has recognized that the marketplace for virtual currency transactions is increasing at an extraordinary rate and represents a continuing source of noncompliance.³¹² In order to effectively capture revenue from virtual transactions, the IRS must promulgate new regulations that bring potential tax consequences to the attention of virtual world and currency operators.³¹³ Given the complexity of the existing Code, taxpayer confusion, and general lack of knowledge about virtual economies, a multi-tiered approach to fostering

305. Cf. §§ 1.6050W-1(a)(1)–(4), (c)(4). This hypothetical assumes that the transaction value of \$2000 exceeds the minimum threshold amount for the regulation to apply.

306. § 1.6050W.

307. §§ 1.6050W-1(a)(1)–(4), (c)(4); *Everything You Need to Know About IRC Section 6050W*, PAYPAL, https://cms.paypal.com/us/cgi-bin/marketingweb?cmd=_render-content&content_ID=marketing_us/IRS6050W (last visited Nov. 23, 2014) (emphasizing that the reporting requirements only apply to those sellers who exceed twenty thousand dollars in gross payments, and engage in more than two hundred transactions within a calendar year).

308. See Arnold, *supra* note 9, at 211 (explaining that fluctuations in the market for virtual goods makes them difficult to value).

309. See Beekman, *supra* note 37, at 174.

310. Arnold, *supra* note 9, at 211–12.

311. See discussion *supra* Part II.B.2.b–c.

312. See Newquist, *supra* note 16 (discussing the Joint Economic Committee's awareness of the public policy questions raised by virtual economies since 2006).

313. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 17.

compliance is needed.³¹⁴ Implementing a regulation that requires virtual world operators to create splash screens would be a useful first step in promoting awareness among taxpayers.³¹⁵ Moreover, mandating virtual currency CPE requirements and creating a federal virtual currency exchange are likely to be even more effective in mitigating noncompliance.³¹⁶ Regardless of how the substantive legal issues are resolved with respect to virtual property, increasing taxpayer awareness and access to information is likely to lead to more accurate reporting.³¹⁷

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314. *See supra* Part IV.B.

315. *See supra* Part IV.B.1.

316. *See supra* Part IV.B.2–3.

317. *See supra* Part IV.

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