

## THE LEGAL RISKS SURROUNDING USER-CREATED CONTENT IN VIDEO GAMES

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### ABSTRACT

*There is no doubt that works that incorporate or build upon existing copyrighted works are derivative works, but what encouraging those works means legally for companies and creators can be muddy. There remains an uncertainty as to who owns user-created content in a video game “co-created” by the players such as Roblox and Minecraft. While user-created content is not new in the video game industry, the ramifications of allowing and encouraging creation have not been discussed in great enough detail and are in dire need of a modern reassessment. The Dota 2 controversy shed light on how the industry’s failure to properly address user-created content has led to companies missing opportunities to take control of genre-defining content made in their own games and using their own tools. Despite this spotlight, companies still have wildly varying solutions that are each insufficient in one manner or another in resolving the uncertainty or the issues stemming from it. This note aims to examine user-created content and its copyright implications in detail, critique the current legal framework used to determine copyrightable elements in video games, analyze the*

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*approaches developers have used to capture user-created content into their intellectual property portfolios or mitigate the risk of indirect infringement, and offer a route of future study to better evaluate how to balance minimizing the risk of indirect infringement and players' interest in creating mods.*

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**I.       INTRODUCING THE UNCERTAINTY**

In 2021, the World Economic Forum estimated that the video game industry was worth \$214.2 billion, thanks in part to the COVID-19 pandemic causing the market to

expand.<sup>1</sup> To put that number into perspective, the global movie industry is currently worth \$77 billion<sup>2</sup> and the global video streaming industry is currently worth \$95.35 billion.<sup>3</sup> Of the video game industry's \$214.2 billion, there is a very small but noticeable segment of games that started off as modifications (“mods”) of other existing games, such as Valve's *Dota 2* which made \$406 million in 2017, approximately double its annual revenue in 2015<sup>4</sup> and PUBG Studios' *PUBG: Mobile* which has generated \$8 billion in its lifetime.<sup>5</sup> Despite how popular and lucrative mods have become, there remains confusion about how intellectual property law affects the modders' ownership rights, the rights to create derivative works, the profits of those derivative works, and the companies' potential liability for allowing mods to exist.<sup>6</sup> For example, some

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<sup>1</sup> Simon Read, *Gaming is booming and is expected to keep growing. This chart tells you all you need to know*, WORLD ECON. FORUM (Jul. 28, 2022), <https://www.weforum.org/agenda/2022/07/gaming-pandemic-lockdowns-pwc-growth/#:~:text=Gaming%20boomed%20in%20lockdown%20and,%24320bn%20%7C%20World%20Economic%20Forum> [https://perma.cc/H5MV-MK68].

<sup>2</sup> *Global Movie Production & Distribution Industry - Market Research Report*, IBISWorld (Jul. 12, 2022), <https://www.ibisworld.com/global/market-research-reports/global-movie-production-distribution-industry/> [https://perma.cc/9VD7-D22M].

<sup>3</sup> *Digital Media – Video-on-Demand: Video Streaming (SVoD) – Worldwide*, STATISTA (Aug. 2023), <https://www.statista.com/outlook/dmo/digital-media/video-on-demand/video-streaming-svod/worldwide> [https://perma.cc/J2CR-XSCP].

<sup>4</sup> Christina Gough, *Revenue generated by DOTA 2 worldwide from 2015 to 2017*, STATISTA (Aug. 9, 2019), <https://www.statista.com/statistics/807617/dota-2-revenue/> [https://perma.cc/7LZM-EHDR].

<sup>5</sup> Craig Chapple, *PUBG Mobile Shoots Past \$8 Billion in Lifetime Revenue*, SENSOR TOWER (May 2022), <https://sensortower.com/blog/pubg-mobile-8-billion-revenue> [https://perma.cc/32YC-XDRF].

<sup>6</sup> Beata Sobkow, *Video Game Industry and User-Generated Content: A Dynamic Interplay Between Laws and Video Game Community Norms* (Feb. 9, 2020) (manuscript at 8), <https://papers.ssrn.com/sol3/>

Blizzard modders operated under the assumption that they “could develop add-ons for [Blizzard] that would both help us have fun and help them make more money.”<sup>7</sup> So when Blizzard announced a set of policies prohibiting modders from soliciting donations for their work or requiring payment to use the work, many felt betrayed by what seemed like Blizzard pulling the rug under them.<sup>8</sup> Another assumption is over the length of copyright, which modders, confused with their own ethical standards, usually assume is dependent on whether the copyright owner is currently taking advantage of the intellectual property, developing it further, or making a profit off of it.<sup>9</sup>

*Dota 2*, which will serve as a case study for the issues this paper will discuss later, is a sequel to the original *Defense of the Ancients* mod made in 2003 for Blizzard’s *Warcraft III: Reign of Chaos* made using Blizzard’s in-game world editor.<sup>10</sup> The original *Defense of the Ancients* mod and its sequel led to the creation of, or at least the popularization of, the “Multiplayer Online Battle Arena” (“MOBA”) genre of games, which today includes other popular games such as *League of Legends*.<sup>11</sup> The other

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[papers.cfm?abstract\\_id=3270498](https://papers.cfm?abstract_id=3270498) [https://perma.cc/J425-ZEN7] (referring to this issue as “the modding dilemma.”).

<sup>7</sup> Yong Ming Kow & Bonnie Nardi, *Who owns the mods?*, FIRST MONDAY (May. 3, 2010), <https://firstmonday.org/ojs/index.php/fm/article/view/2971/2529> [https://perma.cc/ZL7D-3YHH].

<sup>8</sup> *Id.*

<sup>9</sup> *Id.* (“There is generally a point at which modders feel it is acceptable to resurrect another’s work and it’s significantly shorter than the traditional or legal copyright period.”).

<sup>10</sup> Steve Feak & Steve Mescon, *Postmortem: Defense of the Ancients*, GAMASUTRA (Mar. 19, 2009), [http://www.gamasutra.com/view/feature/3966/postmortem\\_defense\\_of\\_the\\_ancients.php](http://www.gamasutra.com/view/feature/3966/postmortem_defense_of_the_ancients.php) [https://web.archive.org/web/20101207055840/http://www.gamasutra.com/view/feature/3966/postmortem\_defense\_of\_the\_ancients.php].

<sup>11</sup> *Id.* The staff at MCV/DEVELOP argue that MOBA games actually originated in the 1989 game *Herzog Zwei* in which the player controls one character, which the player levels up and builds over the course of

aforementioned game, *PUBG: Mobile*, is the mobile version of *PUBG: Battlegrounds*, which itself began as a mod for another mod called *DayZ* made for *Arma 2*.<sup>12</sup> Much like *Defense of the Ancients*, *PUBG: Battlegrounds*, alongside the very similar *Minecraft Survival Games* mod, would go on to spawn the “Battle Royale” genre of games, named after the 2000 Japanese movie *Battle Royale*, which today includes games like *Fortnite Battle Royale*.<sup>13</sup> These two games and their progeny are only two significant examples out of many that began as simple community projects based in existing video games, but went on to become breakthrough hits in the industry that could even surpass the company’s games in player count.<sup>14</sup>

Issues also arose when companies such as Valve began actively encouraging mod creation, such as when Valve attempted to monetize mods in games like Bethesda Game Studios’ *The Elder Scrolls V: Skyrim*, further confusing creators on whether the creators owned the work or if Valve would now own the mod as a work-made-for-

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the game, and controls an army through this one character. *MOBA: The story so far*, MCV/DEVELOP (June 3, 2014), <https://www.mcvuk.com/business-news/moba-the-story-so-far/> [<https://perma.cc/UJ53-Y4HN>]. The author of this paper disagrees and will, for the sake of this paper, continue using *Defense of the Ancients* as the origin point for the MOBA genre.

<sup>12</sup> Caty McCarthy, *Meeting PlayerUnknown, and the Fiction that Inspired the Year’s Biggest Surprise Hit*, VG247 (Aug. 10, 2017), <https://www.vg247.com/meeting-playerunknown-and-the-fiction-that-inspired-the-years-biggest-surprise-hit> [<https://perma.cc/2L83-N844>].

<sup>13</sup> *Id.* The *Survival Games* mods for *Minecraft* also contributed to the foundation for the Battle Royale genre, but there was a lot more variance due to its grassroots nature compared to *PUBG: Battlegrounds*. Emma Kent, *Before Fortnite and PUBG, there was Minecraft Survival Games*, EUROGAMER (Sep. 15, 2022), <https://www.eurogamer.net/before-fortnite-and-pubg-there-was-minecraft-survival-games> [<https://perma.cc/4BF6-8E98>].

<sup>14</sup> Peter Christiansen, *Between a Mod and a Hard Place*, in *GAME MODS: DESIGN, THEORY AND CRITICISM* 27, 36 (Erik Champion ed., 2012).

hire.<sup>15</sup> Even a quick search on popular internet forums such as Quora and Reddit show that regular users, not just modders and companies, have issues understanding and knowing how to resolve the confusion regarding mod ownership.<sup>16</sup> Courts have dealt with the issue of player interactivity and authorship before by accepting the argument that players are ultimately still limited to fixed elements in the game made by the developers.<sup>17</sup> However, courts have not dealt with the more modern practices of game co-creation between developers and players, and the intellectual property implications behind these practices that may be left unaddressed by contracts.<sup>18</sup>

Even beyond mods, games such as *Minecraft* have creation as a fundamental part of the game, which also creates confusion regarding who owns the creations within the game.<sup>19</sup> This can become especially problematic if users

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<sup>15</sup> *Introducing New Ways to Support Workshop Creators*, STEAM, <https://steamcommunity.com/workshop/aboutpaidcontent> [<https://perma.cc/W8Z7-CFBD>] (last visited Nov. 2, 2023).

<sup>16</sup> Sam Brenard, Comment to *Is making a mod of a computer game illegal?*, QUORA, <https://www.quora.com/Is-making-a-mod-of-a-computer-game-illegal> [<https://perma.cc/RT3U-KXQZ>] (last visited Oct. 19, 2023); expert02, *Can a game publisher/developer legally stop someone from creating a mod, or selling a mod they created?*, REDDIT (Apr. 26, 2015, 5:27 PM), [https://www.reddit.com/r/pcgaming/comments/33z5de/can\\_a\\_game\\_publisherdeveloper\\_legally\\_stop/](https://www.reddit.com/r/pcgaming/comments/33z5de/can_a_game_publisherdeveloper_legally_stop/) [<https://perma.cc/J3RX-F9JY>].

<sup>17</sup> Greg Lastowka, *Copyright Law and Video Games: A Brief History of an Interactive Medium* (Feb. 9, 2020) (manuscript at 13), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2321424](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2321424) [<https://perma.cc/8VPU-SKJ6>].

<sup>18</sup> *Id.* at 23, 28 (“[T]he application of copyright law to player authorship presents difficult questions for copyright. These new questions may take some time to reach courts, if they are litigated at all.”).

<sup>19</sup> Galactic Muffin, *Are Minecraft builds owned by the people who make them or are they owned by Mojang?*, MINECRAFT FORUM (May 17, 2014, 12:56 PM), <https://www.minecraftforum.net/forums/minecraft-java-edition/discussion/2073566-are-minecraft-builds-owned-by-the-people-who-make> [<https://perma.cc/W4P6-DBXQ>].

then make copyrighted works within the game, possibly creating confusion regarding who would be liable to the other copyright owner.<sup>20</sup> Greg Lastowka, the late professor from Rutgers School of Law and a well-regarded intellectual property scholar,<sup>21</sup> noted that games such as *Minecraft* face potential issues very similar to the game *City of Heroes*, but Mojang, the developers, are largely able to escape liability “because Mojang does not host player content on proprietary servers and this largely frees Mojang from the DMCA system and the risk of copyright infringement liability.”<sup>22</sup>

Scholars have long noted the symbiotic relationship between modders and companies in co-creating the gaming experience,<sup>23</sup> yet there still exists a “battle between the gaming industry and gamers” that has made a divide between the gaming industry and the gaming culture with respect to intellectual property rights.<sup>24</sup> The industry has, in many ways, alienated gamers and the gaming community, through lack of localizations (leading to fan-led translation efforts) and, as relevant for this paper, their approach to mods which improve the game experience.<sup>25</sup> While the industry is effectively protecting its intellectual property through lobbying efforts and enforcement practices, it has

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<sup>20</sup> Greg Lastowka, *Minecraft, Intellectual Property, and the Future of Copyright*, GAME DEVELOPER (Jan. 17, 2012), <https://www.gamedeveloper.com/business/-i-minecraft-i-intellectual-property-and-the-future-of-copyright> [<https://perma.cc/4K3N-W2SG>].

<sup>21</sup> *Rutgers Law Professor, Internationally Recognized Cyberlaw Scholar Dies of Cancer*, RUTGERS UNIV. (Apr. 28, 2015), <https://www.rutgers.edu/news/rutgers-law-professor-internationally-recognized-cyberlaw-scholar-dies-cancer> [<https://perma.cc/35AX-6TLT>].

<sup>22</sup> Lastowka, *supra* note 20.

<sup>23</sup> Lastowka, *supra* note 17, at 23.

<sup>24</sup> Corinne L. Miller, *The Video Game Industry and Video Game Culture Dichotomy: Reconciling Gaming Culture Norms with the Anti-Circumvention Measures of the DMCA*, 16 TEX. INTELL. PROP. L.J. 453, 461 (2008).

<sup>25</sup> *Id.* at 471–72.

taken significantly different approaches in doing so that has harmed its reputation to the gaming culture.<sup>26</sup> This culture is made up of many communities that are self-aware of their ability to influence a company's revenue significantly, and thus a company's perceived legitimacy to act a certain way or make certain policies.<sup>27</sup> Scholars differ in how they characterize this divide: Lastowka notes that critics of the co-creating relationship call it exploitative, with an example of this exploitation expanded upon later when this paper examines the state of the *Crusader Kings III* modding community;<sup>28</sup> Sobkow says there not a divide at all, and states that "rather than existing in a relationship of conflict and resistance, video game producers and gamers engage in a complex and dynamic dialogue" akin to the co-creative relationship Lastowka describes;<sup>29</sup> and Miller concludes that the divide really does exist and is only widening as companies continue to pursue strict intellectual property protections through mechanisms like the Digital Millennium Copyright Act (DMCA).<sup>30</sup>

Regardless of whether there is a divide and what characterization of it exists, the fact remains that the industry and the modding community have not found a satisfactory answer to the issues highlighted above: that of copyright ownership in mods and the ramifications of developers encouraging creation. Therefore, it would benefit the industry to create a regime of standard practices to resolve these issues and establish firmer boundaries on copyright ownership. To that end, this paper will go over the current intellectual property statutory provisions and case law most relevant to aiding video game companies in understanding ownership over their works and their control over derivative

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<sup>26</sup> Sobkow, *supra* note 6 at 22–23.

<sup>27</sup> Sobkow, *supra* note 6, at 21.

<sup>28</sup> Lastowka, *supra* note 17, at 23–24.

<sup>29</sup> Sobkow, *supra* note 6, at 26.

<sup>30</sup> Miller, *supra* note 24, at 460–61.



works, which are most closely related to user-created content in games. Doing so also requires that this paper examine the history of user-created content in games, including developer-encouraged content. This paper will then use the *Dota 2* litigation between Blizzard and Valve as a case study for why resolving this confusion is so critical and how the confusion became enveloped in the controversy.

Afterward, this paper will discuss various solutions companies have attempted: (1) simply embracing player creativity fully; (2) using notifications, disclaimers, and removals to enforce the company's End User License Agreement ("EULA") and Terms of Service ("TOS") and make a carefully curated mod marketplace; (3) reassigning the copyright to the company upon creation through carefully crafted contracts; and (4) actively enforcing their intellectual property rights to remove any infringing content, including mods and other user-created content. That discussion will also go over each solution's effectiveness and practical application. The paper will then conclude that the best way to protect the company from potential liability for indirect copyright infringement while still appealing to the modding community is the first solution, simply embracing creativity, mixed with the second solution, using terms in the EULA and TOS that curate the mod marketplace, where the company makes an entire economic ecosystem around user-created content that, while still legally risky, practically deters other companies from taking legal action against the company. That conclusion will also include ways to improve this hybrid solution and areas of future study necessary to further cement that hybrid solution's effectiveness.

## II. A HISTORY OF THE LAW'S APPLICATION TO VIDEO GAMES

### A. *Copyright Protection of Video Games*

The United States Constitution grants Congress the power to give “Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”<sup>31</sup> This led Congress to create the Copyright Act of 1976 (the “Copyright Act”), codified in Title 17 of the United States Code, which enumerates the various requirements for a work to obtain copyright protection and other rights the author has in their work.<sup>32</sup> As enumerated in the Copyright Act, copyright exists in “original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.”<sup>33</sup> As relevant to video games, the Copyright Act also explicitly protects literary works, musical works, pictorial, graphic, and sculptural works, motion pictures and other audiovisual works, and sound recordings, all of which are parts of the computer software which creates a video game.<sup>34</sup>

Video games, under Title 17, can therefore be understood as a collection of works which are combined to become more than the sum of their parts, each of which is its own copyrightable work.<sup>35</sup> The Copyright Act protects, for

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<sup>31</sup> U.S. CONST. art. I, § 8, cl. 8.

<sup>32</sup> 17 U.S.C. § 102(a).

<sup>33</sup> *Id.*

<sup>34</sup> 17 U.S.C. §§ 102(a)(1), (2), (5), (6), (7).

<sup>35</sup> Judge Ginsburg concluded that video games, generally, are protected as “audiovisual works.” *Atari Games Corp. v. Oman*, 888 F.2d 878, 882 (D.C. Cir. 1989) (“Video games, case law confirms, rank as “audiovisual works” that may qualify for copyright protection.”). Greg Lastowka notes, however, that courts have also protected video games by comparing them to scripted plays, their code to literary works, and by

example, a video game’s soundtrack and art assets as their own independent works, and unauthorized use of those works would constitute copyright infringement.<sup>36</sup> Protection over a video game’s soundtrack and art assets, while consistent with the Copyright Act’s provisions, has caused grief not only to those wishing to make their own content, but also to those who are simply streaming the games due to “muted VODs stemming from in-game sound effects and clips” as a result of the author’s exclusive right to public performance.<sup>37</sup> Similarly, the circuit courts have protected computer software code, such as that found in a video game, as literary works.<sup>38</sup> Video game images and sounds are independently protected under the Copyright Act, and the two items together are also protected audiovisual works because of the “repeated appearance of the same sequence of numerous sights and sounds in each play of the game.”<sup>39</sup> This logic thus nullifies the argument that each playthrough of a video game is an original work because

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calling video games a series of “attract sequences.” Lastowka, *supra* note 17, at 1112. Even Judge Ginsburg herself would go on to conclude that video games could be protected as a compilation of other works, including ordinarily uncopyrightable visual elements, because of how similar a compilation is to an audiovisual work and vice versa. *Atari Games Corp. v. Oman*, 979 F.2d 242, 306 (D.C. Cir. 1992). The overriding point the author wishes to make is that video games involve numerous copyrightable parts, such as the code as a literary work, the sounds and soundtrack as protected audio, and the series of images as protected visual works, that make them “greater than the sum of [their] several or stationary parts” as Judge Ginsburg once stated. *Atari*, 888 F.2d at 881–82.

<sup>36</sup> Nathan Grayson, *Twitch Apologizes, But DMCA Fiasco Continues With Punishments For In-Game Sounds, Deleted Clips*, KOTAKU (Nov. 11, 2020), <https://kotaku.com/twitch-apologizes-but-dmca-fiasco-continues-with-punis-1845647014> [<https://perma.cc/R22C-BYCP>].

<sup>37</sup> *Id.*; 17 U.S.C. § 106(4).

<sup>38</sup> *Apple Comput., Inc. v. Franklin Comput. Corp.*, 714 F.2d 1240, 1249 (3d Cir. 1983).

<sup>39</sup> *Stern Elec., Inc. v. Kaufman*, 669 F.2d 852, 856–57 (2d Cir. 1982); *Midway Mfg. Co. v. Artic Int’l Inc.*, 704 F.2d 1009, 1012 (7th Cir. 1983).

video games, as an interactive medium, require players to participate in the creation of that specific sequence of images and audio.<sup>40</sup>

Interestingly, however, the Copyright Act does not protect a video game's gameplay elements, and the courts have refused to extend its protection to said elements. Even if the law does protect the underlying code, gameplay elements are deemed "general, abstract ideas underlying [the game] and cannot be protected by copyright nor can expressive elements that are inseparable from them."<sup>41</sup> The understanding is that a "game is expressed, in part, through its rules."<sup>42</sup> In *Tetris Holding, LLC v. Xio Interactive, Inc.*, for example, the court summarized the ideas underlying the game *Tetris* as follows:

Tetris is a puzzle game where a user manipulates pieces composed of square blocks, each made into a different geometric shape, that fall from the top of the game board to the bottom where the pieces accumulate. The user is given a new piece after the current one reaches the bottom of the available game space. While a piece is falling, the user rotates it in order to fit it in with the accumulated pieces. The object of the puzzle is to fill all spaces along a horizontal line. If that is accomplished, the line is erased, points are earned, and more of the game board is available for play. But if the pieces accumulate and reach the top of the screen, then the game is over.<sup>43</sup>

These ideas, the rules of *Tetris*, were thus unprotectable because the game's expression of these ideas was the only expression that existed for them.<sup>44</sup> This is

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<sup>40</sup> *Stern Elec., Inc.*, 669 F.2d at 856–57.

<sup>41</sup> *Tetris Holding, LLC v. Xio Interactive, Inc.*, 863 F. Supp. 2d 394, 409 (D.N.J. 2012).

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* at 404.

known as the “merger doctrine” which is part of the idea-expression distinction the Copyright Act draws.<sup>45</sup> Stated generally, the Copyright Act does not protect ideas, but rather the means of expressing those ideas assuming that the idea can be expressed in numerous different ways.<sup>46</sup> This idea-expression distinction has allowed video game “clones” to survive and genres to expand, with the caveat being that the “clones” cannot be too literal and copy the parent game’s “look and feel,” as was the case with *Mino* and *Tetris*.<sup>47</sup> In that case, the court stated that “[w]ithout being told which is which, a common user could not decipher between the two games” because the puzzle pieces used in *Mino*, the infringing work, were the same color and shape as the puzzle pieces used in *Tetris*, and the puzzle pieces behaved the exact same way too.<sup>48</sup> The court thus granted summary judgment in favor of Tetris Holding, LLC because *Mino* was substantially similar to the look and feel of *Tetris*, and thus infringed on a substantial portion of *Tetris* based on *Mino*’s aesthetic similarities, but not on its gameplay similarities.<sup>49</sup>

Another very similar limitation on copyright that prevents developers from protecting basic gameplay elements is the “scènes à faire” doctrine. The doctrine states that stock elements such as “incidents, characters or settings which are as a practical matter indispensable, or at least standard, in the treatment of a given topic” are unprotectable under copyright law.<sup>50</sup> In *Incredible Tech., Inc. v. Virtual Tech., Inc.*, the court denied summary judgment in Incredible Technologies, Inc.’s favor because its game *Golden Tee*, as

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<sup>45</sup> *Morrissey v. Procter & Gamble Co.*, 379 F.2d 675, 678–79 (1st Cir. 1967).

<sup>46</sup> *Id.*

<sup>47</sup> *Tetris*, 863 F. Supp. 2d at 413.

<sup>48</sup> *Id.* at 410.

<sup>49</sup> *Id.* at 414–15.

<sup>50</sup> *Incredible Tech., Inc. v. Virtual Tech., Inc.*, 400 F.3d 1007, 1011–12 (7th Cir. 2005).

a “realistic” golf video game, used a number of stock elements commonly found in all golf games such as “golf courses, clubs, a selection menu, a golfer, a wind meter... sand traps and water hazards.”<sup>51</sup> The difference between the merger doctrine described above and the scènes à faire doctrine is that the idea being expressed is still “sufficiently general so as to permit more than one form of expression.”<sup>52</sup> However, the idea and how it has historically been expressed is such that similarities between two works using the same idea will be inevitable because the different expressive elements “are as a practical matter indispensable, or at least standard, in the treatment of a given topic.”<sup>53</sup> Such was the case when the District Court of Maryland compared the Atari game *Asteroids* to the Amusement World game *Meteors*, and concluded that “similarities are inevitable, given the requirements of the idea of a game involving a spaceship combatting space rocks and given the technical demands of the medium of a video game.”<sup>54</sup> The basic requirements of a video game and its genre, therefore, can dictate how that video game may be expressed, and thus limit what artistic elements can actually be protected under copyright.<sup>55</sup>

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<sup>51</sup> *Id.* at 1015.

<sup>52</sup> *Atari, Inc. v. Amusement World, Inc.*, 547 F. Supp. 222, 229 (D. Md. 1981).

<sup>53</sup> *Id.* at 228; *Incredible Tech., Inc.*, 400 F.3d at 1012.

<sup>54</sup> *Atari, Inc.*, 547 F. Supp. 222 at 229.

<sup>55</sup> *Id.* (“All these requirements of a video game in which the player combats space rocks and spaceships combine to dictate certain forms of expression that must appear in any version of such a game. In fact, these requirements account for most of the similarities between ‘Meteors’ and ‘Asteroids.’”).

### B. *The Legal Risks Looming Over User-Created Content*

When copyright attaches to a work, the author receives a number of exclusive rights.<sup>56</sup> The most relevant of which to this paper are the right to reproduce and the right to prepare derivative works.<sup>57</sup> These two rights often overlap, especially when users create their own content in a game, because creators are making “a work based on one or more preexisting works” and “a work...consisting of...modifications...is a ‘derivative work.’”<sup>58</sup> Creating a new level in a video game, for example, would infringe on both the right to reproduce and the right to prepare a derivative work, as it would necessarily entail using similar elements from the parent work while also adding some new content.<sup>59</sup> Of course, basing one work on a preexisting one is not, alone, sufficient to make that work a “derivative work” because that would create an unnecessarily broad definition encompassing parodies and critiques.<sup>60</sup> The difference between the two rights, and how they are analyzed and enforced, lies in whether the new work “recast, transformed, or adapted” the preexisting work into another medium, mode, language, or revised version “while still representing the ‘original work of authorship.’”<sup>61</sup>

However, creators of derivative works also gain protection over “the material contributed by the author of

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<sup>56</sup> 17 U.S.C. § 106.

<sup>57</sup> *Id.* at §§ 106(1), (2).

<sup>58</sup> 17 U.S.C. § 101.

<sup>59</sup> *See generally* *Micro Star v. Formgen Inc.*, 154 F.3d 1107 (9th Cir. 1998) (discussing how the allegedly infringing work, user-created maps for the game *Duke Nukem 3D*, reproduced elements of the original game’s story and made what was essentially a sequel to the game).

<sup>60</sup> *Warner Bros. Ent. Inc. v. RDR Books*, 575 F. Supp. 2d 513, 538 (S.D.N.Y. 2008) (“A work is not derivative, however, simply because it is ‘based upon’ the preexisting works.”).

<sup>61</sup> *Id.*

such work, as distinguished from the preexisting material employed in the work.”<sup>62</sup> A copyrightable derivative work is one that has “sufficient nontrivial expressive variation... to make it distinguishable from the underlying work in some meaningful way,” and courts will not use an originality standard more demanding than that used for other works.<sup>63</sup> Additionally, copyrightable derivative works cannot infringe on other work without jeopardizing its own copyrightability.<sup>64</sup> This leaves open the possibility for users to rightfully own intellectual property rights in their creations even if they incorporate preexisting material, as is usually the case for mods. This possibility becomes more likely in the case of developer-encouraged user-created content, as authors are always allowed to transfer their exclusive rights, including the right to prepare derivative works, through a written instrument.<sup>65</sup> Such a provision may also contain important limitations on how the user may then use their created content, such as requiring the user to share the content with others for free.<sup>66</sup> In the absence of a written instrument, a nonexclusive license “may be granted orally, or may even be implied from conduct” by the author, such as by paying an artist for their work to be used in a movie, thereby creating a nonexclusive license for the patron to use the work in the movie.<sup>67</sup> The logical conclusion, then, would be that modders are entitled to some exclusive rights by nature of having employed their original creative talent to

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<sup>62</sup> 17 U.S.C. § 103(b).

<sup>63</sup> *Schrock v. Learning Curve Int’l, Inc.*, 586 F.3d 513, 521 (7th Cir. 2009).

<sup>64</sup> *Id.* at 522.

<sup>65</sup> 17 U.S.C. § 204(a).

<sup>66</sup> *Micro Star v. FormGen Inc.*, 154 F.3d 1107, 1113 (9th Cir. 1998) (“The only written license FormGen conceivably granted was to players who designed their own new levels, but that license contains a significant limitation: Any new levels the players create ‘must be offered [to others] solely for free.’”).

<sup>67</sup> *Effect Assocs., Inc. v. Cohen*, 908 F.2d 555, 558–59 (9th Cir. 1990).



create something new while using in-game assets. However, the mere inclusion of tools for users to create their own content in the game is not enough to be an implied license, as the case below will demonstrate.

One of the leading cases dealing with issues of user-created content was concerning Micro Star's *Nuke It*, a collection of user-created levels for the 1996 video game *Duke Nukem 3D* developed by 3D Realms, the rights to which were owned by FormGen Inc.<sup>68</sup> 3D Realms had included in *Duke Nukem 3D* a "Build Editor" which allowed players to create their own levels, and "[w]ith FormGen's encouragement, players frequently post levels they have created on the Internet where others can download them."<sup>69</sup> Micro Star, without creating its own levels or doing anything particularly new, then downloaded 300 user-created levels and made them commercially and physically available as packaged CDs.<sup>70</sup> When FormGen brought Micro Star to court over their commercial exploitation of FormGen's intellectual property, the Ninth Circuit court ruled in favor of FormGen.<sup>71</sup> Micro Star argued that FormGen had granted an implied nonexclusive license to players by including the Build Editor, but the Ninth Circuit court found this argument unpersuasive because FormGen had given Micro Star no license at all.<sup>72</sup> In fact, FormGen had only given one possible license for rights to *Duke Nukem 3D*'s assets: a written license, located in the "User License" for the game, to players with the significant limitation that "[a]ny new levels the players create 'must be offered [to others] solely for free.'"<sup>73</sup> Thus, the Ninth Circuit court concluded that Micro Star infringed on FormGen's exclusive rights in *Duke*

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<sup>68</sup> *Micro Star*, 154 F.3d at 1109.

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> *Id.* at 1114.

<sup>72</sup> *Id.* at 1113.

<sup>73</sup> *Id.*

*Nukem 3D* by simply repackaging user-created levels and selling them, and in the process ruled that including creation tools is not sufficient to make an implied license.<sup>74</sup>

As hinted at above and in this case, developers may encourage creation with some limitations, such as allowing the creation to be offered to others for free, which is what the Ninth Circuit court in *Micro Star* ultimately used to conclude infringement occurred. Players would be free to create and distribute software even if it incorporated some of *Duke Nukem 3D*'s assets so long as the distribution was free to other players.<sup>75</sup> Problems arose because *Micro Star* attempted to repackage levels and sell them, allowing *FormGen* to bring a case against them. Perhaps players could have brought a case against them, too, considering *FormGen* implicitly authorized the players' derivative works, and all *Micro Star* did was download those works and sell them. The case illustrates the dangers of using user-created content without regard to such limitations for both companies seeking to make large expansion packs, like the *Nuke It* expansion, and players who wish to create large overhaul mods of a similar nature without fully understanding the license they agreed to in playing the game, like whether any restrictions on commercialization exist.

The situation that this paper seeks to use as a case study illustrating issues regarding derivative work ownership and the lack of clarity is the ownership controversy over *Dota 2* between Blizzard and Valve. The controversy stemmed from Blizzard's 2002 game *Warcraft III: Reign of Chaos*, which included a World Editor players could use to make mods.<sup>76</sup> Players could then publish online for other players who had *Warcraft III: Reign of Chaos*, very similarly to how the Build Editor in *Duke Nukem 3D*

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<sup>74</sup> *Micro Star*, 154 F.3d at 1113–14.

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

<sup>76</sup> Feak & Mescon, *supra* note 10.

worked.<sup>77</sup> The issue is that Blizzard did not include any provision in their EULA that “assigned intellectual property created using the World Editor back to the company.”<sup>78</sup> The only limitation in Blizzard’s EULA was a restriction on commercial exploitation of mods separate from the game similar to the restriction found in FormGen’s license.<sup>79</sup> One mod, which ultimately proved immensely popular, was *Defense of the Ancients* made by “Eul,” a mod using rules inspired by another mod *Aeon of Strife* and assets from *Warcraft III: Reign of Chaos*.<sup>80</sup> Eventually, Eul moved on from mod creation and declared on the Blizzard forums: “Whoever wishes to release a version of DotA may without my consent, I just ask for a nod in the credits to your map.”<sup>81</sup>

One such version was *DotA Allstars*, which added 40 playable characters, made substantial changes to the original *Defense of the Ancient’s* gameplay elements, and rewrote most of the code to fix the various bugs that plagued the original mod.<sup>82</sup> One of the many player-developers working on *DotA Allstars* was “Icefrog,” who later joined Valve in 2009 as the lead designer for a standalone sequel.<sup>83</sup> Issues immediately arose in 2010 when Valve officially announced the sequel, *Dota 2*, which took its name from the acronym formed from *Defense of the Ancients*, and registered for the trademark for the name “DOTA.”<sup>84</sup>

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<sup>77</sup> *Id.*

<sup>78</sup> *Blizzard Ent., Inc. v. Lilith Games (Shanghai) Co. Ltd.*, No. 3:15-cv-04084-CRB, 2017 WL 2118342, at \*3 (N.D. Cal. May 16, 2017).

<sup>79</sup> *Id.*

<sup>80</sup> Feak & Mescon, *supra* note 10.

<sup>81</sup> *Blizzard*, 2017 WL 2118342 at \*3.

<sup>82</sup> *Id.* at \*4.

<sup>83</sup> *Id.* at \*5.

<sup>84</sup> See Adam Biessener, *Valve’s New Game Announced, Detailed: Dota 2*, GAME INFORMER (Oct. 13, 2010, 6:59 AM), <https://www.gameinformer.com/b/features/archive/2010/10/13/dota-2-announced-details.aspx> [<https://perma.cc/EC5Z-RG29>].

Blizzard opposed Valve's trademark registration, and Blizzard's executive vice president, Rob Pardo, described the registration publicly as "taking [the name] away from the Blizzard and *Warcraft III* community" and added that it was odd for Valve to "try to exclusively trademark the term considering it's something that's been freely available to us and everyone in the *Warcraft III* community up to this point."<sup>85</sup> Modders "Guinsoo" and "Pendragon," who had by that time launched their own MOBA game *League of Legends* under Riot Games, also opposed the trademark registration.<sup>86</sup> However, the two opposed the registration solely on the grounds that the name "is owned by the community" and did not mention any ownership by Blizzard unlike Rob Pardo.<sup>87</sup> Pendragon went as far as to create his own entity, Dota Allstars, LLC, to file his own competing trademark registration for *Defense of the Ancients* to protect the modding community's interests in the name.<sup>88</sup> The parties, all with their own competing claims to the name, ultimately settled the case out of court almost two years later through an agreement wherein Valve would "continue to use DOTA commercially, including DOTA 2" while Blizzard would "preserve noncommercial use of DOTA for its community with regard to player-created maps for *Warcraft III* and *StarCraft II*."<sup>89</sup>

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<sup>85</sup> Oli Welsh, *Valve shouldn't trademark DOTA - Blizzard*, EUROGAMER (Oct. 23, 2010), <https://www.eurogamer.net/valve-shouldnt-trademark-dota-blizzard> [<https://perma.cc/3HA5-7KE2>].

<sup>86</sup> Josh Augustine, *Riot Games' dev counter-files "DotA" trademark*, PC GAMER (Aug. 17, 2010), <https://www.pcgamer.com/riot-games-dev-counter-files-dota-trademark/> [<https://perma.cc/ZPN3-6U78>].

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

<sup>89</sup> Jim Reilly, *Valve, Blizzard Reach DOTA Trademark Agreement*, GAME INFORMER (May 11, 2012), <https://www.gameinformer.com/b/news/archive/2012/05/11/valve-blizzard-reach-dota-trademark-agreement.aspx> [<https://perma.cc/CFU7-ABED>].

Worryingly, this settlement, and the resulting trademark registration and available legal information from both companies, left out any information about Guinsoo's or Pendragon's potential intellectual property interests in *Dota 2* despite their involvement in the original mod's creation and development.<sup>90</sup> Setting the trademark matter aside, the modders for the original *Defense of the Ancients* mod had essentially made an entirely new game within the *Warcraft III: Reign of Chaos* game, or in other words a derivative work. This work went on to spawn works derivative of it like *League of Legends*,<sup>91</sup> as well as an unresolved copyright issue regarding who exactly owned *Defense of the Ancients*, whether anything in the mod was copyrightable, and whether anyone would be a copyright infringer for making a derivative of that mod.

The copyright issue stems from Blizzard's World Editor or the associated EULA never addressing the authorship of any mods made using that tool until only recently, but it is too late to capture *Defense of the Ancients*.<sup>92</sup> In doing so, the modders may argue that Blizzard had implicitly authorized their creation much like Micro Star had in their case against FormGen, and Blizzard

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<sup>90</sup> *Dota Usage*, BLIZZARD ENT., <https://www.blizzard.com/en-us/legal/2dc4dd7a-0ab1-4a9e-8e03-6f55511414a5/dota-usage#:~:text=DOTA%20is%20a%20trademark%20of,.steampowered.com%2Flegal> [<https://perma.cc/2NCB-ULXZ>] (last visited Nov. 2, 2023); *Legal Info*, VALVE, <https://store.steampowered.com/legal> [<https://perma.cc/64ZP-NCCL>] (last visited Nov. 2, 2023). Neither Blizzard nor Valve mention anything about the modders who made the original *Defense of the Ancients* mod that their MOBAs take much inspiration from.

<sup>91</sup> See Phil Kollar, *The Past, Present and Future of League of Legends Studio Riot Games*, POLYGON (Sep. 13, 2016), <https://www.polygon.com/2016/9/13/12891656/the-past-present-and-future-of-league-of-legends-studio-riot-games> [<https://perma.cc/S9VR-Y4PY>].

<sup>92</sup> See *Blizzard Ent., Inc. v. Lilith Games (Shanghai) Co. Ltd.*, No. 3:15-cv-04084-CRB, 2017 WL 2118342 at \*1, \*3 (N.D. Cal. May 16, 2017).

even had a provision limiting commercial exploitation very similar to FormGen’s provision.<sup>93</sup> By never assigning copyright back to the company, Blizzard had allowed the ordinary rules of derivative works to assign copyright in any new expression separate from the preexisting material to the modders.<sup>94</sup>

From here, the copyright issue becomes messy and theoretical because copyright does not protect game rules under the merger doctrine, and any expressions inextricably linked to the genre would be excluded from copyright under the scènes à faire doctrine. However, the courts have not cleanly resolved the theoretical issue of what constitutes a “game rule” or when exactly an expression becomes inextricably linked to a genre in a way that would allow insightful legal forethought in modding endeavors.<sup>95</sup> Game rules and mechanics are not given copyright protection based on the merger doctrine, yet when the “same idea can be expressed in a plurality of totally different manners” then copyright protection is appropriate, such as the design of game boards and the arrangement of rules.<sup>96</sup> The closest the courts have come to making a useful standard for when an

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<sup>93</sup> *Micro Star v. Formgen Inc.*, 154 F.3d 1107, 1113 (9th Cir. 1998).

<sup>94</sup> *Blizzard Ent., Inc.*, 2017 WL 2118342 at \*3, \*9 (concluding that the modders owned the copyright to their respective versions of *Defense of the Ancients* after Eul declared the project open source and because Blizzard never assigned copyright back to itself).

<sup>95</sup> Robert Walker, *Breaking with Convention: The Conceptual Failings of Scènes À Faire*, 38 CARDOZO ARTS & L.J. 435, 450 (2020) (criticizing current application of the doctrine because “distinguishing what is inherent in a situation from what is imagined by an author is ultimately a matter of aesthetic judgment and taste”).

<sup>96</sup> *Tetris Holding, LLC v. Xio Interactive, Inc.*, 863 F. Supp. 2d 394, 403–4 (D.N.J. 2012); *Affiliated Hosp. Prods., Inc. v. Merdel Game Mfg. Co.*, 513 F.2d 1183, 1188–89 (2d Cir. 1975) (concluding that expressive elements like the “arrangement of the rules and the manner of their presentation” were copyrightable, but the games were so simple that the distinction between expressive elements and substantive elements blurred).

element becomes stock in the video game industry was in the *Incredible Tech* case, where the 7th Circuit stated that elements are *scènes à faire* when they “are as a practical matter indispensable, or at least standard, in the treatment of a given topic.”<sup>97</sup> This standard falls apart upon closer scrutiny, however.

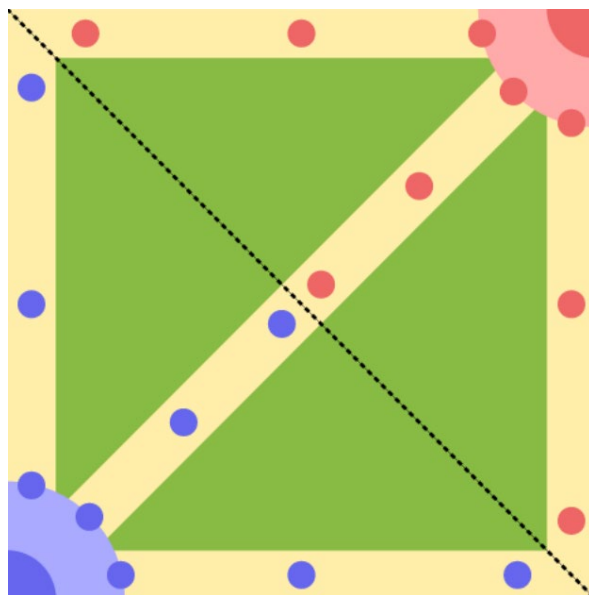


Figure 1: A sample MOBA map made to be as generic as possible to train artificial intelligence (AI) to play MOBA games.<sup>98</sup>

To use MOBAs as an example once again, there exist several “stock” or “core” gameplay elements that identify a MOBA game, as opposed to a literal multiplayer online

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<sup>97</sup> *Id.* at 403 (noting that courts generally treat the doctrine as meaning the element is “as a practical matter indispensable.”); *Incredible Tech., Inc. v. Virtual Tech., Inc.*, 400 F.3d 1007, 1011–12 (7th Cir. 2005).

<sup>98</sup> Victor Silva & Luiz Chaimowicz, *MOBA: a New Arena for Game AI*, (May 2017) (manuscript at 2), [https://www.researchgate.net/publication/317248379\\_MOBA\\_a\\_New\\_Arena\\_for\\_Game\\_AI](https://www.researchgate.net/publication/317248379_MOBA_a_New_Arena_for_Game_AI) [<https://perma.cc/6S8H-R83Z>].

battle arena.<sup>99</sup> The first is the player's choice of "hero," which is a single playable character players control as opposed to the many units players control at once in other strategy games that are similar in appearance.<sup>100</sup> This hero starts at level one, but gradually levels up and grows in power as the player kills enemy units (variably called "minions," "creeps," or other names players use as shorthand) to gain experience points (EXP) and resources (usually a currency such as "gold").<sup>101</sup> The second and third core gameplay elements are abilities and items, which the player obtains with more levels (obtained by getting more EXP) and resources respectively.<sup>102</sup> Abilities are unique attacks or passive effects that define the hero, while items augment the hero's abilities, grant new abilities, or improve the hero's stats such as strength, dexterity, or intelligence.<sup>103</sup> The fourth core gameplay element is the map itself, which is typically symmetrical to give the player teams an equal start and equal chances to initiate fights on their terms throughout the match.<sup>104</sup> Each team has an equal number of structures (the circles on Figure 1) that the opposing team must destroy to eventually assault the team's base and win the match by destroying the central structure therein.<sup>105</sup> These four core gameplay elements form the MOBA genre's foundation upon which all games within the genre tend to revolve around.<sup>106</sup>

However, there are many examples of MOBA games that stray away from these elements and indicate that these elements are not necessary for, or do not flow naturally from,

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<sup>99</sup> *Id.* at 1–2.

<sup>100</sup> *Id.*

<sup>101</sup> *Id.* at 2.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.* at 1–2.

<sup>104</sup> Silva & Chaimowicz, *supra* note 98, at 2; *see also* Figure 1.

<sup>105</sup> Silva & Chaimowicz, *supra* note 98, at 2.

<sup>106</sup> *Id.*



the idea to create a MOBA game. *Battlerite* by Stunlock Studios is labeled as a MOBA game on its Steam store page despite how its preview videos show no bases to destroy or creeps to farm as players would do in *Dota 2* or *League of Legends*.<sup>107</sup> *Dota 2* by Valve is one of the most famous MOBA games, yet prominently features an asymmetrical map, with a neutral creep called “Roshan” spawning on only one part of the river and the uniquely built, rather than perfect symmetrical, jungle areas (the green parts in Figure 1), and has several playable heroes like Chen and Enchantress whose gameplay centers around taking control of multiple units besides the single powerful hero.<sup>108</sup> *League of Legends* by Riot Games is yet another famous MOBA game, but has featured several non-standard options by MOBA game standards such as asymmetrical maps like Twisted Treeline (which allows only 6 players total), Crystal Scar (which has different objectives), and All Random All Mid (ARAM) where players select random heroes and fight in a single lane.<sup>109</sup> *Smite* by Hi-Rez Studios is the most visually distinct by placing the camera behind the player’s character rather than using a top-down view like many other MOBA games, which has made it easier to port the game to

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<sup>107</sup> *Battlerite*, STEAM, <https://store.steampowered.com/app/504370/Battlerite/> [<https://perma.cc/E9TB-M7DJ>] (last visited Sept. 13, 2023); see also Eric Van Allen, *Battlerite Is A True MOBA, And Thank God*, KOTAKU (Dec. 4, 2017), <https://kotaku.com/battlerite-is-a-true-moba-and-thank-god-1820989224> [<https://perma.cc/W4M7-7YFR>].

<sup>108</sup> *Dota 2*, THE DROID GUY, <https://thedroidguy.com/dota-2> [<https://perma.cc/WVA6-FLB7>] (last visited Nov. 2, 2023); see generally HammerKick, *The art of creep micro - A guide to jungle with Chen and Enchantress*, STEAM COMMUNITY (Feb. 25, 2016), <https://steamcommunity.com/sharedfiles/filedetails/?id=375511039> [<https://perma.cc/8MF2-XQN5>] (guiding players on optimal play styles for Chen and Enchantress from early to late game using units).

<sup>109</sup> Christian Vejvad, *List of all League of Legends maps and game modes*, JAXON (last visited Nov. 11, 2022) <https://www.jaxon.gg/here-are-all-league-of-legends-various-maps-and-game-modes/> [<https://perma.cc/97XA-5MKM>] (last visited Nov. 11, 2022).

consoles.<sup>110</sup> *Heroes of the Storm* by Blizzard spreads experience points obtained from minions to the entire team, does not have any purchasable items, and has the player select a talent at certain levels rather than improve an ability every level.<sup>111</sup>

While it is an untested legal theory before the courts, a modder should feel confident there are few – if any – elements that are, as a practical matter, indispensable to the MOBA game genre, given how many different games given the MOBA label feature several different variations of the same “stock” elements. MOBA game mechanics are not as stock as taking refuge in a church from a storm,<sup>112</sup> a view of someone’s legs while sitting on the toilet,<sup>113</sup> or the limited ways a photographer can take a picture of a vodka bottle.<sup>114</sup> Instead, MOBA game elements, like the design of a board game board or its specific set of rules, vary from one game to another to such a degree that even gaming media struggles to define what exactly a “MOBA” is outside its literal meaning.<sup>115</sup> The single asymmetrical map in *Dota 2* not only looks different but gives a very different gameplay experience compared to the many different maps in *League of Legends*, some of which are symmetrical and offer different gameplay experiences in a single game. There may

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<sup>110</sup> Emily Gera, *Smite is bringing the multiplayer battle arena genre to Xbox One*, POLYGON (Aug. 12, 2014), <https://www.polygon.com/2014/8/12/5994249/smite-xbox-one> [<https://perma.cc/JUE7-8FP6>].

<sup>111</sup> Chris Whitely, *Is Heroes of the Storm eSports Too Simplistic to Compete?*, THE VERSED (Sept. 25, 2017), <https://www.theversed.com/72540/is-heroes-of-the-storm-esports-too-simplistic-to-compete/#.nrXyOaiBdh> [<https://perma.cc/N8HG-WZA8>].

<sup>112</sup> *Cain v. Universal Pictures Co.*, 47 F. Supp. 1013, 1017 (S.D. Cal. 1942).

<sup>113</sup> *Bill Diodato Photography, L.L.C. v. Kate Spade, L.L.C.*, 388 F. Supp. 2d 382, 392 (S.D.N.Y. 2005).

<sup>114</sup> *Ets-Hokin v. Sky Spirits, Inc.*, 225 F.3d 1068, 1081 (9th Cir. 2000).

<sup>115</sup> See Leah Jackson, *How MOBAs Took Over Gaming*, IGN (Aug. 1, 2013), <https://me.ign.com/en/pc/70142/feature/how-mobas-took-over-gaming> [<https://perma.cc/5QPL-BPB6>].

be shared control schemes between MOBAs and other genres, such as survival horror games like *Resident Evil*, including the use of a keyboard and mouse except for in *Smite*, and general ideas, such as having to deal damage to something or someone. However, the specific elements of a MOBA are sufficiently defined to separate the genre from other genres. Meanwhile, MOBAs still allow enough variation so they do not naturally flow from or mandate their presence in a game within that genre to be called a MOBA.

This conclusion, however, only comes about thanks to hindsight. As outlined above, developers have released new games since the original *Defense of the Ancients* mod that clarifies what a MOBA's "stock elements" are based on and what surface-level similarities exist between them. However, courts still cannot predict the future with extreme certainty, leaving both developers and modders in the dark as to what would constitute a "stock" element in any game that would become uncopyrightable because of the *scènes à faire* doctrine.

The doctrine itself, along with the related merger doctrine, creates further issues because it may rest upon the fallacy that an idea and an expression can merge at all, and so creators must inevitably "copy" another creator's work to convey the same idea.<sup>116</sup> If ideas are so limited in their expression such that courts may describe them as "stock," then would the parties not have to show that the original author had copied the expression from someplace else?<sup>117</sup> This task would be impossible because the original author's work was copied precisely due to its originality and attractiveness, and practically speaking, the original author would never admit that a certain aspect of their work was

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<sup>116</sup> Michael D. Murray, *Copyright, Originality, and the End of the Scenes a Faire and Merger Doctrines for Visual Works*, 58 BAYLOR L. REV. 779, 848 (2006).

<sup>117</sup> *Id.* at 849.

“stock,” as that would open the way for potential attacks against the author’s copyright for lack of originality.<sup>118</sup>

If courts are to effectively determine what elements are stock, they would have to use experts, such as historians knowledgeable in the video game industry’s trends, to be able to predict with any specificity and certainty what elements can be considered “stock.” However, evidentiary standards may vary wildly between circuits because of the different tests used.<sup>119</sup> To use the Ninth Circuit as an example, the court may not be very knowledgeable about video game genres and, therefore, make uninformed decisions about what elements are truly “stock” or “standard” in that genre. Yet, that circuit has ruled that expert testimony is not allowed in their extrinsic/intrinsic test for substantial similarity because the intrinsic prong relies on “the response of the ordinary reasonable person” and not an expert.<sup>120</sup> The consequence is that lay people, who may be no better than the court at determining similarity between works in an unfamiliar industry, will attempt in vain to determine what is stock and therefore not copyrightable. This sort of test will “promote uncertainty in copyright litigation outcomes” that will certainly exacerbate the issues surrounding the uncertainty of mod ownership and lead to more arbitrary decisions about what game elements are “stock.”<sup>121</sup>

All this analysis leaves only the conclusion that Guisnoo and Pendragon would, in hindsight, likely have had a valid copyright to their *Defense of the Ancients* mod, or at the very least a valid copyright to their specific set of rules

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<sup>118</sup> *Id.*

<sup>119</sup> Ran Duan, *Antonick v. Electronic Arts: Expert Witnesses and Software Copyright Infringement*, 33 BERKELEY TECH. L.J. 1147, 1152–55 (2018).

<sup>120</sup> *Antonick v. Electronic Arts, Inc.*, 841 F.3d 1062, 1067 (9th Cir. 2016).

<sup>121</sup> Duan, *supra* note 119, at 1166.

to play the game and their map, that perhaps could have stemmed the flood of copycats that came later.<sup>122</sup> This is unfortunately not a court ruling, and the only court ruling that touches upon this issue is an unpublished one in 2017 stating that each author owned their own respective version of the *Defense of the Ancients* mod, with authorization given by Eul long ago to create their own versions.<sup>123</sup> There is nothing besides contractual relations between developers and modders addressing ownership over other developed-encouraged user-created content that uses in-game assets, and the case mentioned above does not address how valid Eul's copyright, using either the above analysis or the court's own, was in the original mod before assigning anything to future modders.<sup>124</sup> Thus, there remains uncertainty as to ownership over this content, who holds any rights that may exist to stop infringers, and no uniform protection for modders in the event no provision in a contract exists to inform modders in a helpful way of any of these issues.

### C. *Why Companies Should be Cautious Too*

The confusion as to copyright ownership in user-created content creates many problems for the developers as well for encouraging creation, such as in *Minecraft*,<sup>125</sup>

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<sup>122</sup> Blizzard Ent., Inc. v. Lilith Games (Shanghai) Co., No. 3:15-cv-04084-CRB, 2017 WL 2118342 at \*9 (N.D. Cal. May 16, 2017) (concluding that the modders owned their respective versions of *Defense of the Ancients*).

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> Helen Chiang, *Inspiring students to build a more peaceful world with Minecraft*, MICROSOFT BLOG (Mar. 1, 2022), <https://blogs.microsoft.com/blog/2022/03/01/inspiring-students-to-build-a-more-peaceful-world/> [<https://perma.cc/5VN5-C355>].

*Roblox*,<sup>126</sup> and *Halo*.<sup>127</sup> This encouragement may give users the impression, reasonable or not, that their imagination, as an essential ingredient to the creation, is the material they contribute to the work, and it is their own original work even if the work uses in-game assets. The issue only becomes more complex when considering works made from in-game assets may then be used to make other pre-existing copyrighted works, such as recreating dungeons and biomes from *The Legend of Zelda: Breath of the Wild* in *Minecraft* or entire games in *Roblox*.<sup>128</sup> For users, the issue is simply that of ownership. But for developers and publishers, the issue may become more serious as they face the threat of indirect liability for allowing users to create, perhaps without limitation, other copyrighted works.

The threat of indirect liability comes from the author's exclusive rights when copyright attaches to their work. When anyone violates those exclusive rights, such as by reproducing a game's code or preparing a derivative work by remaking a game in another game, that person becomes an infringer.<sup>129</sup> Considering video games will very likely

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<sup>126</sup> Wayne Williams, *Robux Offers – Roblox Encourages Creativity And Imagination In Game Creation*, LOOKIN ART (Aug. 16, 2021), <https://www.lookinart.net/robux-offers-roblox-encourages-creativity-and-imagination-in-game-creation.html> [https://perma.cc/5QMZ-8YRC].

<sup>127</sup> Robert Collins, *Halo Infinite's Forge maps will reportedly be twice the size of Halo 5's*, ONMSFT (Oct. 18, 2022), <https://www.onmsft.com/news/halo-infinite-forge-maps-will-reportedly-be-twice-the-size-of-halo-5s> [https://perma.cc/AL99-M3PS].

<sup>128</sup> Rachel Watts, *A Minecraft builder has recreated the entire Breath of the Wild map*, PC GAMER (Aug. 9, 2021), <https://www.pcgamer.com/a-minecraft-builder-has-recreated-the-entire-breath-of-the-wild-map/> [https://perma.cc/CTB9-ZSF6]; Tiago Svn, *'Roblox' Modders Perfectly Remake And Improve Upon Classic Games*, CRACKED (Apr. 15, 2022), [https://www.cracked.com/article\\_33492\\_roblox-modders-perfectly-remake-and-improve-upon-classic-games.html](https://www.cracked.com/article_33492_roblox-modders-perfectly-remake-and-improve-upon-classic-games.html) [https://perma.cc/2Z85-U5AX].

<sup>129</sup> 17 U.S.C. § 501(a).

contain unprotectable elements due to the merger doctrine or the *scènes à faire* doctrine, the most appropriate test for them and most computer software adopted by several other courts is the “Abstraction–Filtration–Comparison” test developed in *Computer Associates International, Inc. v. Altai, Inc.*<sup>130</sup>

In *Altai*, the court “determine[d] the scope of copyright protection that extends to a computer program’s non-literal structure” where an employee developed a computer program for one employer that the former employer alleged copied a substantial amount of code and various elements from a previous program made for them.<sup>131</sup> In performing the test, the court first described a computer program at its most basic level, the code itself, looked at the program’s ultimate function, and identified each level of abstraction necessary along the way.<sup>132</sup> The court then separated protectable material from non-protectable material by looking at each component at every level of abstraction and deciding “whether their particular inclusion at that level was ‘idea’ or was dictated by considerations of efficiency, so as to be necessarily incidental to that idea... or taken from the public domain and hence is unprotectable expression.”<sup>133</sup> As seen in this step, the court will look to the merger doctrine

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<sup>130</sup> *Comput. Assoc. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 706 (2d Cir. 1992). Other cases that have adopted this same test are: *Atari Games Corp. v. Nintendo of America Inc.*, 975 F.2d 832, 839 (Fed. Cir. 1992) (“By separating the program into manageable components, this method eases the court’s task of discerning the boundaries of protectable expression.”); *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1525 (9th Cir. 1992) (“In our view, in light of the essentially utilitarian nature of computer programs, the Second Circuit’s approach is an appropriate one.”); *MiTek Holdings, Inc. v. Arce Eng’g Co., Inc.*, 89 F.3d 1548, 1555 (11th Cir. 1996) (noting that the 1st Circuit Court in *Lotus Dev. Corp. v. Borland Int’l, Inc.* only refused to adopt the test when there is nonliteral infringement of a literal element, so the test was appropriate for the 11th Circuit Court to use here).

<sup>131</sup> *Altai*, 982 F.2d at 696–700, 703.

<sup>132</sup> *Id.* at 707.

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

and the scènes à faire doctrine to guide them in determining what is unprotectable.<sup>134</sup> Finally, the court will compare what remains of the original work after having removed the uncopyrightable elements with the allegedly infringing work, and decide “whether the defendant copied any aspect of this protected expression” while considering “the copied portion’s relative importance with respect to the plaintiff’s overall program.”<sup>135</sup> This test, being as fact-specific as it is, allows courts to be flexible in their analysis and is widely used.<sup>136</sup>

When the court determines copyright infringement exists, the person who did the copying becomes a direct infringer, which opens the way to liability based on indirect infringement. The first method of indirect infringement is “contributory infringement” in which courts “impose[] liability where one person knowingly contributes to the infringing conduct of another,” such as when a company operates a swap meet and knows that various vendors are selling infringing material.<sup>137</sup> The second method of indirect infringement is “vicarious infringement” in which courts will find the third-party is liable if they find that “the [third-party] exercises the requisite control over the direct infringer and that the [third-party] derives a direct financial benefit from the direct infringement,” such as when a company hires a third-party’s employees for its stores, retains the ability to fire them, and obtains 10% of the third-party’s revenue from sales made in its stores.<sup>138</sup> The final method of indirect infringement is “inducement” in which courts will impose

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<sup>134</sup> *Id.*

<sup>135</sup> *Id.* at 710.

<sup>136</sup> For discussion on courts implementing this analysis, see *supra* note 130.

<sup>137</sup> *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 261, 264 (9th Cir. 1996).

<sup>138</sup> *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1173 (9th Cir. 2007); see generally *Shapiro v. H.L. Green Co.*, 316 F.2d 304 (2d Cir. 1963).



liability on those “who distribute[] a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement,” thus creating the risk of indirect infringement even if the alleged infringer did not receive any monetary benefit from the allegedly infringing activity.<sup>139</sup>

An enlightening, but unpublished case, touches upon the issue for companies very directly: *Marvel Enterprises, Inc. v. NCsoft Corp.*<sup>140</sup> That case involved the massive multiplayer online (MMO) game *City of Heroes* where players could create infringing characters such as Marvel’s Captain America, Wolverine, and the Incredible Hulk.<sup>141</sup> The players’ created characters, Marvel characters, allowed Marvel to show primary infringement for the purposes of showing indirect infringement by NCsoft, for they were recreated without Marvel’s permission.<sup>142</sup> The court then found that Marvel stated a sufficient claim for vicarious copyright infringement because NCsoft, as the game’s developer and server operator, received “a significant financial benefit by virtue of their increased revenues and increased user base” by allowing players to illegally recreate Marvel characters in the game.<sup>143</sup> The parties ultimately settled, but NCsoft made “no changes to *City of Heroes* or *City of Villains*’ character creation engine” as part of the settlement.<sup>144</sup> The rest of the settlement terms remain

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<sup>139</sup> *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936–37 (2005).

<sup>140</sup> *Marvel Enterprises, Inc. v. NCSoft Corp.*, No. CV 04-9253RGKPLAX, 2005 WL 878090 at \*3 (C.D. Cal. Mar. 9, 2005).

<sup>141</sup> *Id.*

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

<sup>143</sup> *Id.* at \*4.

<sup>144</sup> Robert ‘Apache’ Howarth, *Marvel and NCSoft Settle Differences*, IGN (Dec. 15, 2005), <https://www.ign.com/articles/2005/12/14/marvel-and-ncsoft-settle-differences> [<https://perma.cc/8ZZJ-F2MG>].

undisclosed,<sup>145</sup> but true to their word NCsoft made no changes to the character creation engine and players were still able to make Marvel characters in those games before the servers were shut down.<sup>146</sup>

With how ubiquitous copyright-infringing material has become on the Internet and how easy it is for a company to be vicariously liable, as illustrated above with the *City of Heroes* case, there has obviously been legislative action to protect hosting companies. That action is the DMCA, the advantages and disadvantages of which will be discussed further later in this paper, which shields companies hosting material from liability if they fulfill certain criteria.<sup>147</sup> However, that creates a burden on the rights-holder to monitor every potential avenue of infringement, from *Minecraft* to *Roblox*, for infringing material because the hosting company must have knowledge or awareness of the facts indicating infringing material is present.<sup>148</sup> Without such knowledge or awareness, the rights-holder would need to notify the hosting company, but that requires that the rights-holder also know about the specific infringing material hosted.<sup>149</sup> That said, game companies have tried several methods of handling user-created content in their games, either out of respect for the rights-holders' rights, to preemptively stamp out potential liability, or to otherwise resolve issues regarding ownership of user-created content.

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<sup>145</sup> Andy McAdams, *Lawful Neutral: When Marvel sued NCsoft over City of Heroes*, MASSIVELY OVERPOWERED (Nov. 22, 2019), <https://massivelyop.com/2019/11/22/lawful-neutral-when-marvel-sued-ncsoft-over-city-of-heroes/> [<https://perma.cc/SY9E-7Z4Y>].

<sup>146</sup> AyinMaiden, *City of Heroes/Villains - Character Creation (X-Men)*, YOUTUBE (July 5, 2019), [https://www.youtube.com/watch?v=Lt\\_uMjVhXAQ](https://www.youtube.com/watch?v=Lt_uMjVhXAQ) [<https://perma.cc/J8VS-VSR7>].

<sup>147</sup> 17 U.S.C. § 512.

<sup>148</sup> *Id.* § 512(c)(1)(A).

<sup>149</sup> *Id.* §§ 512(c)(1)(C), (c)(3).

### III. THE VARIOUS ATTEMPTS TO RESOLVE THE ISSUE

#### A. *Embracing Creation*

The first “solution” developers use is not much of a solution but rather a full embrace of the risks that encouraging user-created content brings. The *Roblox* developers, for example, allow players to make entire games in their game, making it more of a sandbox tool or small development kit than a game.<sup>150</sup> These players can then monetize their games through several methods, such as making other players pay a one-time Robux fee to access the game or get special privileges, or requiring other players to buy a subscription to host private servers.<sup>151</sup> These “hobbyist developers” have managed to make \$250 a month to \$100,000 a month from their *Roblox* games, with the community as a whole earning tens of millions of dollars.<sup>152</sup> The amount of money the community makes is nothing compared to how much *Roblox* makes for cultivating this ecosystem and taking a cut of the profits.<sup>153</sup> These massive profits work as a double-edged sword. Theoretically, the

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<sup>150</sup> *The Sandbox: From Mobile Game to Metaverse Leader*, EVERYREALM (June 25, 2022), <https://everyrealm.com/blog/education/the-sandbox-a-high-level-overview> [<https://web.archive.org/web/20220716140704/everyrealm.com/blog/education/the-sandbox-a-high-level-overview>].

<sup>151</sup> *Monetization*, ROBLOX [HTTPS://CREATE.ROBLOX.COM/DOCS/PRODUCTION/MONETIZATION](https://create.roblox.com/docs/production/monetization) [<https://perma.cc/4MA9-LHJ7>] (last visited Nov. 23, 2022).

<sup>152</sup> Jessica Conditt, *Hobbyist developers will make \$30 million via ‘Roblox’ this year*, ENGADGET (July 22, 2017), <https://www.engadget.com/2017-07-22-roblox-30-million-pay-out-developers-2017-how.html> [<https://perma.cc/N5EF-X5JP>].

<sup>153</sup> Taylor Hatmaker, *Roblox will give a handful of game developers \$500,000 each to build its future*, TECH CRUNCH (Sept. 9, 2022), <https://techcrunch.com/2022/09/09/roblox-game-fund-2022/> [<https://perma.cc/WZE3-ZVU4>] (estimating the company to be worth \$25 billion).

company's firm structure, reserves, and general reputation could deter litigation regarding infringing user-created content and even use it to defend users' content,<sup>154</sup> but it may also make them an easy target for other similarly sized companies with strong intellectual property such as music licensing associations.<sup>155</sup>

While the risk of user-created content leading to litigation looms over *Roblox* as it does for any other company that encourages user-created content, the advantages are clear. There is much economic gain for companies that allow user-created content in the form of both good reputation and money earned from selling virtual currency. Given a specific threshold of users or profits, this profit would outweigh the potential risks posed by hosting this infringing content. If a company were to sue *Roblox* or any other company that owns a similar game such as *Minecraft*, then that company would not only bring attention from their existing detractors but alienate *Roblox* users, creating a deterrent even in the face of clear intellectual property violations.

### ***B. Notification, Disclaimer, and Removal***

Another solution developers currently use is notifying their users, in-game or otherwise, that creating their own content in or for the game will violate the game's EULA or TOS. These violations result in punishment for the user, such as being banned from using the game's online services. The problem with this approach is that users,

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<sup>154</sup> Blake Brittain, *Roblox sues tech toymaker WowWee over avatar figurines*, REUTERS (Aug. 3, 2022), <https://www.reuters.com/legal/litigation/roblox-sues-tech-toymaker-wowwee-over-avatar-figurines-2022-08-03/>.

<sup>155</sup> Blake Brittain, *Roblox, music publishers settle copyright licensing dispute*, REUTERS (Sept. 27, 2021), <https://www.reuters.com/legal/transactional/roblox-music-publishers-settle-copyright-licensing-dispute-2021-09-27/> [<https://perma.cc/TXX9-36GL>].

maliciously or not, will likely ignore these disclaimers and notices and end up infringing on various copyrights regardless. For example, the user manual for *Sid Meier's Civilization V*, a strategy game developed by Firaxis Games and published by Take-Two Interactive Software, Inc., expressly does not allow users to “[r]everse engineer, decompile, disassemble, prepare derivative works based on or otherwise modify the Software.”<sup>156</sup> Should the game recognize that the user has files modifying the game’s files or which are not inherently part of the game’s files, the game also provides a warning in-game that the developers “do not examine, monitor, support or guarantee this user created content.”

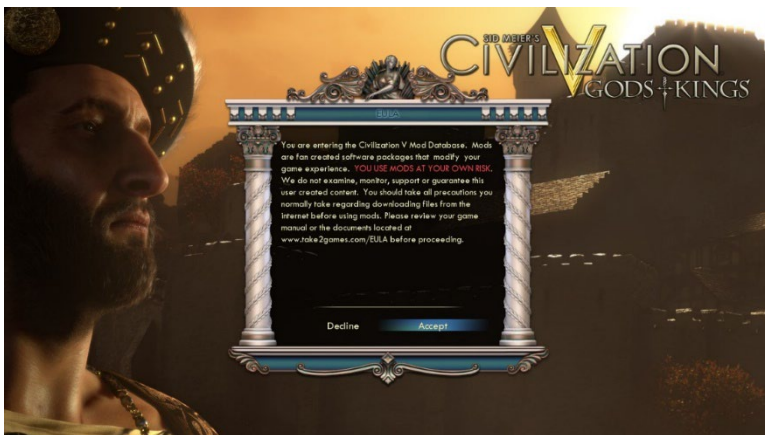


Figure 2: A screenshot of the in-game mod notification for Civilization V with the Gods & Kings expansion.

Nevertheless, players have modded copyrighted material, such as *The Motherland Calls*, into the game.<sup>157</sup> Sculptor Yevgeny Vuchetich and engineer Nikolai Nikitin

<sup>156</sup> TAKE-TWO INTERACTIVE SOFTWARE, INC., CIVILIZATION V MANUAL 226 (2010).

<sup>157</sup> Pouakai, *The Motherland Calls Wonder*, STEAM COMMUNITY (Dec. 6, 2012), <https://steamcommunity.com/sharedfiles/filedetails/?id=111846306> [<https://perma.cc/26FG-VSWG>].

finished constructing this monument, depicting a woman with a sword gesturing as if calling out in 1967 as a memorial for those who fell at the Battle of Stalingrad.<sup>158</sup> The developers made art assets and audio for *The Motherlands Calls* as a wonder in *Civilization V*, but Russian copyright law protects an author's work for the author's life plus 70 years afterward.<sup>159</sup> Although the developers have not given an official statement for the wonder's removal before release, it is very likely that *The Motherland Calls*, unlike other wonders in the game like the Hanging Gardens or the Pyramids, is much too recent to be put in the game, leading to its removal for copyright reasons. However, thanks to all the assets left in the game after its release, modders were able to simply put the copyrighted monument back into the game mod tools provided by the developers.

Steam Workshop and easier mod activation for multiplayer in *Sid Meier's Civilization VI* further fogs both the developer's stance and the risk of litigation as these make modding games easier.<sup>160</sup> This then raises the question of whether Valve, the company that operates the Steam platform and the Steam Workshop that allows users to publish their mods, would become a potential indirect

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<sup>158</sup> Dibyendu Banerjee, *The Motherland Calls – Volgograd, Russia – Leading Landmarks*, TUTORIAL HOME (July 27, 2018), <https://www.tutorialathome.in/history/motherland-calls-volgograd-russia> [<https://perma.cc/FRD7-3J67>].

<sup>159</sup> ElectariumTunic, *Civilization V: A Brave New World - Motherland Calls (Removed before release)*, YOUTUBE (Jan. 13, 2014), <https://www.youtube.com/watch?v=XkWtE6z4rJ0> [<https://perma.cc/TG6W-VXZY>]; Nikolay N. Komedchikov, *Copyright on Cartographic Works in the Russian Federation*, GEODESIA ET DESCRIPTIO TERRARUM 15, 17 (2007), <https://s3.eu-west-2.amazonaws.com/redatlas/Komedchikov2007.pdf> [<https://perma.cc/H7WW-343W>].

<sup>160</sup> Richard Scott-Jones, *Civ 6 features proper multiplayer mod support, plus hotseat mode*, PCGAMESN (Oct. 21, 2016), <https://www.pcgamesn.com/civilization-vi/civ-6-multiplayer-guide> [<https://perma.cc/UP7N-YAHY>].

infringer for encouraging mod creation just like Firaxis Games for having made modding their games much easier. The DMCA would likely protect Valve as a service provider, that service being mod transmission via Steam Workshop and the Steam platform, but such protection brings with it the burden of responding to numerous take-down notices, which would be a time-consuming process, taking anywhere from 24 to 72 hours per notice.<sup>161</sup> The chance that the host will remove infringing material drops substantially to the point of becoming “almost zero” after 96 to 120 hours despite hosts having to “expeditiously” remove the infringing material upon receiving notice.<sup>162</sup>

Even after the host removes the infringing material, sharing methods such as peer-to-peer networks and rapid link repopulation on the same or other sites practically render narrowly tailored takedown notices ineffective and impose burdens on the host to develop or use already-developed technologies to achieve site-wide removals.<sup>163</sup> Matters only get worse if the notice is too vague for the host to understand, thus requiring a back-and-forth between the host and the copyright holder to understand what material to remove “expeditiously” for the host to stay within the DMCA safe harbor.<sup>164</sup> Some hosts even receive multiple

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<sup>161</sup> 17 U.S.C. § 512(a) (protecting service providers from copyright liability “by reason of the provider’s transmitting, routing, or providing connections for, material through a system or network controlled or operated by or for the service provider” should the service providers meet the requirements laid out therein); Johnathan Bailey, *How Long Should a DMCA Notice Take*, PLAGIARISM TODAY (Dec. 5, 2008), <https://www.plagiarismtoday.com/2008/12/05/how-long-should-a-dmca-notice-take/> [https://perma.cc/DRV9-XUST].

<sup>162</sup> Bailey, *supra* note 161.

<sup>163</sup> JENNIFER M. URBAN, ET AL., NOTICE AND TAKEDOWN IN EVERYDAY PRACTICE 56 (2d ed. 2017).

<sup>164</sup> Jennifer M. Urban & Laura Quilter, *Undue Process: Challenges for Rightsholders and Service Providers Implementing Section 512’s Notice and Takedown Provisions*, (Nov. 24, 2015) (manuscript at 22), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2694348](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2694348).

takedown notices from the same copyright holder, and do not respond despite the multiple notices because the copyright holder may not understand the underlying law they are trying to apply or fail to identify with any specificity what the infringing content is, making it near impossible to “expeditiously” remove the infringing content.<sup>165</sup>

Similarly, Hoyoverse, in their game *Genshin Impact*, allows players to use two items called the “Windsong Lyre” and the “Vintage Lyre” to play music.<sup>166</sup> Both have a series of quests showing players how to use them and encourage them to use them as part of quests, explore the world, and simply improve the game’s social aspects, such as by playing music with others.<sup>167</sup> However, Hoyoverse also warns players to “please make sure that you use an original composition or have the relevant rights to use the melody you are playing... Otherwise, we may have to restrict your use of this function.”<sup>168</sup> This disclaimer ensures that players understand the balance between enjoying free use of the two lyre items and respecting musicians’ rights to their music.

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<sup>165</sup> *Id.* at 22–23.

<sup>166</sup> Mehrdad Khayyat, *Genshin Impact Lyre Notes: How To Play Different Songs With Windsong Lyre & Vintage Lyre*, DUALSHOCKERS, (Jan. 27, 2023), <https://www.dualshockers.com/genshin-impact-lyre-notes-play-different-songs-windsong-lyre/> [<https://perma.cc/QH8U-5EZX>].

<sup>167</sup> Marloes Valentina Stella, *How to get the Genshin Impact Windsong Lyre*, GAMESRADAR, (Mar. 30, 2021), <https://www.gamesradar.com/genshin-impact-windsong-lyre/> [<https://perma.cc/2X7D-346U>]; Jessica Thomas, *Where to get the Vintage Lyre in Genshin Impact*, GAMERANX, (Sept. 20, 2022), <https://gameranx.com/features/id/354048/article/where-to-get-the-vintage-lyre-in-genshin-impact/> [<https://perma.cc/ZGS4-EHVZ>].

<sup>168</sup> *See* Figure 3.



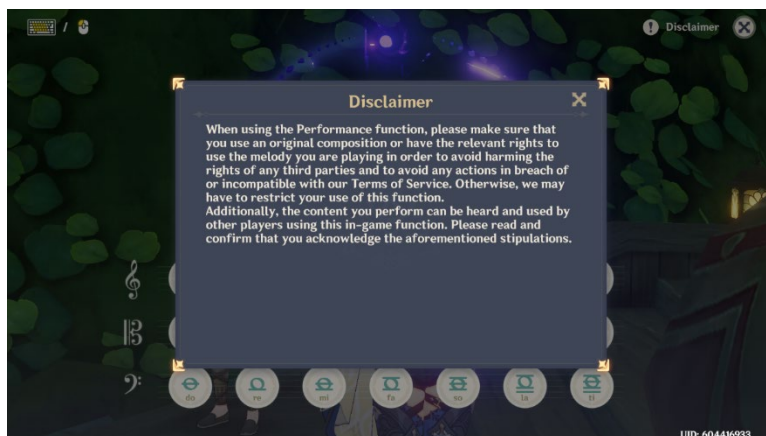


Figure 3: In-game disclaimer that appears when the user clicks the “Disclaimer” button in the top-right hand corner of the screen while using one of the lyre items.

Once again, issues abounded when players, either ignoring the disclaimer or failing to see it entirely, used the lyres to play music from other media, such as one player who reached 1.5 million views on YouTube for playing *Bad Apple!!* from *Lotus Land Story* on the Windsong Lyre.<sup>169</sup> Not only does this bring in Hoyoverse as a potential indirect infringer for adding the lyre items into the game, but also YouTube and other video hosting or streaming sites like Twitch that are popular sites for *Genshin Impact* players to post videos. Although, once again, the DMCA likely shields video hosting and streaming sites if they follow its tedious and time-consuming procedures.

While video hosting and streaming sites are, like Valve for Steam and Steam Workshop, generally shielded from indirect liability thanks to the DMCA, these sites host a slew of infringing videos thanks to the game’s large community and the developers encouraging the continued

<sup>169</sup> Dualie Ch., *Bad Apple!! Windsong Lyre*, YOUTUBE (Mar. 28, 2021), <https://www.youtube.com/watch?v=oZO7m5HJMQ> [https://perma.cc/MMC2-ATPH].

use of the lyres. As with Valve, these sites would have the tedious and perhaps unnecessary burden of responding to take-down notices from copyright holders and scouring their websites for infringing material. Many sites have resorted to using automated systems, in other words, bots, to deal with this burden, but just like hoping users heed notifications and disclaimers, bots are a futile and frustrating attempt to resolve the copyright issues for all parties involved.<sup>170</sup>

Some developers fail or opt not to notify players at all regarding potential intellectual property issues in their games. Nintendo, for example, includes no legal notification of potential copyright infringement based on user-created levels in *Super Mario Maker*, *Super Mario Maker 2*, or the dungeon maker in *The Legend of Zelda: Link's Awakening* for the Nintendo Switch.<sup>171</sup> The instruction manuals for all three of these games do not state who owns the rights to any content users create while using the level creation tools, and no EULA for these games exists that refers to the intellectual property issues at hand.<sup>172</sup> By not disclaiming liability on the users' part or notifying users to be wary of what they create, Nintendo not only leaves the door wide open for potential indirect infringement claims but also leaves their players uneducated as to how this may come to pass because of their creation. While users are free to ignore these notices

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<sup>170</sup> Johnathan Bailey, *Why Bots Shouldn't Decide Copyright Cases*, PLAGIARISM TODAY (Oct. 4, 2022), <https://www.plagiarismtoday.com/2022/10/04/why-bots-shouldnt-decide-copyright-cases/> [<https://perma.cc/5439-ZWT8>].

<sup>171</sup> *The Legend of Zelda Link's Awakening*, NINTENDO, <https://zelda.nintendo.com/links-awakening/gameplay/> [<https://perma.cc/BQ3Z-S9A8>]; *Super Mario Maker 2*, NINTENDO, <https://supermariomaker.nintendo.com/> [<https://perma.cc/Q67F-TUL9>]; *Super Mario Maker How to Play Guide*, NINTENDO, <http://supermariomaker.nintendo.com/manual> [<https://web.archive.org/web/20150911093309/http://supermariomaker.nintendo.com/manual/>].

<sup>172</sup> *Id.*

and disclaimers, just as copyright holders are free to ignore an alleged infringer's disclaimer because they hold no legal force,<sup>173</sup> the fact that Nintendo is outright silent on the matter is worrying for the same reason that Blizzard's simplistic EULA terms for the *Warcraft III: Reign of Chaos* WorldBuilder outlined earlier were worrying (namely the lack of a reassignment or licensing clause to prevent another *Dota 2* situation).<sup>174</sup>

As outlined above, companies must resolve various other issues before the notification solution bears any fruit. The first problem stopping notifications and disclaimers from being effective is the most obvious one: getting users to heed the notifications and disclaimers in the first place. This problem is especially difficult to resolve considering the many ways developers encourage creation in the first place and how some games have become popular in part due to how easy they are to mod or how large overhaul mods can create entirely new experiences.<sup>175</sup> Any solution to this first problem would require the company to carefully balance allowing players to craft their own experiences and challenges through mods and having players respect other companies' intellectual property rights. Making that balance would likely require experienced consultants to help the company's management better understand the community the game fosters and how important mods are for the game. The latter point is especially poignant with more games featuring "must-have" or "basic feature" mods that are much smaller than overhauls but just as vital because of the quality-of-life they add to the game that could be easily

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<sup>173</sup> Rich Stim, *Measuring Fair Use: The Four Factors*, STANFORD UNIV. (Oct. 2019), <https://fairuse.stanford.edu/overview/fair-use/four-factors/> [<https://perma.cc/7GY4-SFQG>].

<sup>174</sup> *Supra* Section III.

<sup>175</sup> Bryan Wirtz, *20 Awesome Games With Mods*, GAME DESIGNING (Sept. 22, 2022), <https://www.gamedesigning.org/gaming/best-game-mods/> [<https://perma.cc/J2Q6-7C9H>].

added by the developers, yet are not. One example is the “Less Event Spam” mod for *Crusader Kings III*, which allows players to turn off “spammy” notifications and customize what notifications for in-game events they see.<sup>176</sup> While not as large or expansive as other mods, like the “LotR: Realms in Exile” mod,<sup>177</sup> the “Less Event Spam” mod adds a vital feature present in *Crusader Kings II*, a game released *eight years* prior to *Crusader Kings III*, that *Crusader Kings III* lacks.<sup>178</sup>

The second problem is the logistics of enforcing a policy based solely on notifications and disclaimers, as explained somewhat by Johnathan Bailey in assessing how effective bots are in finding and claiming infringing material on various social media platforms like YouTube.<sup>179</sup> While AI and other automated systems would relieve the many manpower-related issues regarding enforcement, the AI would have to have expansive knowledge of all existing copyrighted works because “modern algorithms are trained using examples and are honed by being told when they are right and when they are wrong.”<sup>180</sup> The company developing the AI would then have to engage in an arms race against users finding loopholes to the AI’s algorithm so that the AI can find infringement in the sea of material.<sup>181</sup> Even if the AI had a 99% accuracy rating, the hosting company

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<sup>176</sup> Pingvin, *Less Event Spam*, STEAM COMMUNITY (June 2, 2023), <https://steamcommunity.com/sharedfiles/filedetails/?id=2750102888> [https://perma.cc/39RH-DS44].

<sup>177</sup> Jamie-san, *LotR: Realms in Exile*, STEAM COMMUNITY (Oct. 14, 2023, 6:39 AM), <https://steamcommunity.com/sharedfiles/filedetails/?id=2291024373> [https://perma.cc/J4YM-4J5A].

<sup>178</sup> Atey, Comment to *Any way to set notifications?*, Paradox Plaza (Feb. 12, 2022, 3:16 AM), <https://forum.paradoxplaza.com/forum/threads/any-way-to-set-notifications.1510651/#post-28074158> [https://perma.cc/LG9E-SKBD].

<sup>179</sup> Bailey, *supra* note 170.

<sup>180</sup> *Id.*

<sup>181</sup> *Id.*

would still end up hosting infringing material solely because so much material is uploaded every day.<sup>182</sup> It seems clear then that the notification, disclaimer, and removal method does not work very well given how many players still upload infringing material using the game’s tools, thereby putting both players and game developers at risk of liability.

### C. *Reassigning the Copyright*

Another rather divisive approach has been to reassign all the copyright in user-created content to the company providing the modding tools. Blizzard, perhaps learning from the *Dota 2* controversy, updated its ToS for all games in 2020 to include a new “Custom Game Acceptable Use Policy.”<sup>183</sup> This revised policy is much longer than the previous one featured in the *Warcraft III: Reign of Chaos* World Editor, and, among other provisions, states that players “assign to Blizzard all of [their] rights, title, and interest in and to all Custom Games, including but not limited to any copyrights in the content of any Custom Games.”<sup>184</sup> If *Defense of the Ancients* were created today, Blizzard would own all the intellectual property rights and interests in that mod. The policy also places the burden on the players to “execute any future assignments and/or related documents promptly upon receiving such a request from Blizzard in order to effectuate the intent of this paragraph” and automatically grants Blizzard an “exclusive, perpetual,

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<sup>182</sup> *Id.*

<sup>183</sup> Kyle Orland, *Blizzard now claims full copyright for player-made “custom game” mods*, ARS TECHNICA (Jan. 29, 2020), <https://arstechnica.com/gaming/2020/01/blizzard-now-claims-full-copyright-for-player-made-custom-game-mods/> [https://perma.cc/H4DA-FZCS].

<sup>184</sup> *Custom Game Acceptable Use Policy*, BLIZZARD (Jan. 21, 2020), <https://www.blizzard.com/en-us/legal/2749df07-2b53-4990-b75e-a7cb3610318b/custom-game-acceptable-use-policy> [https://perma.cc/ZHM8-4XGP].

worldwide, unconditional, royalty free, irrevocable license” should the player be unable to assign the rights to Blizzard.<sup>185</sup> These provisions ensure that Blizzard has more control over user-created content than it did during the *Dota 2* controversy, and can take advantage of anything the players make even if the players do not necessarily want Blizzard to do so.

Blizzard’s policy also tackles, or rather notifies players that it will attempt to tackle, the issue of copyrighted material from other companies used in user-created content. The policy provides that the user will “represent and warrant” that their content does not “infringe[] or will [not] infringe any copyright, trademark, patent, trade secret or other intellectual property right of any third party.”<sup>186</sup> Based on the policy, Blizzard will remove the user-created content from its platforms should it violate policy.<sup>187</sup> Blizzard games such as *Starcraft II*, *Diablo III*, and *Diablo II*, indeed, have very few – if any – infringing mods, but those games also have very few mods at all.<sup>188</sup> *Warcraft III: Reign of Chaos* still has several mods which infringe on other copyrights, such as a *Dragon Ball Z* asset pack, but *Warcraft III: Reign of Chaos* is no longer playable because of *Warcraft III: Reforged*’s release, so *Warcraft III: Reign of Chaos* would not be on Blizzard’s platforms.<sup>189</sup>

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<sup>185</sup> *Id.*

<sup>186</sup> *Id.*

<sup>187</sup> *Id.*

<sup>188</sup> *StarCraft II: Legacy of the Void Mods*, MOD DB <https://www.moddb.com/games/starcraft-ii-legacy-of-the-void/mods> [<https://perma.cc/9S2J-DHBT>] (last visited Nov. 2, 2023); *Diablo III Mods*, MOD DB <https://www.moddb.com/games/diablo-iii/mods> [<https://perma.cc/Y4QM-RTPY>] (last visited Nov. 2, 2023); *Diablo II Mods*, MOD DB <https://www.moddb.com/games/diablo-2/mods> [<https://perma.cc/9K6W-Z9W9>] (last visited Nov. 2, 2023).

<sup>189</sup> Diabloist337, *Warcraft III : DbZ/GT Arena/Spellpack*, MOD DB (Sept. 27, 2009), <https://www.moddb.com/mods/warcraft-iii-dbzgt-arenaspellpack> [<https://perma.cc/L6HH-HAB9>]; Chris Miller, *Blizzard*

The issue with this approach is evidenced by the relatively barren mod database for Blizzard’s games compared to the abundant resources on the Steam Workshop and Civfanatics for *Sid Meier’s Civilization V*, as shown above. The reaction from the modding community has been extremely negative, to say the least, with users commenting that “[Blizzard] found the quickest way to lose their creative community” and that Blizzard is taking “more incentive away to create games in [its] already dying custom game community.”<sup>190</sup> What Blizzard gained in protection against copyright infringement stemming from user-created content and additional IP, it lost in community goodwill and population. While this approach certainly protects Blizzard from liability, it imposes on itself obligations like that found in the DMCA and harms users by making them give up their intellectual property rights completely, disincentivizing creation in Blizzard’s games. However, this approach is still not the most extreme.

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*Is Now Telling Customers That Can’t Play Warcraft 3 To Simply ‘Upgrade Their Computer’*, HAPPY GAMER (Feb. 5, 2020), <https://happygamer.com/blizzard-is-now-telling-customers-that-cant-play-warcraft-3-to-simply-upgrade-their-computer-54671/> [<https://perma.cc/78VS-QPTB>].

<sup>190</sup> Alexstarfire, Comment to *Blizzard now claims full copyright for player-made “custom game” mods*, ARS TECHNICA (Jan. 29, 2020, 3:44 PM), <https://arstechnica.com/gaming/2020/01/blizzard-now-claims-full-copyright-for-player-made-custom-game-mods/?comments=1&comments-page=1> [<https://perma.cc/F9U2-VS47>]; R3m3mb3rM3, Comment to *Blizzard now claims full copyright for player-made “custom game” mods*, REDDIT (Jan. 30, 2020, 12:37 AM), [https://www.reddit.com/r/starcraft/comments/ew0lcf/comment/ffzaogm/?utm\\_source=share&utm\\_medium=web2x&context=3](https://www.reddit.com/r/starcraft/comments/ew0lcf/comment/ffzaogm/?utm_source=share&utm_medium=web2x&context=3) [<https://perma.cc/LTS5-XNXT>].

**D. Taking a Hardline Stance Against  
Modding**

The final, and perhaps most infamous, approach to user-created content is to take a hardline stance against creation by issuing cease and desist letters or claiming all ownership in user-created content. Nintendo, for example, is particularly notorious for issuing tens of thousands of copyright strikes and cease and desist letters for using their famous intellectual property, whether it be user-created games that simply use their intellectual property, such as *Five Nights at Yoshi's*, or custom maps and stories using existing in-game assets.<sup>191</sup> The Pokémon Company's management, which works alongside Nintendo and its employees to manage the Pokémon brand, has even gone as far as to state that "Nuzlocke" runs of Pokémon are on the same level as ROM hacks.<sup>192</sup> A Nuzlocke run of Pokémon, at its most basic level, involves the player (1) permanently removing any Pokémon that faints (reaches 0 HP) from the game (either releasing the Pokémon or putting it in a box forever); (2) catching the first wild Pokémon they find in areas with unique Pokémon encounter tables, and forgoing the opportunity to catch the wild Pokémon if it faints; and (3) nicknaming all Pokémon they catch.<sup>193</sup> Said Nuzlocke runs do not actually modify the game's code, art assets,

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<sup>191</sup> Ryan Craddock, *Nintendo Issues Mass DMCA Takedown, 379 Fan-Made Games Forcibly Removed*, NINTENDO LIFE (Jan. 6, 2021), [https://www.nintendolife.com/news/2021/01/nintendo\\_issues\\_mass\\_dmca\\_takedown\\_379\\_fan-made\\_games\\_forcibly\\_removed](https://www.nintendolife.com/news/2021/01/nintendo_issues_mass_dmca_takedown_379_fan-made_games_forcibly_removed) [<https://perma.cc/86QP-WU2R>].

<sup>192</sup> The Kit and Krysta Podcast, *Were Our Nintendo Direct Predictions Accurate?* – Kit & Krysta Podcast, YOUTUBE, at 1:33:21 (Sept. 15, 2022), <https://www.youtube.com/watch?v=vrjxg95Q2IY> [<https://perma.cc/5NRB-B27E>].

<sup>193</sup> *Nuzlocke Basics*, NUZLOCKE UNIV., <https://nuzlockeuniversity.ca/nuzlocke-rules/> [<https://perma.cc/4LYT-AZ3W>] (last visited Mar. 16, 2023).



sound recordings, or make a new work at all.<sup>194</sup> Instead, a Nuzlocke run is simply a “way of playing that allows players to *self-impose* rules in order to create a more difficult experience while playing Pokémon.” (emphasis added).<sup>195</sup> This stance is especially interesting considering rules, as stated above, are not copyrightable under the merger doctrine, thus Nintendo’s comparison of Nuzlocke runs to ROM hacks is not entirely accurate and goes too far in stopping anything that would seem like copyright infringement.<sup>196</sup>

Similarly, Take-Two Interactive Software, Inc., the developers of *Grand Theft Auto* and *Red Dead Redemption*, has issued mass DMCA notices to websites hosting mod and targeted mainly ports and fan-remakes.<sup>197</sup> For example, the mod “The Lost and Damned Unlocked for GTA 4” adds the protagonist from *Grand Theft Auto IV*’s *The Lost and Damned* expansion to the main game and does not add any third-party works that would threaten Take-Two.<sup>198</sup> Virtual reality conversions for *Grand Theft Auto V* and *Red Dead Redemption II* were also targets for Take-Two’s DMCA strikes, forcing the modder to remove these new ways to play these games.<sup>199</sup>

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<sup>194</sup> Ana Diaz, *The Nuzlocke Challenge is a Time-Honored Tradition that Makes Pokémon Way Harder*, POLYGON (Aug. 4, 2022), <https://www.polygon.com/23291938/pokemon-nuzlocke-challenge-difficulty-guide> [<https://perma.cc/5A4Q-GYZZ>].

<sup>195</sup> *Id.*

<sup>196</sup> *Supra* Section II.

<sup>197</sup> Zack Zwiezen, *Take-Two Interactive Removes More GTA Mods Using DMCA Strikes*, KOTAKU (Nov. 13, 2021), <https://kotaku.com/take-two-interactive-removes-more-gta-mods-using-dmca-s-1848053219> [<https://perma.cc/J9Q6-JKUF>].

<sup>198</sup> *Id.*

<sup>199</sup> Timothy Geigner, *Take-Two’s War On Its Own Modding Community Continues, Harming Take-Two*, TECHDIRT (Jul. 12, 2022), <https://www.techdirt.com/2022/07/12/take-twos-war-on-its-own-modding-community-continues-harming-take-two/> [<https://perma.cc/85PY-X2VZ>].

Take-Two, like Blizzard and Nintendo, sacrifices community goodwill for legal safety and full rights to their intellectual property, causing players to feel alienated and frustrated in Take-Two's various forums and all over the internet. While not specific to Take-Two, Blizzard, or Nintendo, modders' response to games becoming mod-unfriendly can be generally seen from existing examples of shifts in mod treatment. In Firaxis's *Civilization VI*, for example, modders expressed frustration by the developer's decision to never release the DLL (a core file necessary for certain AI actions and larger overhaul projects) and the difficulty in obtaining art creation tools and art assets from the developers, especially for the game's downloadable content (DLC).<sup>200</sup> In an extreme example, certain modders and players are completely unable to play *VRChat* because of the developer's decision to ban all mods, which has left disabled players completely left behind because they are now unable to use the mods they previously relied on even to play the game considering their disability.<sup>201</sup> These failures to consider the modders' needs have left both games in dire straits as the modding communities, and disabled players in *VRChat*'s case, stop supporting the game and move on to other games, a situation which may not be worth such a hardline stance against modding for legal safety.

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<sup>200</sup> Robert Zak, *Civilization 6 Modders are Losing Interest Over Its Uncertain Future*, PCGAMES (Feb. 25, 2020), <https://www.pcgamesn.com/civilization-6/dll-source-release-modding-community> [https://perma.cc/9NT7-8VBE]; EnigmaConundrum, *Frustration and Firaxis: Troubles of a Non-Sukritact*, in CIVILIZATION MODDING MONTHLY ISSUE 1, 7 (2018).

<sup>201</sup> Liv Ngan, *VRChat Bans All Mods, Leaving Disabled Players and Community Feeling Abandoned*, EUROGAMER (July 27, 2022), <https://www.eurogamer.net/vrchat-bans-all-mods-leaving-disabled-players-and-community-feeling-abandoned> [https://perma.cc/XH8M-LV97].

#### IV. WORKABLE SOLUTIONS

##### A. *Summary of the Current Solutions*

The issues above and the confusion surrounding ownership have stemmed mostly from poorly drafted contracts. By failing to reassign the copyright to itself, Blizzard missed out on a genre-defining mod that it could have capitalized on by reassigning the copyright or negotiating a license with the modders to expand the game, or even outright hiring them to make a full-fledged team focused on a MOBA. Similarly, games like *Civilization* and *Genshin Impact* foster a large community of users creating their own content but fail to address the risk of users using third-party intellectual property in said content, which could lead to indirect liability or having to satisfy the burdensome DMCA requirements. The hardline stance adopted by Nintendo and Take-Two has led to negative backlash by their respective communities and some confusion as to what is or is not allowed because of the companies' seemingly arbitrary definitions of a "mod" that violates their intellectual property.<sup>202</sup> Reassigning the copyright completely has also slowed user-created content to a crawl, discouraging creation when users understand that they will not own their creations at all.

The best solution appears to be how *Roblox* handles user-created content, but even this is rife with issues. By offering monetization methods to creators, *Roblox* encourages other users to create their own content even if it incorporates third-party intellectual property, opening the door to vicarious liability claims. The *Roblox* developers have reminded the community that while they own the intellectual property in anything they create and automatically grant a license to the developers to use that

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<sup>202</sup> Zwielen, *supra* note 197 (pointing out that Take-Two took down a file that was not a mod, but rather a save file); *supra* Section III.

creation, the community must respect third-party intellectual property rights.<sup>203</sup> Despite this reminder and various *Roblox* guidelines, there are still many infringing creations that slip through the cracks that practically speaking would be impossible to proactively hunt down and remove.

### **B. Proposed Improvements**

One way to improve *Roblox*'s method would be to increase visibility for these postings or add guidelines in-game that players must see before using the *Roblox* sandbox tools. This would be similar to the *Civilization V* disclaimer in that the player must see it but would also combine the warning provided in the *Genshin Impact* disclaimer that expressly states that infringing on third-party rights could lead to the user losing access to the creation tool. Players may also receive examples of copyrighted works, such as Nintendo's *Super Mario* series, so that players clearly understand the boundaries set. In addition to those examples aimed at increasing awareness, the developer could show more details about copyright law before players may use the tools. These details would include the likelihood of punishment, the punishment's effect on the player and their relationship with the game's community, and sample cases showing that the law is taken very seriously and uniformly, all items which, when added with increased awareness, would help deter infringement in the first place.<sup>204</sup> Should players ignore these guidelines and place infringing material in their work, the developers could use detection tools such

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<sup>203</sup> KnightGaladeld, *Reminder about IP*, ROBLOX DEVELOPER FORUM (Apr. 18, 2018), <https://devforum.roblox.com/t/reminder-about-ip/116517> [<https://perma.cc/364S-FXEQ>].

<sup>204</sup> Xigen Li & Nico Nergadze, *Deterrence Effect of Four Legal and Extralegal Factors on Online Copyright Infringement*, 14 J. OF COMPUTER-MEDIATED COMM'C'N 307, 322–23 (2009).

as trained AI to flag their creations, and eventually mark that specific player if they repeatedly infringe.

Although AI has received much deserved criticism in how it attempts to enforce copyrights, AI may still serve as a useful tool for companies, or even players should the developers wish to let players check their work before publication, to analyze how much of the player's work is copied the same way an expert witness would be able to determine how much of one musical composition is copied from another.<sup>205</sup> Developers could also train the AI beforehand, rather than unleashing it on players immediately and relying on trial-and-error, to better fit their needs as an infringement detection tool.<sup>206</sup> For example, the developers could request volunteer samples of both infringing and non-infringing material to train the AI in detecting similarities in a practice known as "supervised learning."<sup>207</sup> This would still place a burden on the developers to find samples, either through a call for volunteers or on existing sites, and have some of the same problems with using AI to enforce copyrights, but it still also reduces the manpower required overall to detect possible infringement.

Related to the above proposal is recruiting experienced modders to engage in the gameplay experience co-creation process directly and actively. Many modders are willing to improve the game for free already, with scholars pointing out that companies "retain the majority of the economic value produced by free player labor" in what is ultimately an exploitative relationship.<sup>208</sup> Some developers also evidently take note of this free labor and turn mods into official changes in the game. A positive example of this is the mod adding piston blocks, blocks which can push and

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<sup>205</sup> Shine Sean Tu, *Use of Artificial Intelligence to Determine Copyright Liability for Musical Works*, 123 W. VA. L. REV. 835, 859 (2021).

<sup>206</sup> *Id.* at 855.

<sup>207</sup> Tu, *supra* note 205, at 855.

<sup>208</sup> Lastowka, *supra* note 17, at 23.

pull other blocks, to *Minecraft* which the original author sent to the game's Chief Creative Officer Jens "Jeb" Bergensten who made a formal license with the author (along with another modder who submitted additional ideas and code for the mod) to include the piston blocks into the game officially.<sup>209</sup> A negative example of this comes from the January 2023 patch for *Civilization VI* which fixed a, at that point, two year old bug where the AI would not improve resources in games, leading the AI's infrastructure to be woefully inadequate and armies to be constantly undersupplied.<sup>210</sup> However, one modder, Infixo, fixed the bug a month before Firaxis, the developers, released the January 2023 patch.<sup>211</sup> When the January 2023 patch released, Infixo noticed that the code Firaxis inserted via the patch was exactly the same as the code in his mod right down to the formatting, leading to a very negative reaction from players on the forum which Firaxis has never addressed.<sup>212</sup> Embracing creation without formalities is certain to invite disaster, but creating boilerplate contracts or programs to

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<sup>209</sup> Jens Bergensten, *Attribution of the Piston Mod in Vanilla Minecraft*, REDDIT (June 9, 2011, 8:31 AM), [https://www.reddit.com/r/Minecraft/comments/hvkmo/attribution\\_of\\_the\\_piston\\_mod\\_in\\_vanilla\\_minecraft/](https://www.reddit.com/r/Minecraft/comments/hvkmo/attribution_of_the_piston_mod_in_vanilla_minecraft/) [<https://perma.cc/9MZL-56TB>].

<sup>210</sup> Peserwin, *(1.0.9.9) AI Not Improving Resources*, CIVFANATICS (Jan. 30, 2021, 1:56 PM), <https://forums.civfanatics.com/threads/1-0-9-9-ai-not-improving-resources.666943/> [<https://perma.cc/2PMG-72WS>].

<sup>211</sup> Infixo, *Real Fixes: Luxuries (AI)*, STEAM COMMUNITY (Dec. 13, 2022, 9:04 PM), <https://steamcommunity.com/sharedfiles/filedetails/?id=2901589423> [<https://perma.cc/FJX6-FYG3>].

<sup>212</sup> Infixo, Comment to *Leader Pass Pack 3: Rulers of China (Jan. 2023) - Patch Notes Discussion*, CIVFANATICS (Jan. 13, 2023, 6:11 PM), <https://forums.civfanatics.com/threads/leader-pass-pack-3-rulers-of-china-jan-2023-patch-notes-discussion.681646/post-16400415> [<https://perma.cc/7SN3-HVVZ>]; Fy00sh, Comment to *Leader Pass Pack 3: Rulers of China (Jan. 2023) - Patch Notes Discussion*, CIVFANATICS (Jan. 19, 2023, 7:07 PM), <https://forums.civfanatics.com/threads/leader-pass-pack-3-rulers-of-china-jan-2023-patch-notes-discussion.681646/post-16400449> [<https://perma.cc/7SN3-HVVZ>].

enlist modders who have shown their experience in creating content for the game could both lead to more new intellectual property to improve the game and aid in enforcing the company's intellectual property rights by giving the enlisted modder a higher interest in the game and more reason to trust the developers.<sup>213</sup> This would help remedy any confusion as to who owns the rights to the "mod" portion of the official content patch and careful curation would allow the developer to avoid indirect infringement by ensuring the mod portion contains no third-party intellectual property.

One final step to improve the *Roblox* method would be to initiate a study, perhaps an economic one, to determine what the profit threshold is to deter third parties effectively and what other factors are relevant. Many lawyers already understand the strategic considerations at play when determining whether to sue for copyright infringement, such as whether alternative enforcement mechanisms would be sufficient and cost and uncertainties in litigating issues.<sup>214</sup> One very important consideration is who exactly the target is and their reputation.<sup>215</sup> While studies are determining the risk of litigation for wealthy families by poorer plaintiffs in tort cases,<sup>216</sup> there is no study focused specifically on the likelihood of copyright infringement litigation against one large company by another. Games like *Roblox* and *Minecraft* not only have backing from large companies, but

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<sup>213</sup> Sobkow, *supra* note 6, at 43.

<sup>214</sup> *Strategic Considerations In U.S. Copyright Litigation*, FINDLAW (June 13, 2017), <https://corporate.findlaw.com/intellectual-property/strategic-considerations-in-u-s-copyright-litigation.html> [<https://perma.cc/6FQ8-CKXK>].

<sup>215</sup> *Id.*

<sup>216</sup> *Targeting the Rich: Liability Lawsuits and the Threat to Families with Emerging and Established Wealth*, ACE PRIVATE RISK SERV. (Mar. 2012), <http://www.bairdfinancialadvisor.com/brumderkindlergroup/mediahandler/media/88802/ACE%20Targeting%20the%20Rich%20Liability%20Lawsuits%20032012.pdf> [<https://perma.cc/6LQU-29EU>].

they also have a reputation in the gaming industry, one of innovation and pioneering, especially with talks of “metaverses” and other virtual worlds<sup>217</sup> that may help deter other companies from suing for copyright infringement regardless of the merits. However, this is only mere speculation, and there is still no consensus for quantifying something as abstract as “fame” or “reputation” with the precision required to establish a correlation with the likelihood of litigation.<sup>218</sup> Thus, there is a pressing need to initiate studies that quantify abstract considerations, such as reputation, and use them to determine whether there is a correlation between those considerations the risk of being sued. Researchers could then utilize these studies with other studies examining the correlation between quantifiable values, such as a company’s financial resources or annual profit, and the risk of litigation. Such data would prove useful in allowing companies to determine when they may embrace creativity as *Roblox* and *Minecraft* have without too much fear of litigation in case their safeguards against infringement fail them.

## V. CONCLUSION

The uncertainty of mod ownership, especially in the face of so many different contractual approaches from companies, plagues the gaming industry and modding communities and risks liability either because someone else is the true rightsholder or because of the use of third-party intellectual property in the content. The District Court for

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<sup>217</sup> Ian Sherr, *How the Game Industry Is Charging Into the Metaverse*, CNET (Mar. 22, 2022), <https://www.cnet.com/tech/computing/how-the-game-industry-is-charging-into-the-metaverse/> [<https://perma.cc/7P36-GHL5>].

<sup>218</sup> Edward D. Ramirez, *The quantitative measure and statistical distribution of fame*, PLOS ONE (July 6, 2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6034871/> [<https://perma.cc/9JKA-ZBBY>].



the northern District of California best exemplified this uncertainty when it navigated the long history surrounding *Defense of the Ancients* in the *Dota 2* controversy. In an unpublished opinion, they merely concluded, based on Blizzard's poorly drafted EULA, that each modder owned their own version of the mod, with no further inquiry into the potential copyright owned by the original modder. This uncertainty then creates legal issues for companies later claiming some right to future derivative works, such as *Dota 2* and *Heroes of the Storm*, with no solid guidelines to offer foresight to these companies because doctrines such as *scènes à faire* require examples and analyses given in hindsight. Companies' various attempts to resolve issues related to the uncertainty vary wildly from embracing creation at the risk of litigation, as in *Roblox* and *Minecraft*, to stamping it out completely at the risk of alienating the community, as is the case with Nintendo and Take-Two. There are means of improving existing solutions to make a workable uniform one. However, even this proposed uniform solution requires additional time and development in AI algorithms and studies firmly establishing the connection between the risk of litigation and sometimes unquantifiable considerations such as "fame." Should the uncertainty of ownership and its issues become more clearly communicated and understood, then perhaps these improvements could be developed sooner and prevent another *Dota 2* controversy from occurring for the next big genre-defining mod.