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COPYRIGHT INFRINGEMENT IN THE VIDEO GAME INDUSTRY

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ABSTRACT

This study provides a global insight into copyright infringement and enforcement strategies unique to the video game industry. Over the last few decades, the video game industry has experienced unprecedented growth and, as a result, has become one of the most successful of the creative industries. Video games are complex digital products and/or services. They are designed to be interactive, immersive, and foster players' creativity. The entire lifecycle of a video game – creation, distribution, access to and use of a video game, to play or reuse it for another purpose – is enabled by intellectual property rights (IPRs), particularly copyright. Together with contracts and license agreements, these form the foundations of the video game ecosystem, facilitating interactions among all relevant stakeholders – developers and publishers (video game companies), distributors, retailers, platform owners and players – on a global scale.

The scope of the study encompasses uses and practices with regard to video games that may give rise to copyright infringement and that are distinct from potentially infringing activities concerning other copyright-protected works. Methodologically, the study identifies relevant uses and practices, mapping them according to the various stages of the video game lifecycle and

* The views expressed in this document are those of the authors and not necessarily those of the Secretariat or of the Member States of WIPO.

the identity of the alleged infringer, analyzes the nature of infringement and examines the range of enforcement strategies available to video game companies. The study evaluates the impact of potentially infringing uses and practices in terms of loss of revenue, market share and reputational damage while equally reviewing the enforcement strategies adopted by the industry from the standpoint of the likelihood of successful litigation. For the purposes of this evaluation, the study takes into consideration various factors, including the nature of the infringement and its potential detrimental effect on the company and their product portfolio, the nature of the company seeking to take action, the identity of the potential infringer or the jurisdiction in which the infringement takes place. Considering that many aspects of copyright law are not harmonized and remain subject to national legislation, and enforcement is territorial, the study reports on jurisdictions where specific legislative responses and case law are available. Despite these variables, it is feasible to establish certain key findings and tentative conclusions.

TABLE OF CONTENTS

I. Introduction.....	6
1. Scope of the Study.....	7
2. Methodology	8
3. The Video Game Industry	9
4. Preliminary Observations	12
4.1. Video Game as Complex Subject Matter for Copyright Protection	12
4.2. Limitations, Exceptions and Defenses (Including Safe Harbor).....	14
4.3. EULAs & ToS	16
4.4. Technological Protection Measures (TPMs)	17
4.5. Traditional Piracy.....	17
II. Analysis.....	18
1. Creating a Video Game.....	18
1.1. The Unauthorized Use of Third-party Intellectual Property	18
1.1.1. Industry Relevance	19
1.1.2. Copyright Infringement.....	19
1.1.3. Other Legal Implications	20
1.1.4. Enforcement Strategies.....	21
1.1.5. Evaluation	21
1.2. Game Cloning	22
1.2.1. Industry Relevance	22
1.2.2. Copyright Infringement.....	22
1.2.3. Other Legal Implications	24
1.2.4. Enforcement Strategies.....	27
1.2.5. Evaluation	28
2. Distributing and providing access to a video game.....	28
2.1. Emulators and ROMs	29
2.1.1. Industry Relevance	29
2.1.2. Copyright Infringement.....	29
2.1.3. Other Legal Implications	30
2.1.4. Enforcement Strategies.....	30
2.1.5. Evaluation	31
2.2. Key Selling	31
2.2.1. Industry Relevance	31
2.2.2. Copyright Infringement Issues.....	32
2.2.3. Other Legal Implications	34
2.2.4. Enforcement Strategies.....	34
2.2.5. Evaluation	34

2.3. Account Transfer and Second-hand Video Games	34
2.3.1. Industry Relevance	35
2.3.2. Copyright Infringement.....	35
2.3.3. Other Legal Implications	36
2.3.4. Enforcement Strategies.....	36
2.2.5. Evaluation	36
3. Altering the Video Game	36
3.1. Modding	37
3.1.1. Industry Relevance	37
3.1.2. Copyright Infringement Issues.....	38
3.1.3. Other Legal Implications	38
3.1.4. Enforcement Strategies.....	39
3.1.5. Evaluation	39
3.2. In-game User Creations	40
3.2.1. Industry Relevance	40
3.2.2. Copyright Infringement.....	40
3.2.3. Other Legal Implications	41
3.2.4. Enforcement Strategies.....	41
3.2.5. Evaluation	41
4. Interfering with the Integrity of the Video Game and/or the Experience of Other Players..	41
4.1. Industry Relevance.....	42
4.2. Copyright Infringement Issues	43
4.3. Other Legal Implications.....	46
4.4. Enforcement Strategies	46
4.5. Evaluation	46
5. Re-purposing of the Video Game.....	47
5.1. User-Generated Content (UGC).....	47
5.1.1. Industry Relevance	47
5.1.2. Copyright Infringement.....	48
5.1.3. Other Legal Implications	48
5.1.4. Enforcement Strategies.....	48
5.1.5. Evaluation	49
5.2. Livestreaming and E-sports	49
5.2.1. Industry Relevance	49
5.2.2. Copyright Infringement.....	49
5.2.3. Other Legal Implications	50
5.2.4. Enforcement Strategies.....	51
5.2.5. Evaluation	51

III. CONCLUSION	51
1. Key Findings	51
2. Heat Map	53
3. Concluding remarks	53

I. INTRODUCTION

1. The video game industry continues to develop and grow dramatically, outpacing other creative industries in size, reach and revenue. The industry is young, born-digital, global and fast paced. It embraces modern technologies, trends, business models and distribution channels. Video games are highly creative, innovative and interactive.
2. Technological innovation and easy access to gaming devices that connect people across the globe have, in turn, enabled new forms of distribution and business models adopted by the video game industry. At the core of this rapid growth and transformation of an entire industry are video games themselves. Their distinctive nature (interactivity, connectivity and creativity) facilitates the kind of user experience that was previously impossible, resulting in a truly unique ecosystem¹. Video games *per se* are complex digital products the creation, distribution and consumption of which are incentivized, enabled and facilitated by intellectual property rights (IPRs). The conceptual shift from video games as *digital products* to video games as *digital services* further aids the evolution of business models and the increasing integration of other media, live events and performances. It can reasonably be expected that this will become even more prominent in the Metaverse.
3. The study considers the specific context of the industry and identifies uses and practices within the lifecycle of video games that pose often unique challenges for video game companies when it comes to copyright infringement² and enforcement strategies. Several publications have already looked at general questions, such as copyright subsistence in video games and their constituent elements across different jurisdictions³ or general legal and business aspects of the video game ecosystem⁴. This study further builds on these findings, focusing on uses and practices that: affect all stages of the video game lifecycle (from creation, distribution, playing and re-purposing of a video game); have copyright implications (including contractual implications stemming from license agreements); present challenges unique to video games and the ecosystem as a whole; and have practical relevance to the video games industry in terms of developing and adopting effective enforcement strategies.
4. The study provides a global insight into copyright infringement and enforcement strategies in the video game industry. Identifying particular uses and practices at different stages of the video game lifecycle, analyzing the nature of infringement and examining the range of enforcement strategies, makes it possible to evaluate the impact different uses and practices will have in terms of copyright infringement and loss of revenue and, equally, assess the enforcement strategies adopted by the industry from the standpoint of litigation success. For the purposes of this evaluation, various factors are taken into consideration, including the nature of the infringement and its potential detrimental effect on the company and their product portfolio, the nature of the company seeking to take action, the identity of the potential infringer or the jurisdiction in which the infringement takes place (as copyright law is territorial and enforcement is therefore jurisdiction-specific). Despite these variables, it is feasible to establish common themes and formulate industry-informed recommendations.

¹ David Greenspan and Gaetano Dimita, *Mastering the Game* (2nd edn, WIPO 2022), p. 22 <https://www.wipo.int/copyright/en/creative_industries/video_games.html>.

² For the purpose of this study, copyright is used as to include 'Author's Rights'.

³ Andy Ramos et al, *The Legal Status of Video Games: Comparative Analysis in National Approaches* (WIPO 2013) <<https://www.wipo.int/publications/en/details.jsp?id=4130>>

⁴ Greenspan and Dimita, *op cit*; Jon Festinger et al, *Video Game Law* (2nd edn, LexisNexis 2010) (dated but still relevant); S Gregory Boyd et al, *Video Game Law* (CRC Press 2019); Chrissie Scelsi and Ross Dannenberg, *Computer Games and Immersive Entertainment* (2nd edn, ABA 2019); Dan D Nabel and Bill Chang, *Video Game Law in a Nutshell* (West Academic 2018); Ashley Saunders Lipson and Robert D Brain, *Video Game Law* (2nd edn, Carolina Academic Press 2016).

5. The study is divided into three main sections: the introduction, analysis and conclusion. The introduction provides a high-level snapshot of the industry, sets out the remit and methodology of the subsequent analysis and outlines the fundamental (and distinguishing) features of the video game ecosystem. For ease of reference, it also includes a range of preliminary observations on the legal nature of video games, copyright exceptions, limitations and defenses, license agreements, technological protective measures (TPMs) and traditional piracy. The second and core section of the study focuses on the analysis of potentially infringing uses and practices, copyright implications and enforcement strategies. The uses and practices are grouped into five separate categories, depending on which stage of the video game lifecycle they take place and the identity of the alleged infringer (another video game company, player(s), third-party hosting platform, etc.). Each use or practice is analyzed according to the same structure, by first evaluating industry relevance, then turning to the question of copyright infringement, other legal implications, enforcement strategies and, finally, an evaluation. The rationale for this delineation and the relevant criteria is outlined below under section 1.2 Methodology. The study closes with a conclusion presenting the key findings, a heat map charting different levels of risk of copyright infringement associated with the uses and practices and the likelihood of success with regards to copyright litigation and other enforcement strategies and concluding remarks informed by the evaluation of each use and practice.

1. SCOPE OF THE STUDY

6. The study's focus is twofold: to identify and analyze a range of uses and practices that infringe copyright in video games and present unique challenges to the industry and to systematically evaluate existing enforcement strategies that target these uses and practices. While other intellectual property rights may be affected (patents, trademarks, or design rights) and/or there are additional legal implications (infringement of TPMs, breach of contract or unfair competition), these are secondary to the analysis.

7. As previously established, the video game industry is global, yet copyright law and subsequent enforcement of right holders' exclusive rights are limited to specific jurisdictions. This contradiction is addressed by shifting the attention beyond major players in terms of revenue and market size, flagship titles and more dominant jurisdictions to potentially infringing uses and practices with an explicit industry relevance (judged from the standpoint of loss of revenue, market share, or reputational damage). In other words, uses and practices that are perceived to be truly harmful by the industry.

8. Video games are inherently immersive and interactive media that challenge the traditional allocation of rights, which is informed by copyright law and license agreements, as well as by monetization and business models and, increasingly, by regulation, all of which will vary across the globe. While all these factors may directly or indirectly affect the analysis of whether copyright infringement of a video game has taken place, the impact it has on the right holder, the suitability of a particular enforcement strategy and the likelihood of achieving the desired outcome, it is peripheral to the scope of the study to examine in detail other legal and regulatory implications beyond copyright law. Alternative routes to pursuing copyright infringement litigation are outlined only in specific scenarios where this can be justified based on existing case law or academic research.

9. Where relevant, the study refers to both international copyright law and key national jurisdictions, where legal discourse has addressed the uses and practices in question through case law, legislation, academic research or industry best practices. As a result, territories that feature in the analysis include North America (mainly the United States of America (US)), Europe (mainly the United Kingdom (UK), France and Germany) and Asia (mainly China). We

note that from a global perspective, there are regions with rich and mature video game case law to regions with no relevant cases at all, which is an important observation in and of itself⁵.

2. METHODOLOGY

10. The rationale for identifying key uses and practices that may result in copyright infringement of video games is based on the observation that video games have a unique nature as complex digital products that are inherently creative and interactive (discussed further in section I.4.4.1 below) that sets them apart from other digital products (and services), which, in turn, creates opportunities and challenges not present in other creative industries. In addition, video games can have an extended lifecycle, each stage of which exposes them to potential infringement by a range of different parties. Based on these factors, the methodology observes the video game lifecycle and groups the key uses and practices into five distinct categories.

11. The first stage is the creation of a video game. Thus, the first category looks at uses and practices relevant during the design and development of video games. One concern for right holders is the use and incorporation of third-party intellectual property into their own product, which might expose them to potential copyright infringement liability. While this consideration is focused on litigation avoidance and is therefore not linked to enforcement as such, it is nevertheless an integral part of the overall intellectual property strategy. The infringing party in this scenario would be the video game company itself, provided they do not have an appropriate license to use third-party content or, alternatively, the use does not fall within applicable exceptions and limitations (more on this subject in section I.4.4.2 below). Another significant concern at this first stage is cloning, whereby a competitor creates a game which replicates the game experience of the original.

12. The second stage moves on to the distribution of and access to a video game. The second category of key uses and practices examines the phenomenon of emulators and read-only memory files (ROMs), which enable a game to run on other hardware and/or software platforms than that for which it was designed, key selling, which entails unauthorized re-selling of access keys, and account transfers and second-hand video games, all of which infringe the exclusive right of distribution and/or making available to the public and are also usually prohibited by license agreements (more on this subject in section I.4.4.3 below). The infringing parties range from individual players to third-party commercial websites.

13. The third distinct stage in the video game lifecycle is the interaction between the player and the video game, whereby the game itself or its constituent element(s) is (are) altered. In this category, we concentrate on two types of modifications: modding, which entails alterations of one or more elements of a video game in ways not intended or enabled by the original developer, and in-game user creations, which result from players making use of tools provided by the game itself for creating new content. The potentially infringing parties here would be the players.

14. While using the video game, players' interaction can go beyond changing the content of the game as such. They can interfere with the integrity of the game (rules, game mechanics) and the overall player experience. One of the most significant practices falling within this category is cheating. These exploits differ from the previous category even though they may require a modification of the game or some of its elements and are usually carried out by players, third-party developers or commercial websites.

⁵ Such as the African continent or Latin America.

15. The last stage and category considers uses and practices that go beyond merely “playing” the game, but rather re-purpose the game or some of its content outside the context of the game. This is in contrast to altering the game as identified in the third category. Key uses and practices include user-generated content (UGC) and e-sports, the former carried out by players and player communities, and the latter performed by professional players and tournament organizers in a competitive context.

16. The analysis of each category consists of defining relevant uses or practices, establishing the relevance to the industry (i.e., whether the uses or practices are tolerated by the right holders or not, whether they are considered harmful to the industry and, if so, which aspect is negatively impacted – revenues, market share, reputation, or player experience), identifying the nature of the potential copyright infringement, including relevant case law, legislation and academic research. While the focus of the study is mainly on copyright infringement, implications for other IPRs and relevant areas of law are considered separately. Finally, the analysis concludes with outlining existing enforcement strategies and evaluating the overall risk to the video game company posed by the use or practice in question and the likelihood of successful litigation.

17. The high-level snapshot of the video game industry (more on this subject in section I.3 below) and the description of the unique nature of video games as complex digital products provide necessary context to demonstrate that several other factors play an important role for the outcome of the analysis of potential copyright infringement and enforcement strategies, including the type and genre of the game in question, the adopted distribution and business models, the culture within the player community and its relationship with the right holder. While we are aware of these other factors and their impact on the outcome of the analysis, they are treated as a separate area in the present study.

3. THE VIDEO GAME INDUSTRY

18. In 2020, the video game industry generated revenues of approximately USD 178 billion worldwide, exceeding that generated by the film, book publishing and music industries. Revenue numbers for the video game industry are forecast to increase to USD 180 billion in 2022 and USD 200 billion in 2023.⁶

19. In addition to these impressive economic figures, video games also have significant cultural reach. It is estimated that video games are played by some 3 billion people throughout the world⁷. The popularity of video games crosses age and gender lines. While the market was previously dominated by young men, games are now popular with players of all ages and genders. Female gamers now make up close to 46 per cent of all players, and certain games attract a majority female audience⁸. This change in demographics has been driven by increasingly easy access to games via mobile devices and online gaming portals, as well as the availability of a wide range of games at different price points – from easy-to-play hyper-casual games to elaborate multi-million-dollar AAA titles.

20. Historically, the video game market has been dominated by the US, Japan and Europe both in terms of game development and consumer spending. In recent years, China has

⁶ Greenspan and Dimita, *op cit*, ch 1. See Newzoo.com for updated figures.

⁷ Newzoo, “2021 Global Games Market Report: The VR & Metaverse Edition”, newzoo.com; and Wijman, Tom, “The World’s 2.7 Billion Gamers Will Spend \$159.3 Billion on Games in 2020; The Market Will Surpass \$200 Billion by 2023”, newzoo.com, May 8, 2020.

⁸ The number was based on 33 markets and was a representative sample of the online population aged 10-65/10-50. Newzoo, “Consumer Insights-Games & Esports”, newzoo.com.

emerged as a major player in the industry not only from a revenue-generation standpoint, but also for its role in the development, publication and distribution of video games, as well as the manufacturing of game-related hardware, such as consoles and smartphones and e-sports⁹.

21. Video games can be played on consoles, personal computers (PCs) or mobile devices. Console games run on dedicated hardware that connects to a television or screen, while PC games run on general -purpose personal computers and mobile games run on various mobile devices, such as smartphones and tablets. At the time of writing, mobile devices have become the most popular gaming platform due to easy access to devices. However, the console and PC platforms remain important. The console market continues to be dominated by three console manufacturers, namely, Microsoft (whose current flagship console is the Xbox Series X), Sony (the PlayStation 5) and Nintendo (the Nintendo Switch).

22. Video games have historically been sold as physical products. In recent years, however, physical sales have been significantly displaced by digital distribution channels. This has been driven by improvements in technology, greater access to devices and growth in bandwidth capacity. The mobile gaming market is currently dominated by the Apple App Store (for devices running Apple's iOS) and the Google Play Store (for devices running Google's Android OS)¹⁰. For console games, digital distribution is handled by the console manufacturers: the Xbox, PlayStation and Switch have their own digital distribution platforms. Where PC games are concerned, the largest digital distribution platform by far is Steam. However, its dominance has recently been challenged by the Epic Games Store, launched by the publisher of the hugely popular online game *Fortnite*, which has since signed a number of exclusive distribution deals with other publishers. Companies are also beginning to explore cloud gaming, which would allow gamers to stream games directly from servers (on which the computing would take place) without the need for specific hardware.

23. For a long time, the monetization model for video games was very straightforward: a player would receive a physical copy of a game in exchange for a one-off payment to the retailer. This began to shift with the introduction of massively multiplayer online role-playing games (MMORPGs), such as *EverQuest* and *World of Warcraft*, which charged a monthly subscription fee for continued access to the game. The introduction of digital distribution has led to the development of radically different monetization models, providing users with highly dynamic and varied models and price points for engagement. Digital sales have now grown to account for over half of all game sales in many markets worldwide. Digital distribution today includes a wide variety of pricing models, including subscription services, downloadable content that updates games post-release (adding new levels, new playable characters, etc.), paid apps and apps that either require a small fee or that are free to download and play (though some may be ad-supported or allow for in-game purchases)¹¹. The most prevalent of these is the "free to play" model. Under this model, players are given access to the game at no cost but are incentivized to make micro-transaction purchases in order to access additional content or to progress through the game more quickly.

24. As the underlying business models and distribution channels have changed, we have witnessed a vertical integration across the sector that has, in turn, become much more complex. The type of platform used determines the specific ecosystem, business models and distribution channels. For instance, consoles embody a locked-in proprietary ecosystem where the same entity manufactures the hardware, develops video game titles and often publishes them

⁹ Newzoo, "2021 Global Games Market Report: The VR & Metaverse Edition", newzoo.com.

¹⁰ Though it's worth noting that, as the Google Play Store is currently unavailable in China, a number of alternative third-party Android app stores have emerged to fill the void.

¹¹ ISFE, "Ecorys Analysis on the Impact of Copyright Infringement: A Study of Displaced Logic" (ISFE 2018) <https://www.isfe.eu/wp-content/uploads/2018/11/isfe_ecorys_study_response.pdf>.

exclusively through their digital platform. Mobile gaming allows for easier self-publishing, though the distribution of successful free to play game models has been largely concentrated into two systems (Apple and Google), raising antitrust /competition law concerns¹². In some cases, it is common for video game publishers to develop their own video game titles as well as provide the distribution platform. In other cases, video game developers, publishers and distributors may be separate entities, although with digital distribution dominating the market and a conceptual shift to games-as-service, vertical integration of the main market players is more prominent. For the sake of consistency, we refer to “video game companies” throughout the study unless it is important to distinguish between the developer, publisher and/or distributor.

25. Cloud gaming represents the next stage of distribution and has the potential to expand the market even further by exposing more types of games to current and future players without the need for any type of specific hardware or a physical or digital copy of the game¹³.

26. Product segmentation for major game releases, such as *Cyberpunk 2077*, is complex. The game has been marketed for use on multiple platforms, including PC and gaming consoles manufactured by multiple companies. Within the PC market, it has been marketed through multiple online stores, including Steam, the game store run by Epic Games and CD Projekt Red’s (CDPR) own online storefront, GOG. In addition, the game is also segmented geographically, or “localized,” with versions in different languages for different regions¹⁴.

27. We also need to consider the growing role of third parties representing interests of users and their communities in esports and other live services, or developers of immersive technologies such as augmented reality (AR) / virtual reality (VR) / XR (mixed reality) and artificial intelligence (AI).

28. Social interaction has always been a part of video game culture. The last decade has witnessed an intensification of community engagement in video games, driven in large part by the growth of live and video-on-demand streaming. Video game streaming can be classified into three categories: e-sports, “live-play”¹⁵ and “speedrunning”¹⁶. Streaming is now an important marketing tool for publishers and developers. In terms of streaming platforms, the space is currently dominated by Twitch, with Facebook Gaming and YouTube coming a distant second and third¹⁷. Streaming involves the exploitation and distribution of many different elements of a video game, creating legal challenges for publishers, developers and third-party right holders.

¹² See generally Greenspan and Dimita, *op cit*, 1.8. In the US, see *Epic Games, Inc v Apple Inc*, 493 F Supp 3d 817 (ND Cal. 2020) (currently on appeal).

¹³ Mitchell Longan et al, “Cloud Gaming Demystified: An Introduction to the Legal Implications of Cloud-Based Video Games” (October 25, 2021) Queen Mary Law Research Paper No. 369/2021 <<https://ssrn.com/abstract=3949611>>. Major players in this sector are big tech companies such as Microsoft (Xbox Cloud Gaming), Google (Stadia), Sony (PlayStation Now), Tencent (Start), Amazon (Luna) and Facebook (Facebook Gaming).

¹⁴ Alexandros Alexandrou, Michael Dunford and Salvatore Fasciana, *Cyberpunk 2077: An Intellectual Property Analysis of a Multifaceted Product* (WIPO 2019) <https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_smes_ge_20/wipo_smes_ge_20_p3.pdf>.

¹⁵ Live Play involves the playing of games that are streamed live and viewed by others. Typically, these games will be accompanied by commentary, which may include strategy on how to play the game.

¹⁶ Speedrunning involves the completing of a game or a portion of a game as fast as possible. See James Woodcock, “The Impacts of Live Streaming and Twitch.tv on the Video Game Industry” (jamiewoodcock.net, 3 January 2000) <<https://www.jamiewoodcock.net/blog/the-impacts-of-live-streaming-and-twitch-tv-on-the-video-game-industry/>>.

¹⁷ Cale Michael, “Facebook Gaming Surpasses YouTube Gaming in Total Hours Watched, Twitch Controls 70 percent of the Streaming Market” (dotesports.com, 27 October 2021) <<https://dotesports.com/streaming/news/facebook-gaming-surpasses-youtube-gaming-total-hours-watched-twitch-70-percent-streaming-market>>.

29. E-sports, namely professional or semi-professional competitive gaming in an organized format, deserves specific mention here. Although the revenue it generates is relatively small compared to overall industry revenues, it is attracting an increasingly large audience¹⁸. E-sports tournaments are offering higher and higher prize pools¹⁹; a significant number of US universities now offer e-sports scholarships²⁰; and even the International Olympic Committee has expressed an interest in e-sports²¹. Because e-sports generally involves the livestreaming of tournaments to audiences worldwide, they raise the same legal challenges as livestreaming.

4. PRELIMINARY OBSERVATIONS

4.1. Video Game as Complex Subject Matter for Copyright Protection

30. While the focus of the study is on copyright infringement in video games and enforcement strategies, it is important to provide preliminary understanding of how copyright law looks at video games as such and their constituent parts. Video games are complex digital creations potentially comprised of multiple works of authorship, and whilst they can undoubtedly be protected by copyright to some extent, there is no international consensus on the nature of this protection. As a result, the question of how video games ought to be classified for the purposes of copyright law presents challenges for virtually all jurisdictions. A 2013 WIPO-commissioned study found that different jurisdictions had adopted different approaches²²: some classify video games as predominantly computer programs, others as “complex subject matter”, some treat each protectable element of a video game as a separate work, and a small number of other jurisdictions treat video games as predominantly audio-visual works or software.

31. Lack of clarity on the legal nature of video games and the level of protection afforded by copyright can potentially lead to right holders being dissuaded from enforcing their rights appropriately or even a reluctance from platforms to engage with rights holders on issues such as cloning, as will be illustrated in the analysis section when we discuss relevant uses and practices, copyright infringement case law and available enforcement strategies.

32. Under US copyright law, it has been a long-established view that copyright subsists both in the video game’s underlying computer program and in the audiovisual display generated by it, in particular “the entire effect of the game as it appears and sounds”²³.

33. In the EU, the Court of Justice of the EU (CJEU) has, over the years, developed an extensive jurisprudence that underpins copyright law principles, which determine, *inter alia*, when copyright protection arises. In the *Nintendo* case, the court delivered that:

¹⁸ Attracts more viewers than the finals of each American professional sport except the NFL’s Super Bowl game. See “With Viewership and Revenue Booming, Esports Set to Compete with Traditional Sports” (onlinegrad.syracuse.edu, 2021) <<https://onlinegrad.syracuse.edu/blog/esports-to-with-traditional-sports/>>; and Roundhill Team, “Esports Viewership vs Sports in 2020” (roundhillinvestments.com, 25 September 2020) <<https://www.roundhillinvestments.com/research/esports/esports-viewership-vs-sports>>.

¹⁹ Jerome Heath, “The Top 10 Highest Prize Pools in Esports” (dotesports.com, 24 June 2022) <<https://dotesports.com/general/news/biggest-prize-pools-esports-14605>>.

²⁰ Over 175 American universities/colleges have esports teams. For a list of schools in the US, see: <https://www.ncsasports.org/college-esports-scholarships/varsity-esports>.

²¹ See Tom Faber, “The Olympics need esports more than esports need the Olympics” (*ft.com*, 3 August 2021) <<https://www.ft.com/content/dbabdf17-2835-499e-890d-aa19a6b464e2>>; and Des Bieler, “IOC Announces Inaugural Slate of Olympic-Licensed Esports Events” (*washingtonpost.com*, 22 April 2021) <<https://www.washingtonpost.com/video-games/esports/2021/04/22/ioc-olympics-esports/>>.

²² Andy Ramos et al, *op cit*.

²³ See for instance *Tetris Holding, LLC v. Xio Interactive, Inc* 863 F Supp 2d 394 (DNJ. 2012).

“Videogames [...] constitute complex matter comprising not only a computer program but also graphic and sound elements, which, although encrypted in computer language, have a unique creative value which cannot be reduced to that encryption. In so far as the parts of a videogame, in this case, the graphic and sound elements, are part of its originality, they are protected, together with the entire work, by copyright in the context of the system established by Directive 2001/29 [InfoSoc Directive]”²⁴.

34. In *Infopaq*²⁵, *Levola*²⁶ and *Cofemel*²⁷, the court has further clarified that in order to achieve protection, two criteria have to be fulfilled: 1) a work must be original (in the sense that it must be the author’s own intellectual creation) and 2) it has to be expressed in a manner which makes it identifiable with sufficient precision and objectivity, even though that expression is not necessarily in permanent form. It would be beneficial if the court eventually clarified whether and how these two statements are compatible: is a video game a complex work comprising different protectable elements, or a work *per se*, or both? This could have substantial practical repercussions.

35. UK copyright law adopts a closed list system, which means that in order to attract copyright protection, works must be expressed in a manner that fits within one of the specified categories. This is specifically relevant in the context of video games where some elements, such as game mechanics, would be more closely associated with ideas rather than original expressions and would therefore fall outside the scope of protection. In *Nova v. Mazooma*²⁸ the court held that the sequences of images generated on the screen during play could not be protected as dramatic work, as the precise sequence of images shown would inevitably vary depending on how the game was played. Furthermore, the court held that the literary copyright subsisting in a computer program applied only to the code in which it was written and did not extend to the functionality implemented by that code, such as the game mechanics in this case.

36. These different approaches to the classification of video games as copyright subject matter have implications for enforcement. First, such classification defines the nature and scope of copyright protection afforded to video games, which, in turn, defines which uses and practices qualify as copyright infringement. As the discussion on cloning below will show, in jurisdictions where the different elements that make up a video game are protected as separate works, with no protection afforded to the audiovisual display generated during play, publishers have had difficulty enforcing their rights against the producers of clones. This is because video game clones primarily involve the copying of the overall game design and gameplay, rather than the duplication of individual elements such as the underlying software, the art or the music. Second, the issue of classification has a direct bearing on who the author or right holder is, the exact set of exclusive rights (and neighboring rights) applicable and therefore what acts constitute potential infringements and who is entitled to sue.

37. For instance, classifying video games as audiovisual works brings about a number of difficulties. The traditional set of co-authors for these works – the scriptwriters, the director and composer of the original soundtrack – are not necessarily identical to those involved in the

²⁴ C-355/12 *Nintendo Co Ltd v PC Box Srl* [2014] ECDR 6.

²⁵ C-5/08 *Infopaq International A/S v Danske Dagblades Forening* [2009] ECR I-6569.

²⁶ C-310/17 *Levola Hengelo BV v Smilde Foods BV* [2019] ECDR 2, [40] (holding that “the subject matter protected by copyright must be expressed in a manner which makes it identifiable with sufficient precision and objectivity”).

²⁷ C-683/17 *Cofemel – Sociedade de Vestuário SA v G-Star Raw CV* [2020] ECDR 9.

²⁸ *Nova Productions Ltd v Mazooma Games Ltd* [2007] EWCA Civ 219. The approach by UK courts is further discussed in Nick Kempton, ‘Copyright Protection of Video Games in the Post-Brexit World’ (2020) 3(2) IELR 131.

development of a video game. In the EU, the Term Directive²⁹ stipulates that “[t]he principal director of a cinematographic or audiovisual work shall be considered as its author or one of its authors. Member States shall be free to designate other co-authors”. The same Article further specifies that “[t]he term of protection of cinematographic or audiovisual works shall expire 70 years after the death of the last of the following persons to survive, whether or not these persons are designated as co-authors: the principal director, the author of the screenplay, the author of the dialogue and the composer of music specifically created for use in the cinematographic or audiovisual work”³⁰. Furthermore, the rights requested by and assigned to producers of audiovisual works and video games may not always align. It is also necessary to consider the application of specific rules applicable to works, such as software, in case of authorship and ownership of works created by employees. The Computer Program Directive³¹ provides that “[w]here a computer program is created by an employee in the execution of his duties or following the instructions given by his employer, the employer exclusively shall be entitled to exercise all economic rights in the program so created, unless otherwise provided by contract”.

4.2. Limitations, Exceptions and Defenses (Including Safe Harbor)

38. While there are several international and regional initiatives to standardize and harmonize copyright law³², many aspects of the legal regime are considered to be subject to national jurisdictions on the account of copyright (and intellectual property rights in general) are territorial in nature. Copyright limitations and exceptions are a case in point. While every country provides for specific uses that are exempt from copyright – usually for the purposes of criticism, parody, access for the visually impaired, and so on – approaches to how to implement them will vary. In general, there are two ways to incorporate limitations and exceptions into the copyright system.

39. The first model stipulates specific activities that are excluded from copyright protection and can be mostly found in civil law countries. On the EU level, the InfoSoc and Digital Single Market Directives provide for a list of exceptions to the right holder’s exclusive rights³³. This model creates legal certainty about which uses and practices are allowed and do not infringe copyright, though it is limiting in the sense that activities not falling within the list of limitations and exceptions will be deemed infringing.

40. The second model is more flexible and includes guidelines on what is allowed without the permission of the right holder. Courts then interpret these guidelines in specific scenarios. This enables copyright law to adapt faster to new technologies and applications, but leaves room for more uncertainty. We can see this model embedded in the fair use doctrine in the US.

²⁹ Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights (codified version) [2006] OJ L372/12 (“Term Directive”), art 2(1).

³⁰ Term Directive, art 2(2).

³¹ Computer Program Directive 2009/24/EC. Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (Codified version) [2009] OJ L 111/16 (“Software Directive”), art 2(3)

³² Such as the Berne Convention 1886, the WIPO Copyright Treaties 1996 and the TRIPS Agreement 1994. EU copyright legislation consists of 11 Directives and 2 Regulations, harmonizing the exclusive rights of authors, performers, producers and broadcasters. Moral rights are excluded from the copyright *acquis* as they are considered to be a matter for the national laws of the Member States.

³³ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society [2001] OJ L167/10 (“InfoSoc Directive”), art 5(1); Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC [2019] OJ L130/92 (“Digital Single Market Directive”), art 17.

To apply the doctrine, US courts have developed a four-factor test in which judges consider: 1) the purpose and character of the use, 2) the nature of the copyrighted work, 3) the amount and substantiality of the portion taken and 4) the effect of the use on the potential market³⁴.

41. While China's copyright statute provides for a closed list of exceptions, some of the courts have begun to use the fair use principles derived from US law in their decisions³⁵.

42. One specific principle regarding right holders' exclusive rights requires more detailed attention. Authors have an exclusive right to authorize or prohibit distribution of their works (and their copies) by sale or otherwise, for example by lending or even by distributing free copies. This is subject to the first sale doctrine in the US³⁶ and the exhaustion of the distribution right in the EU³⁷. It has been a long-standing question whether this principle applies to digital works as well as to analogue ones. This is particularly relevant for the assessment of key selling, account transfers and selling of second-hand video games, as discussed in sections II.2.2 and II.2.3.

43. The application of the principle of exhaustion hinges on the difference between the (exhaustible) distribution right and the (inexhaustible) right of making available. The case of *UsedSoft*³⁸ was the first to explore the application of the exhaustion doctrine in the digital context. UsedSoft started selling "second-hand" licenses to Oracle's software, which was made available to download by customers from the Internet. The use of the software was governed by a license agreement which provided that, in return for payment of a one-off fee, the customer received a non-exclusive, non-transferable right to use the software for an unlimited period. The court was asked to consider what constitutes the sale of a copy, which, in turn, results in the exhaustion of the copyright holder's right to distribution. The CJEU chose to focus on the transaction's substance rather than its form and essentially concluded that while the terminology used was of little consequence, it is the economic circumstances of the transaction that matter.

44. The most recent decision in *Tom Kabinet*³⁹ further confirmed the distinctive nature of the InfoSoc Directive in relation to the Software Directive (which is *lex specialis* and applies only when it concerns computer programs). The Court decided that the supply of legally obtained 'second hand' e-books via download for permanent use does not affect the distribution right, but rather the right of making available to the public as a subset of communication to the public⁴⁰. Furthermore, Recital 29 of the InfoSoc Directive states that "exhaustion does not arise in the case of services and on-line services in particular". This translates to a situation where whenever a work is distributed through digital means, this distribution necessarily corresponds to the provision of a service – not the sale of goods⁴¹. The Court's position makes it clear that the distribution right is based on an understanding of the exhaustion rule that only covers the circulation of physical copies⁴².

45. Elsewhere, there are two cases relevant for the application of the first sale doctrine with regards to digital goods, namely the decision in *ReDigi*⁴³ in the US, where the court ruled against digital exhaustion of digital copies, and the Canadian case *ESA v. Society of*

³⁴ General information on the fair use doctrine and the four-factor test can be found here: <https://fairuse.stanford.edu/overview/fair-use/four-factors/>.

³⁵ Copyright Law (People's Republic of China), art 22.

³⁶ Copyright Act 1976 (US), s 109(a).

³⁷ Information Society Directive, art 4(2), Alina Trapova and Emanuele Fava, "Aren't We All Exhausted Already? EU Copyright Exhaustion and Video Game Resales in the Games-as-a-Service Era" (2020) 3(2) IELR 77.

³⁸ C-128/11 *Usedsoft GmbH v Oracle International Inc* [2012] 3 CMLR 44.

³⁹ C-263/18 *Nederlands Uitgeversverbond v Tom Kabinet Internet BV* [2020] 2 CMLR 20.

⁴⁰ Ansgar Kaiser, "Exhaustion, Distribution and Communication to the Public – The CJEU's Decision C-263/18 – *Tom Kabinet* on E-Books and Beyond" (2020) 69(5) GRUR International 489.

⁴¹ Caterina Sganga, "A Plea for Digital Exhaustion in EU Copyright Law" (2018) 9 JIPITEC 211, 217.

⁴² Kaiser, *op cit*.

⁴³ *Capitol Records, LLC v ReDigi Inc* 934 F Supp 2d 640 (SDNY 2013).

*Composers, Authors and Music Publishers of Canada*⁴⁴, which goes the opposite way and lays foundations for legitimate transfers of second-hand video game accounts to others.

46. Another relevant concept to discuss is the safe harbor regime that offers immunity to online service providers, including hosting providers, from claims of copyright infringement based on the actions of their users provided that: (i) they have no knowledge or awareness of that fact that infringing material is being provided through their services and (ii) upon acquiring knowledge of awareness of that fact, they act expeditiously to remove or disable access to that material, in line with the notice-and-takedown system⁴⁵. Similar to limitations and exceptions, this exemption has not been harmonized and is interpreted and applied differently depending on the jurisdiction. Looking at the US and EU, the main discrepancies being the definition of an Internet service provider (ISP) and the range of entities meeting those criteria, and the burden of proof. In the EU, the ISP has to prove that they have no actual knowledge or awareness, which is in practice much easier than it is for the ISP in the US to prove that they have actual knowledge or awareness⁴⁶.

4.3. EULAs & ToS

47. End-user license agreements (EULAs) and Terms of Service (ToS) (also called Terms of Use – ToU) are the principal legal instruments governing the relationship between the video game company and their players. Players must agree to the relevant EULA and/or TOS in order to play the video game concerned.

48. These contracts are essential for allocating rights in ways that enable the commercialization of video games by virtue of granting permission to access and use the copyright protected work, under specific conditions (proprietary, open-source license, end-user license agreement). They specify in detail the permissions and restrictions that apply to the use of the software. The default copyright rules are often modified or adapted by contracts – license agreements.

49. From the standpoint of terminology, a EULA agreement gives the purchaser the right to use a copy of the product after they have paid for it, based on the permission included in the license. It also usually specifies which uses and practices are prohibited, such as reverse engineering and making additional copies of the software. In contrast, ToS is a legal document that more widely covers expected behavior and rules addressed to users of the software, including matters such as harassment, privacy and data protection. Together, EULAs and ToS are fundamental instruments of governance when it comes to uses and practices connected with video games. It is also worth noting that they are all virtually contracts of adhesion as they are offered and accepted on “take it or leave it” basis. The validity and enforceability of individual provisions have been questioned in courts on multiple occasions.

50. Any use or practice that goes beyond the scope of the license automatically constitutes a breach of contract and may potentially amount to copyright infringement. In addition, acting in a

⁴⁴ *Entertainment Software Association v Society of Composers, Authors and Music Publishers of Canada* [2012] 2 SCR 231.

⁴⁵ In the EU, this is addressed by Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market [2000] OJ L178/1 (“E-Commerce Directive”), art 14; in the US, the safe harbor provision was introduced by the Digital Millennium Copyright Act 1998, s 512.

⁴⁶ The new Digital Single Market Directive, in particular article 17, gives ISPs greater responsibility to act against copyright infringement and could therefore be a new tool for right holders to challenge them in court. However, it is still debated whether the application of article 17 is fully relevant to video game companies.

way that contravenes the terms of these agreements means that players are in breach of contract. In the context of digital works, this translates to the situation whereby the right holder may argue that continued use of the said work not only constitutes breach of contract but also amounts to copyright infringement since the license provides that the authorization given to the licensee to use the work is terminated under such circumstances. This reinforces the reach of copyright (together with TPMs, as discussed in the following section) and in cases where there is no protection afforded to a specific element or the use or practice in question falls within a valid limitation and exception, the use and practice may still lead to a breach of contract.

4.4. Technological Protection Measures (TPMs)

51. The WIPO Treaties⁴⁷ introduced the legal protection on TPM. These were later implemented in the US by the DMCA and in the EU by three separate directives. TPMs provide for an additional protection system through technologies that prohibit access, encrypt or control copying of protected works, including techniques such as authentication handshakes, code signing, code obfuscation and protocol encryption. The use of TPMs is then reinforced by complex and extensive laws prohibiting circumvention of such measures, by way of overlapping civil and criminal actions⁴⁸.

52. Prior to *Nintendo v PC Box*, the courts of EU member states had interpreted the InfoSoc Directive's requirements with regards to the scope of protection afforded by TPMs in a way that seemed to extend the protection to the right holders. Nintendo's TPMs prevented the use of Nintendo consoles for games and multimedia not originating from Nintendo. PC Box argued that the actual purpose by Nintendo was to obtain blanket prevention of use of all software, even third-party legal software and other software, which allowed full use of console's capabilities. The CJEU stated that the TPMs should not restrict activities beyond those necessary to protect the copyright in the works, following the principle of proportionality. While some uses and practices infringe TPMs in addition to copyright, the infringement or circumvention of TPMs is not the primary focus of this study.

4.5. Traditional Piracy

53. Before proceeding with specific practices, it is necessary to address the issue of what one might call "traditional" piracy, namely the unauthorized online distribution and downloading of entire copies of video games. The industry claims that this type of infringement continues to constitute a threat to the future of the industry and represents countless lost sales every year, but it has been notably difficult to substantiate this claim with objective data. Piracy in the video game industry is a complex issue, with different companies impacted to varying degrees, depending on the types of games they publish and on which platforms they publish them. This issue has been discussed in detail in previous publications⁴⁹ and recommendations⁵⁰ have been

⁴⁷ WIPO Copyright Treaty 1996 ("WCT"); WIPO Performances and Phonograms Treaty 1996 ("WPPT").

⁴⁸ On the international level, the legal principles are enshrined in the WIPO Internet Treaties. In the EU, the relevant Directives are the Information Society Directive, Software Directive and Directive 98/84/EC of the European Parliament and of the Council of 20 November 1998 on the legal protection of services based on, or consisting of, conditional access [1998] OJ L 320/54 ("Conditional Access Directive"). In the US, the relevant provisions can be found in the Digital Millennium Copyright Act 1998.

⁴⁹ Brett Danaher, Michael D Smith and Rahul Telang, "The Truth About Piracy" (Technology Policy Institute, February 2016) <<https://techpolicyinstitute.org/2016/02/02/the-truth-aboutpiracy/>>.

⁵⁰ ISFE, "Response to EC's Recommendation on 'Measures to Effectively Tackle Illegal Content Online'" (ISFE 2018) <<https://www.isfe.eu/news/response-to-ecs-recommendation-on-measures-to-effectively-tackle-illegal-content-online/>>.

developed to tackle it. The primary enforcement strategies against this form of piracy are the same as those applicable to piracy of other types of copyright-protected works. These include litigation against the operators of piracy sites; applying for website blocking injunctions⁵¹ requiring ISPs to block their subscribers' access to these sites; utilizing the notice and takedown mechanisms now implemented by many hosting providers; and applying TPMs. For this reason, the study does not address traditional piracy as such, since it does not pose a challenge that is unique to the video game industry.

II. ANALYSIS

54. The analysis concentrates on identifying and evaluating key uses and practices that may infringe copyright in video games and existing enforcement strategies. The uses and practices are grouped into five separate categories, depending on which stage of the video game lifecycle they take place and the identity of the alleged infringer (i.e., another video game company, player(s), a third-party hosting platform, etc.). The analysis is further grouped into the following categories: creating a video game, distributing and providing access to a video game, altering a video game, interfering with the integrity of a video game and re-purposing a video game. The categories, as well as individual uses and practices, are examined and assessed based on the same methodology. After a brief description, we look at the impact these uses and practices have on the industry, copyright (and other legal) implications and available enforcement strategies. The evaluation provides the basis for the final recommendations.

1. CREATING A VIDEO GAME

55. At first instance, potential copyright infringement can arise during the design and development of a video game whereby the publisher (or developer, if these are separate entities) includes third-party IP without authorization (i.e., without acquiring a license from the right holder). The use of third-party IP is an increasingly common practice and should be subjected to a thorough rights clearance to minimize risk. Video game companies can also face copyright infringement claims in scenarios where they attempt to imitate other successful game titles by replicating the same game experience (game cloning). When it comes to users, they may face legal consequences for running video games on hardware and/or software platforms other than those for which the games were originally designed (ROMs and emulators), re-selling digital copies of video games, or transferring their personal accounts. Websites that sell product keys for video games and thus distribute them without authorization from the publisher are also potentially in breach of copyright.

1.1. The Unauthorized Use of Third-party Intellectual Property

56. This practice concerns the initial stage of the product development process and considers a scenario where a video game publisher may wish to incorporate third-party IP. The reason for this increasingly common practice is the aim to create a truly immersive and realistic experience for players. This may take the form of including real-world objects (such as vehicles, clothing, accessories and weapons), works of architecture, Easter eggs⁵² and even dance moves⁵³. To

⁵¹ See for instance *Nintendo Co Ltd v British Telecommunications Plc* [2021] EWHC 3488.

⁵² The term describes secret content hidden in a video game by its developers, typically as a joke or reference. It often references or mimics an existing piece of media.

provide players with a more immersive and realistic experience, video game companies may choose to design their games around historic events, using replications of weapons, military vehicles, aircraft, uniforms and equipment, include real or fictional characters, places, or accessories. All these assets may be protected by copyright (and other IPRs).

57. This gives rise to a general question whether this inclusion results in potential liability for copyright infringement on the part of the video game company, unless they acquired the necessary license of the relevant right holder. It is also possible to argue, under specific circumstances, that the inclusion is permitted under copyright exceptions.

1.1.1. Industry Relevance

58. Strictly speaking, this practice is not about enforcing right holders' exclusive rights *per se* but about avoiding litigation for infringing third-party IP. However, a robust rights clearance system is growing in significance given the shift towards deeper realism, immersion and integration of other media into video games.

59. Clearing real-world objects can be extremely expensive and time-consuming given that it may not be evident whether the content is protected by IPRs in the first place (for instance, it was questioned whether dance moves or tattoos attract copyright protection), the term of protection is still running its course, or the identity of the right holder. In addition, the territorial nature of copyright and other IPRs, coupled with the lack of harmonization of limitations and exceptions around the world, make this a real challenge and a potential legal minefield.

1.1.2. Copyright Infringement

60. As a preliminary issue, the video game company seeking to use a third-party work should confirm whether it is likely to be protected by copyright in the first place. Works of architecture, for instance, are protected by copyright in several jurisdictions, including the US⁵⁴, the UK⁵⁵ and EU member states⁵⁶. However, many older works of architecture may well be out of copyright, as the term of protection is the life of the author plus 70 years after their death (or, if the author is unknown, 70 years after its creation). Meanwhile, the copyright status of dance moves is less clear. While choreographic works are generally protected under the copyright laws of most jurisdictions⁵⁷, there is some suggestion from the practice of the US Copyright Office that the kind of short dance moves commonly used in video games such as *Fortnite* may not be eligible for protection. The US Copyright Office's Circular 52⁵⁸, which deals with the copyright registration of choreography and pantomime, states that: "Individual movements or dance steps by themselves are not copyrightable ... [T]he US Copyright Office cannot register short dance routines consisting of only a few movements or steps with minor linear or spatial variations, even if the routine is novel or distinctive"⁵⁹.

⁵³ The hugely popular video game *Fortnite* is particularly well known for this. Players can direct their characters (or avatars) to act out short dance moves. Some of these dances are original to the game, but others are based on dances performed by real-life celebrities.

⁵⁴ Copyright Act 1976 (US), s 102(a).

⁵⁵ Copyright, Designs and Patents Act 1988 (UK), s 4(1).

⁵⁶ See e.g. Intellectual Property Code (France), art L112-2; Act on Copyright and Related Rights (Germany), s 2(1).

⁵⁷ See e.g. Copyright Act 1976 (US), 102(a); Copyright, Designs and Patents Act 1988 (UK), s 3(1).

⁵⁸ United States Copyright Office, "Copyright Registration of Choreography and Pantomime"

<<https://www.copyright.gov/circs/circ52.pdf>>.

⁵⁹ Cited in *Brantley v Epic Games* 463 F Supp 3d 616 (D Md 2020). Here, two former college athletes brought an action against Epic Games for including a dance called the "Running Man" in *Fortnite*. They claimed that they had

61. Before using a third-party copyright work, the video game company is usually advised to clear the use with the relevant right holder (i.e., obtain a license from them) or to ascertain that the use is permitted under one or more copyright exceptions. As indicated in the preliminary observations, some jurisdictions may have exceptions that permit the use of specific types of copyright works. A case in point is buildings. UK copyright law contains a statutory exception permitting the making of a graphic work representing a protected building where it is permanently situated in a public place or in premises open to the public⁶⁰. In the EU, the InfoSoc Directive (“InfoSoc Directive”) permits member states to introduce (or maintain) an exception or limitation covering the “use of works, such as works of architecture or sculpture, made to be located permanently in public places”⁶¹. However, different EU member states have implemented this exception differently. For instance, France’s new “freedom of panorama” exception permits the making of copies of public artworks – which would include architectural works – but only in the course of a non-commercial activity⁶². The Supreme Court of Sweden has held that Wikimedia required a license from the relevant right holder in order to lawfully display images of copyright-protected buildings⁶³.

62. US copyright law, meanwhile, allows third parties to create, distribute or publicly display pictorial representations of an architectural work if the building embodying that work is located or ordinarily visible from a public place⁶⁴. This means that a video game developer would usually not require a license to incorporate publicly visible architectural work as a general part of the scenery in their game. However, there may still be issues where a game developer seeks to make a particular building the focus of a game level, or to allow the player to destroy the building’s in-game representation, or to make use of its interior or distinctive exterior elements. Moreover, some countries provide for specific protection (that is independent from copyright) against the commercial use of their cultural heritage (see *Decreto Urbani* in Italy⁶⁵).

63. Other exceptions may also be available depending on the nature of the particular use. Certain uses of third-party works may be permitted under the open-ended fair use doctrine in the US and several other jurisdictions operating a similar open-ended exception. Some uses – particularly in Easter eggs, given their self-referential and often humorous nature – may also be permitted under the narrower exceptions for parody and quotation in the UK⁶⁶ and in EU member states⁶⁷. However, there have yet to be any judicial decisions on this point, so the assessment would have to be carried out on a case-by-case basis.

1.1.3. Other Legal Implications

64. Many of these digital objects may also be subject to trademark protection, design rights, or personality rights (in cases where the likeness of real-world protagonists is being recreated in the digital environment, such as in sports-based video games). And even where no licenses are required in a given jurisdiction because the use is permitted by the law, it may still be advisable in some circumstances for the video game company wishing to use third party IP to

created and popularized the “Running Man” dance, which went viral on social media and became even more popular when the duo performed it on the *Ellen DeGeneres Show*. While the suit initially included a claim for copyright infringement, this was ultimately dropped by the plaintiffs, and replaced with other claims.

⁶⁰ Copyright, Designs and Patents Act, s 62.

⁶¹ Information Society Directive, art 5(3)(h).

⁶² Intellectual Property Code (France), art L112-5.

⁶³ *Bildupphovsrätt i Sverige ek.för. (BUS) vs Wikimedia Sverige* (Case nr Ö 849-15).

⁶⁴ Copyright Act 1976 (US), s 120(a).

⁶⁵ Decreto Legislativo 22 gennaio 2004, n. 42 “Codice dei beni culturali e del paesaggio”.

⁶⁶ Copyright, Designs and Patents Act 1988 (UK), s 30(1ZA).

⁶⁷ Information Society Directive, art 5(3)(d).

clear the use with the relevant right holder, in order to secure their goodwill and avoid potential public backlash.

1.1.4. Enforcement Strategies

65. This section specifically deals with an infringement avoidance strategy rather than enforcement strategy. As indicated previously, a video game company seeking to make use of third-party content should begin by establishing the likelihood that copyright subsists in the content in question. They should then consider whether any copyright exceptions apply to their proposed use. In this context, it is important to remember that copyright exceptions are not uniform across all jurisdictions; fair use, for instance, is applicable only in a limited number of countries. If there is a likelihood that copyright subsists in the third-party content and there are no clear exceptions, the video game developer should proceed to secure a license from the relevant right holder. This is especially the case where the right holder is well-resourced and likely to be litigious.

66. A final point to remember is that, even in cases where no license is legally necessary, it may be advisable to secure the consent of the third-party creator in any event, particularly where not doing so might give rise to a public backlash. In one high-profile incident, Sony drew outrage from the Church of England over the video game *Resistance: Fall of Man*, which featured combat scenes taking place within a virtual representation of Manchester Cathedral. The age of the cathedral meant that any copyright that might have subsisted in it as a work of architecture would likely have expired long ago, and even if copyright did still subsist in it, Sony's use of its in-game representation was likely to be covered by the UK statutory exception referred to above⁶⁸. Nevertheless, there was still significant controversy, and Sony ultimately felt the need to offer an apology to the Church of England. Similar considerations apply to the use of short dance moves in video games such as *Fortnite*: while copyright might not subsist in such dance moves (at least under the current approach taken by the US Copyright Office), it may still be advisable to arrive at an agreement with the originators of these dance moves, particularly where they have a significant social media following, as any negative statements they make about the perceived misappropriation of their dance moves might result in significant public backlash for the video game developer.

1.1.5. Evaluation

67. While incorporating third-party content into a video game potentially makes it more appealing to players, the likelihood of such content being protected by copyright or some other form of IPR and the lack of harmonization of exceptions and limitations across different jurisdictions and the risk of public backlash (even where the use does not implicate any third-party IPRs) combine to make this a somewhat risky practice for video game companies, both legally and from a public relations perspective. This is not to suggest that video game companies should necessarily shy away from using such content. However, given the attendant risks, third-party content should preferably be used where there is a strong business case for it, such that the risks are outweighed by its positive impact on the game. Video game companies should also take steps to minimize the risk of copyright and other IP infringement by securing licenses where appropriate and should also be mindful of the need to guard against public backlash by seeking permission from the creators and custodians of such content even when this is not strictly legally necessary.

⁶⁸ Freeth Cartwright LLP, "Church of England Try to Send Sony on a Massive Guilt Trip" (freethcartwright.com, 12 June 2007)
<https://web.archive.org/web/20071211160716/http://impact.freethcartwright.com/2007/06/church_of_engla.html>.

1.2. Game Cloning

68. Game cloning refers to a practice where a competitor seeks to capitalize on a video game's success by replicating its combination of game mechanics – namely the rules and systems that govern and guide the player's interactions with the game – without engaging in any direct copying of the game's art, music, sounds or the computer program that powers it. This effectively allows the competitor to produce a game that “plays” in the same way as the original but looks and sounds different from it.

1.2.1. Industry Relevance

69. The issue has become particularly significant in light of the growth of the mobile gaming sphere, as the relative simplicity of mobile games make them much more susceptible to this kind of imitation. A key concern for mobile game companies is that when the original game and its clone are presented side-by-side in the same online store, potential customers may well confuse the two and may end up purchasing the clone when they might well have intended to purchase the original game. At present, right holders whose games have been “cloned” often find it difficult to make out claims of copyright infringement, for the reasons set out below.

1.2.2. Copyright Infringement

70. From a copyright perspective, the creation of a game clone potentially amounts to an infringement of the reproduction right and/or the adaptation right in the original game, and the marketing of a game clone may constitute infringement of its distribution and/or communication to the public right. As alluded to previously, however, the developer or publisher of the original game may have difficulty making out copyright infringement for two main reasons: (i) classifying the original game as an appropriate category of copyright subject matter that encompasses game mechanics and (ii) establishing that the copying of game mechanics constitutes copying of the game's “expression” rather than merely its “idea”.

71. Video game companies in several jurisdictions have taken legal action on the basis of copyright infringement against producers of game clones, with mixed results. In the UK case of *Nova Productions v. Mazooma Games*⁶⁹, the manufacturer of an arcade video game that simulated a game of pool brought a claim of copyright infringement against the designer of another pool-themed arcade video game. The basis of the claim was that the two games had certain game mechanics in common. The claim was unsuccessful both at first instance and on appeal. It was held that the sequences of images generated on the screen during play could not be protected as a dramatic work, as the precise sequence of images shown would inevitably vary depending on how the game was played. This being the case, it was held that the visual elements of the video game could only be protected as artistic works in the form of still screen images. One of the similarities relied upon by the claimant was an animation cycle which showed the pool cue moving in time with a pulsing power meter, which allowed the player to determine the strength of the shot. This feature was present in both the claimant's and defendant's games. This animation cycle, however, could not be captured within any single one of the still images, and the claimant's attempt to argue that the animation itself constituted a different type of artistic work was rejected. The claimant also sought to argue that the game

⁶⁹ [2006] EWHC 24 (Ch); [2007] EWCA Civ 219.

mechanics were protected as part of the computer program through which they were implemented and which was itself protected as a literary work. This argument, however, was also unsuccessful. The court held that the literary copyright subsisting in a computer program applied only to the code in which it was written and did not extend to the functionality implemented by that code, such as the game mechanics in this case.

72. Cases brought before US courts have, however, been more successful. In *Tetris Holding v. Xio Interactive*⁷⁰, the right holders in the well-known *Tetris* puzzle game brought a claim against the developer of *Mino*, a game based around the same concept of requiring players to manipulate falling tetrominoes in order to form complete lines. The court began by noting that under US copyright law, protection subsists in the audiovisual display generated by a video game and in particular “the entire effect of the game as it appears and sounds”. Here, the court found that the designer of *Mino* had engaged in detailed copying of the game mechanics found in *Tetris*, including the dimensions of the playing field, the display of “garbage” lines, the appearance of “ghost” or shadow pieces and the display of the next piece to fall. A similar outcome was reached in *Spry Fox v LolApps*⁷¹, where the copyright in the puzzle game *Triple Town* was held to be infringed by its clone, *Yeti Town*. Both games were match-three games, meaning that when three identical objects were placed next to each other on the game grid, they transformed into a single more complex object. Both games featured a six-square-by-six-square game grid, a similar hierarchy of objects and the presence of a wild creature – in *Triple Town*’s case, a bear; in *Yeti Town*’s case, the titular yeti – that would appear from time to time to impede the player’s progress. While there were some visual differences – e.g., *Triple Town* being set in a meadow and *Yeti Town* in a snowfield – these did not preclude a finding of infringement⁷².

73. Video game companies seeking to take legal action against producers of game clones have had mixed results before the Chinese courts. In earlier cases, the courts seemed more willing to find infringement where the game clone had copied a literary or artistic element of the original video game in addition to copying the game mechanics. In the *Hearthstone* case, decided in 2013, Blizzard Entertainment brought an action against the developers of the mobile game *Wolongsb* for copyright infringement of Blizzard’s digital collectible card game *Hearthstone*⁷³. *Hearthstone* was based on the lore of Blizzard’s popular MMORPG *Warcraft*, while *Wolongsb* was based on the Chinese epic *Romance of the Three Kingdoms*. Nevertheless, *Wolongsb* was said to have closely imitated *Hearthstone*’s game rules, user interface and card descriptions. The First Intermediate People’s Court of Shanghai found infringement primarily on the basis of the card descriptions, which it held were protected as written works. In relation to the other elements of the claim, it held that the rules of the game were abstract ideas and therefore incapable of being protected by copyright.

74. In subsequent cases, however, there are signs that the Chinese courts may be prepared to take a more flexible approach in cases involving the copying of game mechanics and rules. In 2015, the right holders in the mobile game *Taichi Panda* sued the developers of another mobile game, *The Journey of Flower*, for copying the former’s game mechanics and user interface⁷⁴. While the court emphasized that copyright could subsist only in the specific expression of ideas and not in abstract ideas as such, it also held that the specific selection, arrangement and combination of game rules could amount to expression and could therefore be

⁷⁰ 863 F Supp 2d 394 (DNJ 2012).

⁷¹ No 2:12-cv-00147 (WD Wash 2012).

⁷² Another case of copyright infringement brought in relation to a game clone is *Machine Zone v Ember Entertainment* No 3:15-cv-01554 (ND Cal 2016). This was subsequently settled out of court.

⁷³ *Blizzard Entertainment Co, Ltd & Shanghai NetEase Network Technology Co, Ltd v Shanghai Youyi Network Technology Co, Ltd* (2014) Hu Yi Zhong Civil Verdict Five (IP) No 23.

⁷⁴ *Suzhou Snail Digital Technology Co, Ltd. v Chengdu Tianxiang Interactive Technology Co, Ltd* (2015) Su Zhong IP Civil Verdict No 00201.

protected by copyright to some extent. As *The Journey of Flower* had copied these exact elements from *Taichi Panda*, it was found to have infringed the right holders' adaptation right. Similarly, in 2017, the developers of *Battle of Heroes* and *Gameplay Frontline* were found to have infringed the adaptation right in *Overwatch* by copying game design elements such as the game rules, winning and losing conditions, character designs and the user interface⁷⁵. The court held these game design elements to be specific expressions of abstract rules and therefore capable of being protected by copyright.

1.2.3. Other Legal Implications

75. The practice of game cloning also raises legal issues that could potentially be dealt with under patent law, trademark law, the law of unfair competition or passing off and/or design law.

Patent Law

76. A number of companies have successfully secured patents for particularly innovative game mechanics in the US⁷⁶. These include the Nemesis system from *Middle-Earth: Shadow of Mordor* (a mechanic by which the game creates a complex hierarchy of enemies, each with their own strengths, weaknesses and unique relationships with the player and each other)⁷⁷, the "dialogue wheel" from the *Mass Effect* series (which presents interactive dialogue choices to the player in the form of a wheel)⁷⁸ and the "sanity system" from *Eternal Dark* (a mechanic whereby the player's sanity level is represented by a meter bar, which is decreased every time the player encounters a gruesome situation)⁷⁹. Where a video game company has secured a patent over a game mechanic, they will be able to enforce that patent against any video game developer or publisher who, without prior authorization from the patent owner, produces a game containing the same mechanic. In 2003, Sega filed a patent infringement action against video game publishers Fox Interactive and Electronic Arts and game developer Radical Entertainment for using game mechanics similar to Sega's *Crazy Taxi* in their driving game *The Simpsons: Road Rage*⁸⁰. Sega had previously obtained a patent on the relevant technology, which claimed "a game display method, moving direction indicating method, game apparatus and drive simulating apparatus"⁸¹. Its features included having cars surrounded by an invisible "danger zone", which virtual pedestrians would jump out of the way of, and hovering arrows, which showed the player which direction to go in. These elements were also found in *The Simpsons: Road Rage*. The case was eventually settled out of court.

77. The standard for obtaining a patent, however, is high. When applying for a patent, the applicant must show that the invention is novel, involves an inventive step (i.e., must be non-obvious) and is capable of industrial application. If a similar invention exists or has been described in sufficient detail in any sort of publication that is accessible to the public (such as a scientific paper, a textbook or even a website), that could render the invention unpatentable.

78. In addition, the patent laws of certain jurisdictions contain explicit exclusions from patentability that make it very difficult to obtain a patent over a game mechanic. European patent law, for instance, prohibits the patenting of computer programs "as such"; they can only

⁷⁵ *Blizzard Entertainment Co, Ltd & Shanghai NetEase Network Technology Co, Ltd v 4399 Network Co, Ltd* (2017) Hu 0115 Civil Verdict No 77945.

⁷⁶ Chris Wallace, "The Orcish Patent" *MCV/Develop* (March 2021) 34.

⁷⁷ US Patent No 10,926,179.

⁷⁸ US Patent No 8,082,499.

⁷⁹ US Patent No 6,935,954.

⁸⁰ *Sega of America v Fox Interactive* No 4:03-cv-05468 (ND Cal 2003).

⁸¹ US Patent No 6,200,138.

be patented if they are implemented in a way that creates a further “technical effect”⁸². European patent law also excludes from patentability schemes, rules and methods for playing games “as such”⁸³. The practical effect of these rules is that a patent for a game mechanic can only be obtained if the mechanic is implemented in such a way as to produce a technical effect going beyond that already inherent in the mechanic itself and its implementation via a computer program. In practice, it is easier to obtain a patent for a video game-related invention where hardware is involved. In Case No. T 1504/17, for instance, the European Patent Office (EPO) granted Nintendo a patent concerned with the use of a controller’s movement sensor to determine how in-game objects are selected and moved to other areas of the screen. The EPO expressly noted that the inventive feature of the patent was in fact “not a game aspect, such as a game rule, or specific to a particular role-playing game but a technical way of controlling an object in a game space”⁸⁴. In contrast, in Case No. T 0188/11, the EPO held that a mechanic in a Nintendo kart racing game which allowed players to drive the kart in different ways depending on the weight of the in-game driver and passenger characters was unpatentable. According to the EPO, attributing weight to a virtual character and having the kart respond in different ways according to their weight was merely a game rule⁸⁵.

79. It should also be noted that patents are territorial in nature. A video game company who successfully obtains a patent over a game mechanic in the US but is unable to obtain a similar patent in Europe (due to the stringent exclusions from patentability) would only be able to enforce it in the US.

Trademark Law

80. In some jurisdictions, such as the UK and the EU, it is now possible to register multimedia trademarks that are represented in the form of a video with sound. This is due to fairly recent amendments to the legislation, which have removed the requirement that a trademark be capable of being “graphically represented” (which effectively required the mark to be represented only by written text, a 2D image or some combination of both). This opens up the possibility that a video depicting the operation of an essential game mechanic could be registered trademark⁸⁶. If successful, this could allow the owner of the trademark to enforce it against third parties using an identical or confusingly similar feature in their games. There is currently an application for a multimedia trademark consisting of a video clip depicting the “kill cam” mechanic from *Sniper Elite 4* pending before the European Union Intellectual Property Office (EUIPO)⁸⁷.

81. Given the novelty of multimedia trademarks in general and trademarks depicting game mechanics in particular, it remains to be seen whether applications to register such marks will be granted. Indeed, it should be noted that the application referred to above is still under examination despite having been filed as early as October 2017. In addition, the mark still has to meet the requirement of being “distinctive”, that is to say, capable of distinguishing between the products and services of one trader from those of other traders. As consumers are accustomed to thinking of game mechanics as features of the video games they play rather than as indicators of trade origin, this could present a problem for the registration of such marks. In any event, the registration of such marks will still remain a practical impossibility in those

⁸² European Patent Convention, art 52(2)(c).

⁸³ European Patent Convention, art 52(2)(c).

⁸⁴ EPO Boards of Appeal Decision of August 17, 2006 in respect of Case No. T 1504/17 – 3.2.04, *epo.org*.

⁸⁵ EPO Boards of Appeal Decision of May 3, 2013 in respect of Case No. T 0188/11 – 3.2.04, *epo.org*.

⁸⁶ Kostyantyn Lobov, “How Multimedia Trademarks Could Kill Cloned Games” (*gamesindustry.biz*, 19 February 2018) <<https://www.gamesindustry.biz/articles/2018-02-19-multimedia-trademarks-kill-cloners>>.

⁸⁷ Application 017282203. Still under examination at the time of writing according to the EUIPO eSearch plus database. It is highly unlikely it will be granted. The 25-second clip showing the mechanic is available at <https://www.youtube.com/watch?v=WvGurDybTm4>.

jurisdictions that still retain a graphic representation requirement for trademarks. Trademarks – like patents and other forms of IPRs – are territorial in nature; because of this, even if a video game company were successful in registering a trademark over a video of a game mechanic in the UK or a European jurisdiction, this would not be enforceable in other jurisdictions.

82. It is also open to video game companies to bring claims on the basis of trademark infringement against producers of clones who use similar video game logos or branding elements to advertise those clones, especially where this might mislead would-be purchasers into believing that the clone is authorized by or affiliated with the video game company.

Unfair Competition and Passing Off

83. Where a clone copies many or all of the game mechanics that make the original video game compelling, this may be sufficient to give rise to a claim of unfair competition in a number of jurisdictions. In essence, unfair competition law prohibits market participants from gaining an unfair advantage over their competitors through misleading, deceptive or fraudulent conduct. In various common law jurisdictions, the law of “passing off” performs a similar function. Indeed, a developer of “hyper casual” games succeeded in legal action against the producer of a game clone on the basis of unfair competition before the Paris Court of First Instance, which held that while *Woodturning 3D* was not original enough to enjoy copyright protection (and so no copyright claim could have succeeded), the marketing of *Wood Shop* amounted to unfair competition because *Wood Shop* had been intentionally designed as a clone of *Woodturning 3D* and consumers could confuse the two games⁸⁸.

84. Disputes over game cloning in the US have given rise to claims on similar grounds of trade dress infringement. Trade dress infringement occurs where the design or packaging of a product imitates that of another product so closely that it gives rise to a likelihood of confusion in the mind of the public as to the source of the product. This is intended to protect consumers from buying one trader’s product under the mistaken belief that it comes from a different trader. Some video game companies have been successful in legal action against game clones on this basis. In the *Tetris* and *Spry Fox* cases, discussed previously, the plaintiffs succeeded on the basis of trade dress infringement in addition to copyright infringement.

Design Law

85. Design law is a branch of IP law that protects the appearance of a product. It has also been suggested that design law might provide video game companies with some degree of protection against cloning.⁸⁹

86. However, there are limitations to this form of protection. First, given the nature of design rights, only certain graphic elements of a video game – such as the icons used, the graphic user interface and the appearance of the characters – can be protected as designs. In short, design rights protect how elements of the game *look*, but not how they *work*. This may not be helpful when dealing with a clone that uses the same game mechanics but implements them in a way that is visually different. Second, for a design to be protected, it must fulfil the requirements of novelty and “individual character”. A design is “novel” or “new” where no identical design or designs the features of which only differ in immaterial details, have previously been made available to the public. It will have “individual character” where the overall impression it produces on the informed user differs from the overall impression produced on such a user by a

⁸⁸ *Voodoo v Rollic Games and Hero Games* (Tribunal Judiciaire De Paris, 4 September 2020).

⁸⁹ Emanuelle Sarlangue, “Registered Community Designs in the Video Game Industry: A Neglected Yet Potent Tool” (2021) 4(2) IELR 87.

design previously made available to the public. Because of this, an application to register a particular game element will be unsuccessful if a similar earlier design already exists.

1.2.4. Enforcement Strategies

87. Dealing with cloning often requires a multilayered enforcement strategy. Video game companies hardly ever concentrate only on copyright claims in a legal action as this is particularly risky when the alleged infringement relates to the non-audiovisual elements of a video game (e.g., mechanics, game play). Case law also shows that they are very conscious on the jurisdiction/s in which to bring the claim: courts in the US, and to some extent in China, have been more welcoming toward these claims than courts in the EU and the UK. Thus, it is always a better strategy to include all the forms of IP allegedly infringed: trademark and unfair competition claims are often crucial to the success of the case, in particular when there is a risk the court would struggle in assessing what should be protected and what has been copied due to the unconventional nature of the subject matter⁹⁰.

88. Unfair competition (or equivalent) claims are also often brought (often successfully) when the aim of the video company is to protect the investment (often substantial) in promoting and advertising the video game⁹¹. However, the requirements for a successful unfair competition claim are different, sometimes substantially so, in every jurisdiction. This forces the video game company to file differently framed claims in all the relevant jurisdictions, and also means that even if a video game company succeeds in some jurisdictions, it will still not be able to enforce its rights globally.

89. Even a successful court case, however, might not be enough. Timing is essential, especially in the mobile game sphere where cloning is more predominant. Litigation is time-consuming and, when the defendant's main or only business is game cloning, by the time a decision is issued, it would have already recouped the funds invested in the clone and moved on to another video game.

90. Where the video game company is seeking primarily to stop the distribution of the clone rather than looking for damages, a speedier and perhaps more efficient approach would be to request the relevant digital distribution platforms to de-list the alleged clone from their catalogues (similar to a take-down notice). This would, however, depend on whether the video game company is able to make out a sufficiently convincing claim of copyright or trademark infringement.

91. Where the company that has produced the clone is a legitimate and established company, another possible strategy is to contact it directly to reach a compromise.

92. Given the costs and risks of legal action, some independent game companies prefer non-legal methods, such as "naming and shaming" perceived cloners, particularly where the latter are large companies⁹². When independent game developer Buffalo Studios felt that their online Bingo game *Bingo Blitz* had been cloned by leading mobile games developer Zynga's *Zynga Blitz*, they issued an infographic highlighting the similarities between the two games, accompanied by a statement telling Zynga: "We are moved that your new game was so

⁹⁰ See II.1.2.3 above.

⁹¹ See for instance, *Voodoo v Rollic Games and Hero Games* (Tribunal Judiciaire De Paris, 4 September 2020); Emanuele Fava, "Hyper-Casual Simulation Video Games May Not Be Original Enough to Enjoy Copyright Protection, but Game Cloning Could Still Be Prevented by Relying on Unfair Competition: *Voodoo v Rollic Games and Hero Games*" (2021) 43(6) EIPR 402

⁹² Tom Phillips, "Don't Clone My Indie Game, Bro!": Informal Cultures of Videogame Regulation in the Independent Sector" (2015) 24 *Cultural Trends* 143.

inspired by our innovative product, *Bingo Blitz* ... Please tell your thousands of employees and shareholders that we hope they enjoy playing the games “we’re cooking up next!”⁹³. Some independent developers have also expressed concerns about legal action, due to the risk that this might result in overly restrictive court judgments which could potentially constrain creativity.

1.2.5. Evaluation

93. Cloning is not necessarily a copyright infringement: it is a particularly complex area as it relates to some of the most fundamental aspect of copyright law (originality, subject matter, idea/expression dichotomy) and the activity *per se* is loosely defined. More research is needed in this area to address how to further harmonize the subject matter of protection and more effectively balance copyright protection and freedom of creativity.

94. Different jurisdictions treat game clones very differently, depending in part on how they classify video games as copyright subject matter and in part on where they draw the line between idea and expression where copying of game mechanics is concerned. Because of this, litigation may well be an effective strategy in some jurisdictions, but not in others. In jurisdictions that do not recognize game cloning as an actionable infringement, unfair competition law and the law of passing off may well offer the broadest protection for video game companies, particularly as it will protect the investment which has been expended in advertising and promoting the game and will prevent customers from being confused between the original game and its clone.

95. In general, litigation is not always the best way forward. It may be lengthy and expensive. In fact, it may not achieve the desired outcome in the long term. For instance, the so-called “Streisand effect”, originally named after an incident involving the US singer Barbara Streisand, refers to a phenomenon where attempts to suppress information have the inadvertent effect of spreading that information further. In the context of the video game industry, this can be experienced with regards to virtually all the key uses and practices. Attempts to limit and prevent a potentially infringing and harmful use or practice may further exacerbate the impact. Similarly, video game companies may experience the “whack-a-mole” problem, which describes a phenomenon where a pervasive problem keeps recurring even after it is supposedly resolved. Most third parties that operate illegal after-market services often do so as covertly as possible and, when one gets shut down, another operator may soon fill the void. Video game companies that wish to effectively exterminate the “mole” problem must deter others from popping up. Companies can accomplish this fairly effectively if they obtain a large monetary judgment from a court⁹⁴. The “Streisand” effect’ and the “whack-a-mole” problem are general enforcement issues raised by most - if not all - of the uses and practices described below. To avoid repetition, they will not be expressly mentioned in the sections that follow, but those sections should be read with this in mind.

2. DISTRIBUTING AND PROVIDING ACCESS TO A VIDEO GAME

96. This category focuses on the distribution of video games by unauthorized third parties and the provision of access to video games in ways not approved by the original video game company. It focuses on the following uses and practices: the distribution of emulators and ROM files within retro-gaming communities; the unauthorized sale of video game product keys on ‘grey market’ websites; and the transfer of gaming accounts by players.

⁹³ Mike Rose, “*Bingo Blitz* Developer Accuses Zynga of Copying” (gamasutra.com, 30 January 2012) <https://www.gamasutra.com/view/news/39900/Bingo_Blitz_developer_accuses_Zynga_of_copying.php>.

⁹⁴ Nabel and Chang, *op cit*.

2.1. Emulators and ROMs

97. Emulator programs enable users to run video games on hardware and/or software platforms other than those for which the games were originally designed. They are particularly important to players of older or “retro” games, as they allow video games designed for much older computers to be played on contemporary devices⁹⁵. Emulator programs are typically used in conjunction with ROM files, which contain data extracted from physical copies of video games. Emulators and ROM files are typically created and made available by enthusiasts of retro games via retro-gaming websites, almost universally without the authorization of the right holders concerned.

2.1.1. Industry Relevance

98. Until recently, the activities of the retro-gaming community have largely been ignored by right holders, as these were directed at older titles that were no longer being marketed. This has now changed, following a wave of renewed interest in retro games. Some major publishers have begun dusting off the most popular titles in their back catalogue, re-mastering them and making them available for sale once again. The ready availability of emulators and unauthorized ROMs on retro-gaming websites is perceived by some video game companies as a serious threat to this business model.

2.1.2. Copyright Infringement

99. The creation of an emulator program requires the programmer to reverse-engineer the operating system on which it is based. In particular, it will usually be necessary for the programmer to decompile at least part of the operating system’s program code in order to understand how it operates. This potentially implicates the reproduction and adaptation rights in the operating system and raises the question of whether there are any exceptions applicable.

100. Several cases involving the emulators have been litigated in the US. US courts have tended to hold the creation of emulators to be non-infringing, on the basis that acts of reverse engineering and de-compilation that are carried out for the purpose of gaining access to the unprotected functions and ideas embodied in a computer program amount to fair use, in circumstances where there is no alternative means of gaining such access⁹⁶. It has also been suggested that the same conclusion might be reached under European law, in particular under Article 6 of the Software Directive, which allows a lawful user of a computer program to decompile it where this is indispensable for obtaining the information necessary for achieving the interoperability of an independently created computer program with other programs⁹⁷. However, this has yet to be tested in court. A programmer who makes an emulator available to the public might potentially also be contributorily liable for the creation and use of infringing ROM files by gamers, though again, this issue has yet to be litigated.

⁹⁵ The distinction between what counts as a ‘retro’ game or a contemporary game is heavily debated, but core examples are games designed for older consoles that have been discontinued, such as the Nintendo Entertainment System and the Mega Drive or Sega Genesis Drive.

⁹⁶ *Sega Enterprises v Accolade* 977 F 2d 1510 (9th Cir 1992); *Sony Computer Entertainment v Connectix Corporation* 203 F 3d 596 (9th Cir 1999); *Sony Computer Entertainment v Bleem* 214 F 3d 1022 (9th Cir 2000).

⁹⁷ Benjamin Farrand, “Emulation Is the Most Sincere Form of Flattery: Retro Videogames, ROM Distribution and Copyright” (2012) 14 IDP 5, 11 – 12.

101. The creation of a ROM file involves the wholesale duplication of the entire video game concerned. It therefore implicates the reproduction right subsisting in the video game. In most jurisdictions, this would amount to a clear-cut case of copyright infringement, unless it were carried out with the authorization of the right holder. A retro gamer who uploads a ROM file in order to make it available to other gamers would also be infringing the right holder's distribution right and/or their right to communicate the work to the public and contributorily liable for the unauthorized reproductions made by other gamers who subsequently download the ROM file. The operators of websites on which ROM files are hosted may also be found contributorily liable for the unauthorized uploads and downloads of ROM files made by their users. It is these operators who have been the primary target of enforcement strategies.

2.1.3. Other Legal Implications

100. The use of emulators and ROMs also raises legal issues that can be successfully dealt with under trademark law, which is illustrated in the series of litigation between Nintendo and Storman, a third-party provider of ROMs, and discussed in more detail in the subsequent paragraphs.

2.1.4. Enforcement Strategies

101. Nintendo has been successful in taking legal action under US law to compel operators of websites that host ROM files to shut them down. This is consistent with Nintendo's overall business strategy of pursuing any and all IP violations in order to maintain control over its brand and gaming ecosystem. In 2018, Nintendo brought claims of copyright and trademark infringement against the operators of the ROM sites LoveROMS.com and LoveRETRO.co⁹⁸. The parties eventually settled, arriving at a consent judgment. A permanent injunction was issued prohibiting the defendants from continuing to infringe or inducing others to infringe Nintendo's copyrights and trademarks. The defendants were also required to hand over to Nintendo all Nintendo games, game files and game system emulators in their possession and to transfer the domain names LoveROMS.com and LoveRETRO.co to Nintendo. In the aftermath of this case, the operator of EmuParadise, a popular retro-gaming site, announced that the site would no longer be offering ROMs, as "it's not possible right now to do so in a way that makes everyone happy and keeps us out of trouble"⁹⁹.

102. In 2021, Nintendo was once again successful in its legal action against the operator of the ROM site romuniverse.com¹⁰⁰. The defendant had uploaded ROM files of Nintendo games to his website, where they could be downloaded by visitors to the site. The court found the defendant liable for direct infringement of Nintendo's reproduction rights in its games by uploading the ROM files to his website; liable for contributory infringement of those rights by users who downloaded those ROM files by advertising and making the files available for download; and liable for vicarious infringement of those rights as he obtained a direct financial benefit from the infringing acts of his users (by charging membership fees) and did not do anything to prevent infringements on the part of his users despite having the ability to do so. The court also found the defendant liable for infringement of Nintendo's trademarks by displaying them on his website. The court found that the requirement that the use of Nintendo's

⁹⁸ *Nintendo of America v Mathias* No 2:18-cv-02282 (D Ariz 2018).

⁹⁹ See <https://www.emuparadise.me/emuparadise-changing.php>. EmuParadise does continue to offer emulators to the public.

¹⁰⁰ *Nintendo of America v Storman* 2021 WL 3556831 (CD Cal 2021); *Nintendo of America v Storman* 2021 WL 4772529 (CD Cal 2021); *Nintendo of America v Storman* 2021 WL 4780329 (CD Cal 2021).

trademarks must result in a “likelihood of confusion” for the average consumer was made out, relying on case law which states that “counterfeit marks are inherently confusing”. Here, the defendant had used Nintendo’s registered trademarks to display and promote his counterfeit goods. Nintendo was ultimately successful in obtaining an injunction prohibiting the defendant from further infringements of its IP rights.

2.1.5. Evaluation

103. While video game companies have a very strong case of copyright infringement against players who upload and download ROMs and the platforms that host them, it should be noted that Nintendo’s aggressive enforcement strategy has resulted in significant backlash and dissatisfaction from their player base generally and the retro-gaming community at large¹⁰¹. This is especially the case as the closure of the ROM sites concerned made it difficult, if not impossible, for the retro-gaming community to obtain ROMs of other (i.e., non-Nintendo) games that were no longer being marketed. In order to maintain good relations with their player base, it is suggested that video game companies should first attempt to reach an amicable solution with the operators of ROM sites, e.g., requesting the takedown of ROMs of games which the video game company is already marketing or will be marketing imminently. Where the publisher has no plans to market a particular game, the availability of ROMs for that game will have minimal impact on the company’s revenues. Only if this is unsuccessful should the company escalate the proceedings to litigation.

2.2. Key Selling

104. Key selling is the act of selling the product key of a video game typically at a lower price than those set by authorized digital retailers, thus diverting sales away from the latter. These keys can be obtained from a range of different channels (these keys might be simply taken out of a video game box or from a bundle¹⁰² or directly from digital distributors)¹⁰³.

2.2.1. Industry Relevance

105. Video game companies find the practice of key selling problematic for several reasons. First, some independent video game developers have claimed that key selling websites often offer illicitly obtained keys (though this is denied by the websites in question). This is said to occur is by fraudulent third parties purchasing product keys from video game publishers and developers using stolen credit card information¹⁰⁴. These are then offered on key selling websites. When a fraudulent transaction is disputed by the rightful cardholder, the video game company who initially received the fraudulent payment will have to spend time and effort

¹⁰¹ Tola Onanuga , “All That’s Wrong with Nintendo’s Heavy-Handed ROM Crackdown”, (wired.com, 18 August 2018) <<https://www.wired.co.uk/article/nintendo-roms-emulator-loveroms-loveretro-lawsuit>>.

¹⁰² A bundle is a groups of video game sold together, generally at discounted price.

¹⁰³ Andreas Lober, Susanne Klein and Florian Groothuis “The Long and Winding Road of Digital Distribution. Or: Why the ECJ’s *UsedSoft* Decision is of No Use to KeySellers” (2018) 1(1) IELR 44, 44 – 45.

¹⁰⁴ In 2019, the company G2A featured heavily in news for their role as the major “grey market” key selling site. While users are making a legitimate purchase, they cannot verify where the key has been acquired through legal means. Patrick Klepek, “G2A Scammer Explains How He Profited Off Stolen Indie Game Keys” (kotaku.com.au, 31 July 2016) <<https://www.kotaku.com.au/2016/07/g2a-scammer-explains-how-he-profited-off-stolen-indie-game-keys/>>; Wesley Yin-Poole, “G2A and tinyBuild’s Row Over PC Game Key Reselling Gets Ugly” (eurogamer.net, 23 June 2016) <<https://www.eurogamer.net/g2a-and-tinybuilds-row-over-pc-game-key-reselling-is-getting-ugly>>; Tom Phillips, “G2A Admits it Sold Stolen Game Keys” (eurogamer.net, 21 May 2020) <<https://www.eurogamer.net/g2a-admits-it-sold-stolen-game-keys>>.

investigating the complaint and ultimately to reimburse the rightful cardholder. Often, the video game company concerned will also have to pay an additional “chargeback fee” to the credit card company. This appears to be a matter of particular concern for independent video game developers, who have limited financial resources. Some independent developers have even suggested that players should pirate their video games rather than purchasing product keys from key selling websites, as they stand to incur greater loss from the latter¹⁰⁵.

106. Second, key selling websites potentially undermine video game companies’ regional pricing strategies. Many video game companies employ a discriminative pricing strategy by charging different prices for the same video game in different regions, based on the relative purchasing power of the average gamer in each region. Key selling websites take advantage of this business model by purchasing product keys from retailers located in regions where video games tend to be priced at a lower rate and offering them for sale to purchasers in regions where video games are priced higher, thereby potentially reducing the publishers’ and developers’ revenues.

2.2.2. Copyright Infringement Issues

107. Key selling websites are potentially liable for infringing the right holders’ distribution right and/or making available to the public right in the video games concerned. In Europe, it now seems clear that the CJEU decision in *UsedSoft*, which held that the doctrine of exhaustion applied to downloaded copies of software so as to entitle their purchasers to re-sell those “used” digital copies without seeking further authorization from the right holder, does not extend to video games in such a way as to permit key selling. While the CJEU has yet to decide a case specifically on key selling, it has held that video games, being complex matter comprising not only a computer program but also graphic and sound elements, are not governed by the copyright regime applicable specifically to software that was applied in *UsedSoft*, but rather by the copyright regime applicable to works in general¹⁰⁶. At the same time, it also held that the digital distribution of works does not fall within the scope of the distribution right, but rather of the communication to the public right; thus, the principle of exhaustion does not apply¹⁰⁷. The combined effect of these decisions is that the CJEU is highly likely to hold that exhaustion does not apply to the digital distribution of video games, and thus that their purchasers are not entitled to re-sell these digital copies without the authorization of the video game company¹⁰⁸. The position is likely to be the same in the US, where the Second Circuit has confirmed that the first sale doctrine does not apply to digital distribution¹⁰⁹. The Canadian decision in *ESA v. Society of Composers, Authors and Music Publishers of Canada*¹¹⁰ does suggest a possibility that the Canadian courts may take the opposite position. While that case did not directly concern the distribution right, the majority of the Supreme Court was at pains to emphasize that treating digital copies of works differently from physical copies would violate the principle of technological neutrality, which requires copyright law to apply equally between traditional and more technologically advanced forms of the same media. Key selling websites may also be contributorily liable for infringing acts of reproduction committed by purchasers of the product keys when they use the keys to download a copy of the relevant video game.

¹⁰⁵ Fraser Brown, “Developers Tell People to Pirate Their Games Instead of Using G2A” (pcgamer.com, 1 July 2019 <<https://www.pcgamer.com/developers-tell-people-to-pirate-their-games-instead-of-using-g2a/>>).

¹⁰⁶ C-355/12 *Nintendo Co Ltd v PC Box Srl* [2014] ECDR 6.

¹⁰⁷ C-263/18 *Nederlands Uitgeversverbond v Tom Kabinet Internet BV* [2020] 2 CMLR 20.

¹⁰⁸ See Trapova and Fava, *op cit*.

¹⁰⁹ *Capitol Records, LLC v ReDigi Inc* 934 F Supp 2d 640 (SDNY 2013).

¹¹⁰ *Entertainment Software Association v Society of Composers, Authors and Music Publishers of Canada* [2012] 2 SCR 231.

108. Germany appears to be only jurisdiction with reported case law on the matter. Under German law, it seems likely that key selling websites will be found liable under copyright law on a number of grounds. In 2013, the Higher Regional Court of Frankfurt held that the sale of a non-activated product key for a computer program did not amount to distribution¹¹¹. As the product key had not yet been activated, no separate “copy” of the computer program existed; there was therefore no “used” copy capable of being transferred. Accordingly, the doctrine of exhaustion did not apply in such cases. Instead, the court indicated that the right holder’s reproduction right might be infringed when the purchaser of the product key downloaded the program using the key. In 2017, the Higher Regional Court of Munich dealt with the sale of an activated product key and the provision of a link for downloading a copy of the computer program in question¹¹². The court held that this amounted to distribution, but also emphasized that the conditions set out in *UsedSoft* – namely that the key seller must be able to verify the origin of the product key and show that the right holder had received appropriate compensation – must be met in order for the doctrine of exhaustion to apply and for the sale of the product key to be lawful. The court also emphasized that, where a key seller transmits a product key and a download link to a purchaser without the right holder’s authorization – and presumably in circumstances where the distribution right has not been exhausted – the downloading of the computer program by the purchaser may amount to an infringement of the right holder’s reproduction right, for which the key seller may be contributorily liable. While these cases involve computer software rather than video games, they establish the principle that the doctrine of exhaustion does not apply to the re-sale of non-activated product keys. The sale of such product keys is likely to lead to an infringement of the right holder’s reproduction right on the part of the purchaser, for which the key seller will be liable. This is relevant in the context of video game product keys, which are almost always sold as non-activated keys.

109. In the *World of Warcraft I* case, the Federal Court of Justice went even further, holding that the principle of digital exhaustion laid down in *UsedSoft* did not apply to video games at all¹¹³. This was because *UsedSoft* had been decided under the Software Directive, while video games were more than just software – they contained audiovisual elements and therefore fell under the regime established by the InfoSoc Directive, which, unlike the Software Directive, did not contain provisions enabling digital exhaustion. This decision is consistent with the judgment of the CJEU in *Nintendo v. PC Box*. Taken to its logical conclusion, this means that the doctrine of exhaustion only applies to the re-sale of video game product keys where the keys are initially sold as part of a physical copy of a video game. It cannot apply where the relevant copy of the video game was first purchased through digital distribution channels. The re-sale of a product key – even one that has been activated – which is linked to a digital copy of a video game will therefore be an infringement of the right holder's exclusive rights.

110. Even in the rare case where a video game product key is linked to a physical copy, a would-be key seller would still find themselves very restricted as to the extent to which they are free to re-sell it. In 2014, the Berlin District Court considered the case of a physical, boxed copy of a video game which comprised both a DVD and a digital product key. The purchaser had the option of installing the game using the DVD or using the digital product key to download the game from an online platform. Key sellers take advantage of this business model by purchasing physical copies of video games from a region where they are sold at a relatively low price and offering the product keys for sale (without the DVD) to a market where the games are sold at a relatively high price. The court held that the re-sale of the product keys was an infringement of the right holder’s distribution right unless it had been exhausted under the InfoSoc Directive. Exhaustion can only apply where the relevant copies of a work have been put on the market with the right holder’s consent. In the context of the present case, the court

¹¹¹ OLG Frankfurt a.M., 6 W 42/16 – short form in MMR 2016, 819, at 820.

¹¹² OLG Munich, GRUR 2017, 1034, at 1038.

¹¹³ BGH GRUR 2017, 266, at 273.

concluded that where a video game has been put on the market in the form of a combination package (comprising a DVD and a product key), the distribution right is exhausted only where the game is resold as a combination package. By selling the product key without the DVD, the key seller deviated from the scope of the product as originally put on the market. Therefore, the distribution right had not been exhausted and the key-seller had infringed it.

2.2.3. Other Legal Implications

111. Video game companies may also choose to bring claims on the basis of trademark infringement against key sellers who display their video game logo or other branding elements on their key selling websites, especially where this might mislead would-be purchasers into believing that the key seller is authorized by or affiliated with the video game company

2.2.4. Enforcement Strategies

112. As indicated above, a video game company successfully sued a key seller at the Berlin District Court for re-selling video game product keys linked to physical copies of the game. While there have been no cases in Germany dealing specifically with the re-sale of product keys linked to digital copies of video games, current case law indicates that such a case would have a high likelihood of success.

113. With regards to non-litigation strategies, it has been suggested that the best way for right holders to prevent key selling is simply to cease offering video game product keys. Instead of selling product keys, Ubisoft uses a method called “silent key activation”: rather than sending the purchaser a product key which can be copied-and-pasted or resold, Ubisoft’s Uplay platform links each purchased game directly to the purchaser’s Uplay account¹¹⁴.

2.2.5. Evaluation

114. To date, only courts in Germany have addressed the specific issue of key selling; however, the key principle on which this jurisprudence is based – i.e., that exhaustion does not apply to the digital distribution of works – is one that has generally been accepted¹¹⁵ by the CJEU¹¹⁶ as well as courts in the US. In these jurisdictions – as well as other jurisdictions that are likely to take a similar approach – video game companies would have a good chance of success in litigation against key selling platforms. Given the costs of litigation, however, it may be advisable for video game companies to also implement self-help measures where they can, such as by imposing tighter controls over the product keys they offer or, where possible, by linking digitally purchased games directly to the player’s account.

2.3. Account Transfer and Second-hand Video Games

115. Another related issue is the selling of second-hand video games and account transfer, a practice whereby a user transfers their online gaming account (including the video games they have purchased, the progress they have made in those games and the in-game assets they

¹¹⁴ Fraser Brown, “Ubisoft Is Trying to Wipe Out Key Reselling with ‘Silent Key Activation’” (pcgamer.com, 2 May 2019) <<https://www.pcgamer.com/ubisoft-is-trying-to-wipe-out-key-reselling-with-silent-key-activation/>>.

¹¹⁵ C-263/18 *Nederlands Uitgeversverbond v Tom Kabinet Internet BV* [2020] 2 CMLR 20.

¹¹⁶ *Capitol Records, LLC v ReDigi Inc* 934 F Supp 2d 640 (SDNY 2013).

have acquired) to another user in exchange for payment. This is generally expressly prohibited by the EULA and, in most jurisdictions, is a potential infringement of the right of distribution, which is not exhausted when obtaining the video game digitally.

2.3.1. Industry Relevance

116. In the past, when video games were predominantly sold as physical products, there was a thriving market for second-hand copies of video games. Major retailers allowed customers to “trade in” second-hand copies of games either for cash or in-store credit. These “used” copies were then offered for sale by the retailer at a price lower than that of a new copy. This practice attracted objections from video game companies, who received no share of the revenue from the second-hand market. Now that digital distribution is the major sales channel for video games, video game companies have invested in various strategies to reduce instances of reselling or preventing their users from selling or acquiring “used” copies of video games through a range of technical (TPMs) and legal instruments (EULA & ToS).

2.3.2. Copyright Infringement

117. For the reasons set out earlier in the context of key selling, the principle of exhaustion does not apply to copies of video games that are distributed digitally. This point is reinforced contractually in the EULAs and/or ToS, which describes the transaction not as a “sale” but rather a non-transferable license to access and use the video game, coupled with terms that explicitly prohibit players from transferring their accounts or engaging in second-hand sales. Because of this, players who attempt to sell and transfer their gaming accounts are likely to be liable for infringement of the video game company’s distribution right and/or making available to the public right. They are also likely to be contributorily liable for infringing acts of reproduction committed by account purchasers when they download the relevant video games. The same applies to online marketplaces that facilitate these transactions.

118. The proposition that exhaustion does not apply to digital copies of video games has been tested in Germany and France in two cases brought by consumer associations (representing video game players) against Valve, which operates Steam, the largest digital distribution platform for PC gaming. In Germany, the consumer watchdog group Verbraucherzentrale Bundesverband (“VZBV”) brought a case against Valve over terms in its EULA that disallowed the sale and transfer of gaming accounts on Steam¹¹⁷. The court ruled in favor of Valve, holding that even if the principle of exhaustion did apply¹¹⁸, it did not require Valve to design its business in such a way that facilitated the sale of “used” games. In the French counterpart to this case, meanwhile¹¹⁹, the Paris Court of First Instance held that Valve could not lawfully prevent Steam subscribers from transferring purchased videogames to third parties and that the terms in the Subscriber Agreement that prevented this would thus be null and void. This case was decided following the CJEU’s judgment in *Nintendo v PC Box*, though prior to *Tom Kabinet*; because of this, it has been criticized as being inconsistent with the CJEU’s case law. While this case is

¹¹⁷ Konstantin Ewald and Felix Hilgert, “German Court Rules Valve May Prohibit Steam Account Transfers” (spielrecht.de) <<https://spielrecht.de/wp-content/uploads/2009/08/German-Court-Rules-Valve-May-Prohibit-Steam-Account-Transfers.pdf>>.

¹¹⁸ This case was decided following *UsedSoft* but prior to *Nintendo v PC Box* and *Tom Kabinet*. Even then, the court was sceptical of the proposition that the principle of exhaustion was applicable to digitally distributed video games.

¹¹⁹ For a summary, see Melinda Rucz, “Does the Doctrine of Exhaustion Apply to Videogames Purchased Digitally? French Court Says Oui” (copyrightblog.kluweriplaw.com, 12 December 2019) <<http://copyrightblog.kluweriplaw.com/2019/12/12/does-the-doctrine-of-exhaustion-apply-to-videogames-purchased-digitally-french-court-says-oui/>>.

being appealed, it is too early to tell whether it will have any effect outside of France (at the time of writing no effect could be recorded).

2.3.3. *Other Legal Implications*

119. Beyond potential copyright infringement, claims to prevent account transfer and second-hand sales of video games can include breach of contract, intentional interference with contractual relations, trademark and unfair competition¹²⁰.

2.3.4. *Enforcement Strategies*

120. On the basis of the above, it is not surprising that data on enforcement against users for selling accounts and second-hand video games is scarce. If caught, the account could be banned for breach of contract without having to argue a potentially complex copyright case in court. More than the players, however, video game companies might be more focused on stopping the online marketplaces that facilitate these transactions – if they have a claim.

121. Beyond the copyright infringement issues discussed above, where we analyzed the claims from the digital distribution point of view, video game companies can be successful in preventing online unauthorized distribution on the basis of the following: infringement of the copyright in protected elements (e.g., screenshots) used on the defendant website for advertising purposes (if any); infringement of any registered trademark used on the defendant website for advertising (if any); breach of contract if the video game EULA or ToS prohibits (as it often does) the sharing of accounts/login credentials and the selling of accounts without permission; intentional interference with contractual relations or equivalents if the defendant induced the players to breach the EULA or ToS; and/or unfair competition depending on the requirements of the relevant jurisdiction.

2.3.5. *Evaluation*

122. Despite a contrary decision in France (which, as noted, has been criticized for being out of step with the jurisprudence of the CJEU), the approach taken in Germany and the general acceptance of the principle that exhaustion does not apply to digital copies in the US, the EU and the UK, strongly suggests that video game companies will have a good chance of success in litigation against players who seek to sell their gaming accounts and the third-party marketplaces that facilitate these transactions. In the case of claims against players, litigation will often not even be necessary, as video game companies will be empowered to suspend or terminate their gaming accounts on the grounds that they have breached the applicable EULA or ToS. It is expected that, if cloud gaming becomes more prevalent, account selling will become much less of an issue, as players will have shifted from a model where they purchase individual games to one where they pay a regular subscription in exchange for access to a range of games.

3. ALTERING THE VIDEO GAME

123. Under this heading, the study looks at practices whereby players alter one or more elements of an existing video game or introduce new content into a video game. Two main

¹²⁰ Nabel and Chang, *op cit*, 407.

practices will be considered. The first is modding, a practice whereby players alter one or more elements of a video game in ways not intended or enabled by the original developer. The second concerns what this report will call “in-game user creation”, where players make use of tools provided by the video game itself for creating new content.

3.1. Modding

124. The altering of one or more aspects of a video game can range from small tweaks (such as recolored versions to existing outfits and hairstyles for *The Sims 4*) to complete overhauls (such as the *Black Mesa* mod, which recreates the entirety of *Half-Life* using the much more advanced game engine developed for its sequel *Half-Life 2*). Once created, these alterations, known as “mods”, are typically distributed online free of charge. In order to use a mod, it is necessary for the player to have the video game which it modifies already installed on their gaming device. In this sense, mods can be viewed as plug-ins or add-ons for a particular video game: they alter its content but are incapable of functioning without it and do not operate as stand-alone pieces of software.



Figure 1 – Comparison screenshot: original *Half-Life* (top) and *Black Mesa* (bottom)

3.1.1. Industry Relevance

125. Mods are said to contribute to the commercial value and success of video games. They vary the content of a video game in ways that make it seem fresh and interesting, thereby ensuring players’ continued engagement with the game¹²¹. This allows the game to continue attracting sales and attention for a much longer time than it otherwise would. For this reason, mods have historically been tolerated, if not actively encouraged, by the video game industry.

126. Recently, however, there are signs that this dynamic may be changing, at least for some segments of the industry. First, a growing number of video game titles now include an online multi-player mode, including those from franchises that previously consisted of single-player titles. Mods are therefore a concern as they could potentially be used to alter the game in ways that give the user a competitive advantage over other players, operating essentially as cheats, and thus interfering with the integrity of the video game. This, in turn, has a negative impact on other players’ user experience¹²². Second, as more and more of the video game industry pivots towards some variation of the games-as-service model – where each title receives a stream of monetized new content over time – there may be concerns about mods’ potential to displace sales of official new content, particularly as mods are typically offered free-of-charge.

¹²¹ Wagner James Au, “Triumph of the Mod” (salon.com, 16 April 2002) <<https://www.salon.com/2002/04/16/modding/>>.

¹²² See Section II.5.4 Below.

3.1.2. Copyright Infringement Issues

127. As stated previously, a mod is in essence a plug-in or add-on for an existing video game. It functions by adding new material into the game and does *not* duplicate the game in its entirety. In principle, therefore, it is not the case that the creation of a mod will always infringe the copyright subsisting in the relevant video game. This is because it is technically possible to create a mod without engaging in any copying of the video game’s copyright-protected elements, in the same way as it is technically possible to create an add-on for a computer program without infringing the copyright in that computer program. In practice, however, many mods do engage in copying of the video game’s protected elements to a degree sufficient to give rise to copyright infringement: a new piece of code may imitate the structure and organization of existing code, and an altered version of an original graphic will often incorporate features of the existing art. These acts of copying (of the work as a whole or of a substantial part or similar equivalents depending on a jurisdiction in question) implicate the reproduction right in the original video game and/or its constituent works, as well as adaptation or derivative works rights in jurisdictions that provide for these. The making available of these mods online potentially implicates the distribution, making available to the public and/or communication to the public rights in the original video game. Where a mod contains infringing material, the operator of the website on which it is hosted may also incur liability, except where the “safe harbor” rules for internet service providers apply.

128. The mere use of a mod may also amount to copyright infringement, particularly where the EULA governing the use of the video game expressly prohibits players from modifying it. The process of playing a video game involves the making of temporary copies of the game and its components within the hard drive and on the screen of the player’s gaming device. These acts of temporary reproduction fall within the scope of the right holder’s exclusive rights; because of this, they are permitted only so long as the player complies with the conditions set out in the EULA. Where a player installs a mod in breach of the EULA, they act outside the scope of the permission granted to them by the right holder, and the temporary copies of the game that are generated during play thus potentially become infringing¹²³. If this is the case, then the creator and distributor of the mod may also be contributorily liable for these infringements. There is UK case law to this effect. In *Take-Two Interactive Software v. James*¹²⁴, the High Court of England and Wales held that *Grand Theft Auto V* players who used cheat software developed by the defendant – which, like mods, functioned as an add-on to the game – generated infringing temporary copies of the video game during play. The defendant was thus also liable for authorizing these infringements.

3.1.3. Other Legal Implications

129. The creation and use of mods may, of course, also amount to a breach of the EULA under which the video game is sold. A common stipulation found in video game EULAs is that players must not “reverse engineer, decompile, disassemble, display, perform, prepare derivative works based on, or otherwise modify the [Game], in whole or in part”.

¹²³ Information Society Directive, Art. 2 (defining the reproduction right as “the exclusive right to authorise or prohibit direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part”).

¹²⁴ [2020] EWHC 179 (Pat).

3.1.4. Enforcement Strategies

130. Publishers of online games or games with an online component routinely take action against players who use mods in ways that disrupt the game's competitive balance, such as by temporarily suspending the player's access to the game or, in serious or repeat cases, terminating their access to the game permanently. This is typically done on the basis that it constitutes a violation of the EULA. Blizzard, the developer of the popular MMORPG *World of Warcraft*, periodically suspends or terminates large numbers of player accounts where such behavior has been detected.

131. Yet, there are relatively few cases of action being taken against creators of mods. In one well-publicized incident, it was claimed that Take-Two Interactive, the publisher of the *Grand Theft Auto* series, had sent cease-and-desist letters to the creators of two high-profile mods for *Grand Theft Auto V* and even dispatched private investigators to the creators' homes to speak to them¹²⁵. The legal basis on which these actions were taken, or said to be taken, is not altogether clear, but the creators of these two mods did cease their activities shortly thereafter. Take-Two Interactive also issued a cease-and-desist letter to the developers of OpenIV, a popular modding tool for the *Grand Theft Auto* series. According to the OpenIV developers, the letter stated that the tool allowed "third parties to defeat security features of its software and modify that software in violation of Take-Two's rights", a claim that the developers denied. In the wake of this, the developers ceased distributing OpenIV. Some weeks afterwards, however, the tool was reinstated, with the developers seeming to have reached some sort of compromise with Take-Two Interactive, though the precise details of this remain unclear.

3.1.5. Evaluation

132. At present, modding does not appear to pose a serious threat to video game companies' revenues except where they allow cheating by players in multi-player settings; these concerns can readily be addressed through the same strategies applicable to cheating generally¹²⁶. In addition, the legal basis on which video game companies may seek to prevent modding as such is unclear. As stated previously, modding is not an inherently infringing activity, and video game companies would be required to specifically identify instances where modders had reproduced substantial parts of the original video game's constituent works in order to build an actionable case against them. The example of Take-Two Interactive¹²⁷ suggests that, in practice, video game companies have difficulty identifying the precise legal basis on which action may be taken against modders. An aggressive enforcement strategy such as that adopted by Take-Two Interactive is likely to cause significant backlash and alienate significant segments of the player base. Given the minimal negative impact caused by (non-cheat) mods and the importance of maintaining good relations with modders, who tend to be one of the most active and engaged segments of the player base, it may be advisable for video game companies who are concerned about a particular mod or modding tool to first approach the relevant creators and attempt to reach an amicable solution.

¹²⁵ Tom Skyes, "Take-Two Reportedly Sent Private Investigators to Modder's Home" (pcgamer.com, 10 November 2015) <<https://www.pcgamer.com/uk/take-two-reportedly-sent-private-investigators-to-modders-home/>>.

¹²⁶ See Section II.4.

¹²⁷ Referred to above in section II.3.2.2.

3.2. In-game User Creations

133. Content created by users embodies the creative freedom and interactivity that defines video games as a medium. Many video games and platforms provide players with tools to facilitate creativity within the game. For instance, *Minecraft*, one of the most popular games worldwide, allows players to create elaborate buildings and similar structures¹²⁸. It is common to allow players to customize their avatars¹²⁹ extensively, and some allow players to design their own playable levels.

3.2.1. Industry Relevance

134. Video games that provide players with tools to facilitate their creativity in-game are appealing as they provide players with an avenue for self-expression. They also ensure players' continued engagement with the video game, which translates to greater commercial success. In making these in-game user creations, however, players may end up re-creating existing third-party works or reusing parts of existing third-party works to a degree sufficient to trigger copyright infringement. An example of this occurred in the Sony-published game *Dreams*, which gives players extensive tools for making their own in-game creations. One player, PieceOfCraft, created a model of Nintendo's famous Super Mario character for use in the game. This caused a complaint from Nintendo, forcing Sony to remove the model from the game. Where an in-game user creation contains copyright-protected third-party material, the relevant video game company may incur liability for facilitating these acts of user creation and for hosting these in-game user creations.

3.2.2. Copyright Infringement

135. A player who recreates or reuses an existing third-party work in the course of making an in-game user creation is likely to have infringed the copyright in that work. The copying of the third-party work, or a substantial part of it, potentially implicates the reproduction right. If the player has made the in-game user creation available to other players, this will implicate the distribution, making available to the public and/or communication to the public rights in the third-party work. The relevant video game company may, in turn, potentially be liable for the contributory infringement of those rights for having provided the player with tools that facilitated or enabled the infringement. Where the video game company provides hosting for players' in-game user creations, they may also incur direct liability for infringing the distribution, making available to the public and/or communication to the public rights in any third-party works that are used by players unless the "safe harbor" rules apply¹³⁰.

136. No decided case on this specific issue appears to be available at the time of writing. However, in the US case of *Marvel Enterprises Inc, v NCSoft Corporation*¹³¹, the plaintiffs, who held the copyright in numerous popular superhero characters (including the Incredible Hulk, Wolverine, Magneto and Captain America), brought an action against the defendant for creating, distributing and hosting a superhero-themed MMORPG whose character creation tools allowed players to design and play characters closely resembling the plaintiffs'. The plaintiff claimed

¹²⁸ Anthony M Catton, "Mere Play or Authorial Creation? Assessing Copyright and Ownership of In-Game Player Creations (Part 1)" (2019) 2(2) IELR 57; Anthony M Catton, "What is Mine in *Minecraft*? Assessing Copyright and Ownership of In-Game Player Creations (Part 2)" (2020) 3(1) IELR 21.

¹²⁹ An in-game representation of a character or person.

¹³⁰ See Section I.4.2.

¹³¹ *Marvel Enterprises Inc v NCSoft Corporation* No CV 04-9253-RGK (PLAx) (CD California 2005).

that this amounted to copyright infringement by the defendant's players and that the defendant was contributorily liable for those infringements. The case was ultimately settled on undisclosed terms, and it was reported that no changes were required to the defendant's character creation tool as part of the settlement¹³².

3.2.3. Other Legal Implications

137. Unauthorized use by the player of third-party material protected by some other form of IPR, in the absence of applicable limitations, exceptions and defenses could also potentially result in third-party liability for the video game company on the same basis as that set out above. Depending on the nature of the IPR, the third party may have difficulty making out all the requirements of the claim. In *Marvel v NCSoft*, for instance, the plaintiff also claimed that the defendant's players had engaged in infringement of its trademarks (specifically, the names of its superhero characters), for which the defendant was contributorily liable. However, this part of the claim was dismissed by the court on the defendant's application, as the plaintiff had not shown that the players were using the superhero names for commercial purposes.

3.2.4. Enforcement Strategies

138. It is a common practice for video game companies to include a provision within the EULA requiring users to warrant to the video game publisher that any content they use or create in the game are either original, in the public domain or licensed and do not violate the rights of third parties involving copyright, trademarks, patents and the rights of publicity (the right to exploit one's likeness for commercial purposes) and privacy (the right to be left alone)¹³³. This may be sufficient to deflect most claims that video game companies are authorizing or contributorily liable for infringements of third-party IP carried out by their players.

3.2.5. Evaluation

139. With the advent of the Metaverse(s), the issues related to potential IP infringement with regards to in-game user creations, and consequently IP licensing, are expected to gain importance. Two of the most profound components for the Metaverse to exist are "interoperability" and "multiple contributors", which will be extremely difficult to achieve in practice without clarifications of the issues described above. Furthermore, more flexible and user-oriented licensing structures that facilitate creativity will be required¹³⁴.

4. INTERFERING WITH THE INTEGRITY OF THE VIDEO GAME AND/OR THE EXPERIENCE OF OTHER PLAYERS

140. This category focuses on uses and practices which interfere with the user experience and/or the integrity of the video game (i.e., integrity of the online servers, of the game mechanics, rules, etc.) In a vernacular term, most of these practices can be referred to as "cheating", when they allow for some users to gain an unfair advantage which negatively

¹³² NCSoft Corporation, "Marvel Entertainment, Inc, NCSoft Corporation, NC Interactive Inc, Cryptic Studios, Inc Settle Litigation" (us.ncsoft.com, 14 December 2005) <<https://web.archive.org/web/20110726055918/http://us.ncsoft.com/en/news/press-releases/marvel-entertai.html>>.

¹³³ Greenspan and Dimita, *op cit*, ch 2.

¹³⁴ Osborne Clarke, "Metaverse Report" (October 2021) <<https://togetherwith.osborneclarke.com/metaverse-report/home/>>.

impacts the experience of other users, especially in the context of multi-player online games. The specific practices relevant to this section might vary from video game to video game and the definitions might vary. What constitutes cheating in a specific video game is generally specified in the EULA and ToS and might have different copyright implications. Generally, one can distinguish between:

- Private servers: Private servers are the often-unauthorized reimplementations of an online video game server by a third party, typically for MMORPGs such as World of Warcraft or Runescape. Right holders constantly attempt to shut down private servers and often succeed in doing so.
- Bots: A bot is a computer program that plays a video game in the place of the player. Bots are used in a variety of video games often to automate a repetitive and tedious task and provide an unfair advantage to their users.
- Cheats, hacks and exploits: Cheats are combinations of keys coded in the video game to enable testers to fully test the game more easily, which might be leaked to the players or left intentionally available. Hacks are shortcuts or methods to progress more easily in a video game or use the interface more efficiently. Exploits are methods to exploit bugs or oversights in the video game's design to gain an unfair advantage.

4.1. Industry Relevance

141. Protecting a video game's integrity is extremely important in order to preserve the unique user experience and maintain healthy and engaged player communities. This is obviously much more important for online multi-player games. In the case of single-player games, cheating affects only the players themselves and has no impact on other users and therefore does not present a particular problem. To the contrary, it might keep the player more engaged and avoid the frustration of not being able to finish the game. For a multi-player online game, where users compete with one another, there may be a stronger incentive to cheat in order to obtain an advantage against other players at their detriment, and so more robust actions will be needed. This generally results in the ban or suspension of the player, but can escalate into legal action against those who provide the software or other means which directly affects game integrity (e.g., cheats and automated bots) and/or external services (e.g., paying someone to help with the video game or to play the game instead of the account holder) that result in negative externalities for game integrity.

142. Multi-player online games have been very popular for years with thousands, often millions, playing simultaneously with and against each other. Their popularity depends on the level playing field between participants. Winning or losing should only be determined by the skills and dedication of the players. Cheating – or to be precise, failing to prevent cheating – might have a dramatic impact on the popularity and success of the video game as it creates frustration and resentment in the player base and consequently leads to fewer players and less participation. Thus, this often undermines the video game companies' business model. The industry invests substantially in anti-cheat measures (software to prevent cheating) and in employing personnel to identify cheat software and exclude its users. The use of cheat software is clearly prohibited in most EULAs and ToS and often accompanied by technical protective measures. Moreover, some publishers also seek legal action against the providers of cheat software.

4.2. Copyright Infringement Issues

143. Cheating in video games, in particular in online video games, via the use of hacks and bots, the exploitation of bugs and the provision of unauthorized private servers has strong copyright implications, affecting the reproduction right and the communication to the public right. It may also amount to a circumvention of TPMs and a breach of EULAs. Video game companies have been very active in their enforcement against users and providers of these tools, creating extensive case law (in particular in the US, Germany, the UK and China)¹³⁵. Preventing and policing interferences with the integrity of the video game is crucial for the commercial success of the video game. In a game with cheaters running rampant, the number of players decreases, undermining the video game company's turnover and exposing the company to considerable economic damage.

144. Most video game companies incorporate prohibitions against the use, production and distribution of cheat software in their EULAs and ToS. Players accept these terms upon installing the video game or creating an account for the game. Thus, when a player violates the prohibition, the publisher can terminate the account and ban the player. Video game companies also often use TPMs to detect and prevent the use of cheat software (so-called anti-cheat measures) and the cheat software usually contains components that are intended to circumvent these TPMs to prevent the detection¹³⁶. This makes enforcement against players quite straightforward. However, the majority of players who engage in cheating make use of cheat software supplied by third parties. Enforcement against these providers of cheat software is not as straightforward.

145. When the creation of the cheat software involves copying the video game's code and/or graphic interface or the circumvention of TPMs, it might constitute copyright infringement. However, this requires video game companies to identify with a high degree of specificity exactly which protected elements of the video game have been copied, and notwithstanding the substantial effort of video game companies, often not all the claims are successful. Providing cheat software to players might also trigger third parties' contributory liability for players' copyright infringements, as the latter exceeds the license granted by the use of the cheat software. However, this only applies as far as they intentionally provide the offender (i.e., the player) with a crucial instrument (i.e., the cheat software) through the use of which the infringements will be committed¹³⁷ and at least have a vague idea of the number and duration of the infringements¹³⁸.

146. In addition, in order to design and test cheat software, it is necessary for the providers of cheat software to install and play the video game concerned. As the EULA and ToS applicable to video games generally specify that they can only be used for private, non-commercial purposes, the installation of the video game (which involves the reproduction of the video game) by the provider of cheat software will exceed the scope of the license, thus making it an infringing act.

147. In the US, the seminal case in this context is *MDY v Blizzard*¹³⁹, involving the cheat software Glider, a bot that allowed players to automatically play World of Warcraft (WoW).

¹³⁵ See generally, Andreas Lober and Timo Conraths, "Cheat software – 'Doping' in Online Games" (2019) 2(2) IELR 78.

¹³⁶ *Ibid.*

¹³⁷ BGH, decision of 7 February 2017 – 3 StR 430/16 = NStZ 2017, 274, 275.

¹³⁸ OLG Munich, decision of 2 March 2017 – 29 U 1799/16 = ZUM-RD 2017, 394, 398.

¹³⁹ *MDY Industries, LLC v Blizzard Entertainment, Inc* 629 F 3d 928 (9th Cir 2010). The earliest copyright case involving cheating is probably the US case *Lewis Galoob Toys, Inc v Nintendo of America, Inc* 964 F 2d 965 (9th Cir 1992). Galoob manufactured the "Game Genie", a hardware device which allowed players to cheat by entering

Despite being over ten years old, this case is complex and of extreme academic interest. For the purpose of this study, the most notable aspect is that Blizzard claimed that the breach of contract (the EULA specifically prohibited “the use of bots or third-party software to modify the WoW experience”) would void the license to the players using Glider and render all copies of WoW that were loaded (i.e. copied) into their computer’s temporary memory during play infringing. This argument failed on appeal, as the Ninth Circuit found that the “bot” prohibition was a license covenant (merely a contractual obligation) rather than a condition. Thus, a Glider user violates this covenant (thereby committing a breach of contract) but does not infringe copyright by continuing to copy the code into their RAM.

148. In this often-criticized decision¹⁴⁰, the court further found that the Blizzard anti-cheat software (called “Warden”) did not protect against unauthorized copying of the video game, and it was not an effective access control measure in respect of the literal¹⁴¹ and non-literal elements¹⁴². However, the court found the claims in respect to the dynamic nonliteral elements (the communications server-clients) more convincing and stated that:

“MDY (1) traffics in (2) a technology or part thereof (3) that is primarily designed, produced, or marketed for, or has limited commercially significant use other than (4) circumventing a technological measure (5) that effectively controls access (6) to a copyrighted work”¹⁴³.

The court concluded that MDY was not liable for contributory copyright infringement and was liable under the DMCA only for the circumvention of the TPM with respect to WoW’s dynamic non-literal elements¹⁴⁴.

149. Another US-based claim was brought by Riot Games against the creators of LeagueSharp, a piece of cheat software for *League of Legends* that allowed players to automate their gameplay and accelerate through the game more quickly than would otherwise be possible for a human player. This was brought on a number of grounds. First, it was claimed that in offering LeagueSharp for sale to players, the defendants were unlawfully trafficking in technologies for circumventing Riot’s anti-cheat software, in breach of the anti-circumvention protections in the DMCA. Second, it was claimed that the defendants had knowingly and intentionally induced many *League of Legends* players to breach the game’s ToS, which explicitly prohibits cheating. Third, it was claimed that the defendants’ actions amounted to unfair competition. This claim was subsequently settled in Riot’s favor¹⁴⁵.

certain codes to obtain unlimited lives, superspeed, etc. The court ruled in favour of Galoob as the device did not infringe Nintendo’s copyright.

¹⁴⁰ For more details see: James Harrell, “Permissible Error: Why the Ninth Circuit’s Incorrect Application of the DMCA in *MDY Industries, LLC v Blizzard Entertainment, Inc* Reaches the Correct Result” (2013) 14 Wake Forest J Bus & Intel Prop L 211; Ross Shikowitz, “License to Kill: *MDY v Blizzard* and the Battle over Copyright in *World of Warcraft*” (2010) 75 Brook L Rev, 1015.

¹⁴¹ *World of Warcraft*’s literal elements (the game client’s software code) are available on a player’s hard drive as soon as the video game software is installed. *MDY Industries, LLC v Blizzard Entertainment, Inc* 629 F 3d 928 (9th Cir 2010), [130].

¹⁴² *World of Warcraft*’s individual nonliteral components may be accessed by a user without signing on to the server. *MDY Industries, LLC v Blizzard Entertainment, Inc* 629 F 3d 928 (9th Cir 2010), [131].

¹⁴³ *ibid*, [139].

¹⁴⁴ *ibid*, [164].

¹⁴⁵ *Riot Games, Inc v Stefan Delgado Argote et al.* Case number 2:16-cv-05871 (CD Cal 2017). See also Patent Arcade, “Bots and Cheaters Lose as *League of Legends* is Awarded a \$10 Million Payout”, patentarcade.com, June 29, 2019 <<http://patentarcade.com/2019/06/bots-and-cheaters-lose-as-league-of.html>>.

150. Epic Games was similarly successful in obtaining a consent judgment from Joseph Sperry, a defendant who created and marketed cheat software for *Fortnite*¹⁴⁶. The defendant, who was a registered *Fortnite* player, admitted to directly infringing Epic's copyright by using the cheats (thereby creating unauthorized derivative works of *Fortnite*'s copyright-protected code); contributorily infringing Epic's copyright by inducing other *Fortnite* players to do the same; breaching the terms of *Fortnite*'s EULA and ToS; inducing other players to do the same, thereby intentionally interfering with the contracts formed between those players and Epic; circumventing TPMs incorporated into *Fortnite*, specifically its anti-cheating software; and trafficking in technologies for circumventing *Fortnite*'s anti-cheating software.

151. In bringing such claims against the providers of cheat software, video game companies need to specify the alleged infringements and other unlawful acts in a sufficient level of detail. Copyright claims brought by Bungie against AimJunkies.com, a business that sold cheat software for Bungie's *Destiny 2*, was dismissed by a US District Court on the ground that Bungie had failed to plead any facts explaining how the cheat software constituted an unauthorized copy of the protected works specified in its complaint¹⁴⁷.

152. In Germany, the leading cases emerge out of a series of claims brought by Blizzard against Bossland, a company that provides bots for Blizzard's MMORPGs¹⁴⁸. These claims have generally been successful, on grounds ranging from copyright infringement, trademark infringement, unfair competition and breach of the EULA and ToS. In relation specifically to copyright, the Federal Court of Justice held that Bossland infringed Blizzard's copyright by installing (and thus copying) *World of Warcraft*'s client software for its commercial purposes¹⁴⁹. This was because *World of Warcraft*'s EULA specifies that it is licensed for private, non-commercial purposes only.

153. In the UK, there are two cases that have been brought against providers of cheat software¹⁵⁰. These have been primarily on the ground of inducement of breach of contract, i.e., that defendants who supply such software to players thereby induce players to act in breach of the terms of the EULA governing their use of the game, and secondarily on the ground of authorizing copyright infringement. In relation to the second ground, the argument is that players exceed the scope of the license granted to them by the EULA when they use cheat software, meaning that all temporary reproductions of the video game and its constituent works generated in the course of play become infringing copies; in providing cheat software, therefore, the defendants are said to authorize these infringements. In one of these cases, it was also claimed that the defendants' cheat software had the effect of circumventing the TPMs (in the form of anti-cheating software) incorporated into the video game¹⁵¹. In the first of these cases, *Blizzard Entertainment v Bossland*, the court did not have the opportunity to rule on the substantive issues as the defendant admitted to the claims. In the second of these cases, *Take-Two Interactive v James*, the UK High Court awarded summary judgment against the defendants on the ground of inducement of breach of contract and authorizing copyright infringement, but declined to make a similar finding on the ground relating to circumvention of

¹⁴⁶ *Epic Games, Inc v Joseph Sperry*. Case number 5:18-cv-00094 (EDNC 2018). See also Ernesto Van der Sar, "Epic Settles with Copyright Infringing Fornite Cheater, PUBG Cheaters Arrested", torrentfreak.com, May 2, 2018 <<https://torrentfreak.com/epic-settles-with-copyright-infringing-fornite-cheater-pubg-cheaters-arrested-180502/>>.

¹⁴⁷ *Bungie, Inc v AimJunkies.com*. Case number 2:21-cv-00811-TSZ (WD Wash 2022). See also Ernesto Van der Sar, "Court Dismisses Bungie's Copyright Claims Against Cheat Seller AimJunkies, For Now" (torrentfreak.com, 28 April 2022) <<https://torrentfreak.com/court-dismisses-bungies-copyright-claims-against-cheat-seller-aimjunkies-for-now-220528/>>.

¹⁴⁸ BGH, decision of 7 February 2017 – 3 StR 430/16 = NStZ 2017, 274; OLG Munich, decision of 2 March 2017 – 29 U 1799/16 = ZUM-RD 2017, 394.

¹⁴⁹ Judgment of 6 October 2016; docket no. I ZR 25/15)

¹⁵⁰ *Blizzard Entertainment SAS v Bossland GmbH* [2019] EWHC 1665 (Ch); *Take-Two Interactive v James* [2020] EWHC 179 (Pat).

¹⁵¹ *Take-Two Interactive v James* [2020] EWHC 179 (Pat).

TPMs, as the defendants had adduced evidence that nothing they had done was designed to get around the game's anti-cheating software.

154. In China, a number of instances of criminal enforcement have been reported but could not be verified.

4.3. Other Legal Implications

155. Beyond copyright, trademark protection can be invoked when a video game logo or other branding elements are used in the distribution of the cheat software in such a way to cause confusion about the origin of the product. Unfair competition may also be considered as a possible legal avenue since the distribution of cheats arguably prevents video game companies from offering their genuine, unaltered product on the market.

156. It must be noted that cheating in video games as well as preventing and monitoring it has intricate data protection connotations, which might have an impact on enforcement¹⁵².

4.4. Enforcement Strategies

157. Enforcement against players who cheat is dealt with contractually and in-house with penalties, including suspensions and bans. This is quite straightforward but not inexpensive. Monitoring and enforcement strategies must be regularly updated in order to deal with increasingly sophisticated cheating methods and software.

158. Numerous courts worldwide have confirmed that it is possible to successfully enforce copyright against the developers, publishers and distributors of cheat software. However, due to the unorthodox nature of the potentially infringing act¹⁵³, the key to a successful claim is in the wording of the provision in the EULAs and ToS that prohibits cheating while ensuring that it is still valid and enforceable. The breach by the user of a EULA provision is what strengthens the third-party liability claims against the provider of the cheat software. Moreover, cheat software providers can be held liable for copyright infringement for commercially using the video game (again, prohibited by the EULA and ToS) in developing, testing and promoting the cheat software.

4.5. Evaluation

159. As matters currently stand, video game companies have ample tools at their disposal for dealing both with players who cheat and providers of cheat software. The key is to ensure that EULAs and ToS are appropriately drafted so as to prohibit cheating and commercial uses and to regularly update their methods for monitoring players' use of cheat software.

¹⁵² This goes beyond the scope of this study. Anti-cheat mechanisms often process personal data, but the legal basis for such data processing is virtually unexplored in legal writings. Generally, see Lober and Conraths, *op cit*.

¹⁵³ Despite potentially consisting of copying, modifying or interfering with the video game's code and/or graphic interface or the circumvention of TPMs, it may not be straightforward to demonstrate that in the course of a copyright infringement litigation, as explained in the Copyright Infringement section.

160. It appears that the increasing sophistication and motivation of cheat software developers could ultimately backfire as the large monetary judgments¹⁵⁴ often obtained by the video game publishers can create a deterrent to the investment in large-scale cheat software operations.

161. Claims based on unfair competition appear to be more straightforward than copyright and, depending on how the cheat is advertised and distributed, trademark claims might also be successful (and easier to argue in court).

5. RE-PURPOSING OF THE VIDEO GAME

162. In this final category, the study considers uses and practices that go beyond playing or altering the game itself. These practices result in stand-alone creations (e.g., fan fiction, mash-ups, memes, machinima¹⁵⁵ and Let's Play videos¹⁵⁶) or performances (such as livestreams or the use of the video game in e-sports competitions) that can be accessed and experienced outside of and independently of the original game itself. These can be distinguished from the uses and practices (mods and in-game user creations) discussed in Section II.3. Altering a video game, all of which involve in-game alterations and creations.

5.1. User-Generated Content (UGC)

163. This section deals with user creations that make use of protected content from a video game but exist outside of and independently of the game itself. For the purposes of this report, these user creations will be referred to as "user-generated content" (UGC). This type of content exists separately from the original game and can be viewed and experienced without playing the original game itself.

5.1.1. Industry Relevance

164. Historically, the video game industry has had no objections to most types of UGC. While UGC such as fan fiction, video mash-ups, memes and machinima may well make use of protected video game content, they have not been viewed a serious threat to the video game industry's business model and may even have been viewed positively as having the effect of promoting the games concerned to new audiences and increasing existing players' engagement with those games. There is, however, one type of UGC that has caused concern to the video game industry, namely Let's Play videos. These are videos that document the play of a video game, usually with humorous or critical commentary on the part of the player. While Let's Play videos may function as an effective way of promoting a video game, they can also be seen as undermining sales of the game as they allow audiences to view the events of an entire game from start to finish without needing to purchase a copy of the game. Let's Play videos can also have a negative impact on the user experience as they take away the element of surprise and discovery, thus potentially reducing players' engagement with the game. In addition, Let's Play videos are often monetized, typically through advertising revenue split between the creator of the video and the platform on which the video is hosted. This may also be a source of

¹⁵⁴ See for instance Riot's award of \$10 million in the settlement with LeagueSharp: Alissa McAloon, "Riot Awarded \$10 Million Following Lawsuit against LeagueSharp" (gamedeveloper.com, 3 March 2017) <<https://www.gamedeveloper.com/disciplines/riot-awarded-10-million-following-lawsuit-against-leaguesharp>>.

¹⁵⁵ The use of a video game to create a cinematic production.

¹⁵⁶ See Section II.5.1.1.

dissatisfaction for the publisher of the video game, who does not typically receive a share of these revenues.

5.1.2. Copyright Infringement

165. Because Let's Play videos incorporate all or most of a video game, their creation will almost certainly implicate the reproduction rights in the game and/or its constituent works. Uploading the video to a hosting platform where it can be viewed by the general public potentially implicates the public performance, making available to the public and/or communication to the public rights in these same works.

166. In some jurisdictions, creators of Let's Play videos may be able to rely on copyright exceptions to justify their activities. This is more likely to be successful in jurisdictions that have a specific exception for user-generated content (such as Canada) or an open-ended system of copyright exceptions (such as fair use in the US) rather than a closed-list system of exceptions (such as in the EU and the UK). It is possible that at least some types of Let's Play videos would be permitted under the US fair use, particularly those featuring extensive commentary, which would thus be more likely to be regarded as sufficiently transformative by the courts¹⁵⁷. In contrast, creators of Let's Play videos would find it much more difficult to bring their activities within the scope of the more limited fair dealing exceptions for criticism, review or quotation under UK copyright law. This is especially the case as classic examples of uses falling within these exceptions involve the reuse of extracts from a work, while Let's Play videos feature games in their entirety (or almost their entirety). To date, there is no copyright case law dealing with Let's Play videos.

5.1.3. Other Legal Implications

167. The creation and monetization of Let's Play videos may also amount to a breach of the EULA under which the video game is sold. Players who purchase a copy of a video game are typically permitted to play it only for private, non-commercial purposes, and those who create and monetize Let's Play videos exceed the scope of this license by using the video game for commercial purposes.

5.1.4. Enforcement Strategies

168. Video game publishers who wish to prevent Let's Play videos featuring their content from being made available online can make use of video hosting platforms' notice and takedown systems. This appears to be a generally effective measure.

169. Some video game publishers have sought to regularize Let's Play videos by allowing players to create and monetize them as long as certain rules are adhered to. For instance, Ubisoft allows players to make and monetize Let's Play videos of its games provided that the videos contain the player's own creative input and commentary (as opposed to merely raw gameplay footage) and comply with certain content-appropriateness rules (e.g., "[a]bsolutely no racist, sexist, homophobic, or offensive content ... keep your videos focused on our games, and away from overtly controversial topics")¹⁵⁸. Microsoft Studios has also created a set of Game

¹⁵⁷ Greg Lastowka, "All Your Nintendo Let's Plays Are Belong to Nintendo?" (gamedeveloper.com, 17 May 2013) <[https://www.gamedeveloper.com/business/all-your-nintendo-let-s-plays-are-belong-to-nintendo->](https://www.gamedeveloper.com/business/all-your-nintendo-let-s-plays-are-belong-to-nintendo-).

¹⁵⁸ Ubisoft, "Ubisoft Video Policy" <<https://legal.ubi.com/VideoPolicy/en-INTL>>.

Content Usage Rules that permit the creation and monetization of Let's Play videos subject to similar restrictions¹⁵⁹.

5.1.5. Evaluation

170. Let's Play videos are often effective marketing vehicles for video games and play an important role both in attracting new players and maintaining existing players' engagement with the game. While it is relatively straightforward for video game companies to take down Let's Play videos that are hosted on major video platforms, video game companies stand to gain much more by implementing policies that allow players to create and monetize such videos provided they adhere to certain restrictions as to presentation and content. The clearer these policies are, the easier it will be for players to comply with them.

5.2. Livestreaming and E-sports

171. Livestreaming is a practice where players broadcast themselves playing a video game — typically with commentary — to a live audience online. A video game livestream shares certain similarities with a Let's Play video, but the latter features a higher degree of editing and curation while the former is an unedited, real-time performance. Internationally, the most popular livestreaming platform is Twitch, with Facebook Gaming and YouTube coming in a distant second and third. These platforms provide streamers with opportunities for monetization via platform advertisements, viewer subscriptions and donations.

172. E-sports is a form of professional or semi-professional competitive gaming. Because e-sports tournaments are typically livestreamed to audiences worldwide, they raise the same copyright infringement issues as livestreaming and are therefore discussed here.

5.2.1. Industry Relevance

173. Like Let's Play videos, livestreaming may be an effective way of promoting a video game, but it is also a potentially problematic for much the same reasons as Let's Play videos: it gives audiences access to the video game without requiring them to purchase it; it potentially undermines the player experience; and it is monetized in ways that do not involve the video game publisher. The same concerns also apply to e-sports. An additional worry with e-sports is that video game publishers may experience reputational harm if their games are associated with unauthorized e-sports tournaments that are poorly run.

174. Moreover, with the explosion of the e-sports phenomenon, it has become crucial for video game companies to control the uses of their games for e-sports competitions¹⁶⁰.

5.2.2. Copyright Infringement

175. Unauthorized video game livestreams, including livestreaming as part of an e-sports tournament, raise the same copyright infringement issues as unauthorized Let's Play videos,

¹⁵⁹ Microsoft, "Game Content Usage Rules" <<https://www.xbox.com/en-us/developers/rules>>.

¹⁶⁰ IP in general, and copyright in particular, allow them to determine how much control, if any, they want to exercise on e-sports and to influence the entire e-sports ecosystem. See generally Greenspan and Dimita, *op cit*, Section 1.7.4.

and for the same reasons. They potentially implicate the reproduction, public performance, making available to the public and/or communication to the public rights in the video game and/or its constituent works.

176. This latter point has been litigated before the Guangzhou High Court in China, which held that while the livestreaming of a video game did not fall within the copyright owner's exhibition right, projecting right, performing right, broadcasting right or distribution right via an information network¹⁶¹, it did fall within the residual category of "other rights to be enjoyed by copyright owners"¹⁶².

177. As with Let's Play videos, it is possible in some jurisdictions to make the case that certain video game livestreaming practices fall within the scope of a copyright exception, particularly for livestreams that involve a significant degree of player input and creativity and particularly in jurisdictions that operate an open-ended system of copyright exceptions. However, this is not necessarily conclusive, as evidenced by the decision of the Guangzhou High Court referred to in the previous paragraph. In this case, the Guangzhou High Court seemed to waver between the two approaches and ultimately applied both. In applying fair use principles, it ultimately held that the livestreaming in the case was not sufficiently transformative, as its value was still derived from the video game itself. Having done so, it then went on to hold that in any event, as livestreaming did not fall within the statutory closed list of copyright exceptions, it could not amount to fair use.

5.2.3. Other Legal Implications

178. As with Let's Play videos, livestreaming a video game (and monetizing the practice) and participating in an unauthorized e-sports tournament may also amount to a breach of the common EULA term under which players who purchase a copy of a video game are permitted to play it only for private, non-commercial purposes.

179. In recent cases in China, video game publishers have also successfully brought claims against livestreaming platforms on the basis of unfair competition law as a means of preventing unauthorized livestreaming and unauthorized broadcasts of e-sports tournaments. In 2015, a company called Yaoyu, who had obtained an exclusive license from Valve to organize and livestream the *DOTA 2* Asian Championship e-sports tournament in China, successfully sued the livestreaming platform Douyu for rebroadcasting the tournament without permission¹⁶³. The Shanghai IP Court held that Douyu was liable under unfair competition law for "free riding" on the investment made by Yaoyu.

180. It is also open to video game publishers to bring claims on the basis of trademark infringement against unauthorized streamers or e-sports tournament organizers who display their video game logo or other branding elements in ways that cause confusion to audiences and might lead audiences to mistakenly believe that the video game company is affiliated with those streamers or tournaments.

¹⁶¹ *NetEase v Guangzhou Huaduo* [2015] Yue Zhi Fa Zhu Civil Verdict No 16 [(2015)]; [2018] Yue Civil Final No 137 [(2018)].

¹⁶² Copyright Law (People's Republic of China), art 10(17).

¹⁶³ *Shanghai Yaoyu Culture Media Co v Guangzhou Douyu Network Technology Co* [2015] Civil Verdict No 191 (IP) People's Court of Pudong New Area of Shanghai. See also [2015] Shanghai (IP) Civil Verdict (Final) No 641.

5.2.4. Enforcement Strategies

181. Litigation against streamers is very scarce and arguably counterproductive (because targeting players directly often causes public backlash). No other reported cases against streamers and streaming platforms beyond the ones mentioned above could be identified at the time of writing.

182. Video game companies that wish to prevent livestreaming videos featuring their content from being made available online can make use of streaming platforms' notice and takedown system, such as the one provided by Twitch.tv¹⁶⁴. This appears to be generally a more effective measure.

183. Some streaming platforms, such as YouTube, scan all streams for copyright protected works and replace the potentially infringing content with a placeholder image notifying the streamer with a warning. The stream can only continue after the warning is addressed¹⁶⁵.

184. Copyright (and trademarks) have been used successfully to prevent unauthorized tournaments, on the basis of qualifying as commercial uses not covered by the standard EULAs. However, enforcement seems to be focused largely on professional events that involve cash prizes and on commercial entities running these events, as there is a growing interest from video game companies dedicated to e-sports in preserving and fostering grassroots movements and semi-professional events. Thus, major e-sports publishers tend to create easily obtainable licenses

5.2.5. Evaluation

185. The video game industry generally welcomes these activities. Any grey areas resulting from copyright limitations and exceptions can be addressed by carefully worded EULA and ToS, and thus allow video game companies to intervene strategically when necessary. Nevertheless, streamers would benefit from more clarity and consistency regarding what is allowed under limitations and exceptions and the licensing terms.

III. CONCLUSION

186. The study identified several factors against which it is possible to analyze the risk of copyright infringement and the efficiency of enforcement strategies. Given the complexity of the video game ecosystem, it is difficult to draw any definitive conclusions. However, the following sections formulate tentative key findings informed by the analysis that could be taken into account when developing intellectual property strategy and pursuing enforcement.

1. KEY FINDINGS

187. The global nature of the video game industry and the lack of harmonization of copyright law means that if a use or practice is found to be infringing in one jurisdiction, it does not necessarily follow that it is infringing in another jurisdiction as well. The same conclusion can be made in terms of enforcement strategies: the fact that a specific enforcement strategy is deployed in one territory does not guarantee it will achieve the same objectives elsewhere.

¹⁶⁴ See https://help.twitch.tv/s/article/dmca-and-copyright-faqs?language=en_US.

¹⁶⁵ <https://support.google.com/youtube/answer/3367684?hl=en-GB>.

188. It follows directly from the previous point that business practices are generally shaped by jurisdictions with a more mature and established industry presence. These practices have a transnational effect beyond the jurisdiction that informed them.

189. The fragmented approach to copyright infringement and enforcement and high level of unpredictability is based on the inconsistent classification of video games as copyright subject matter.

190. Video games are there to be played and using them creatively is part of the player experience. Copyright law has consistently shown that it is not designed to deal with the consequences. The relationship between copyright and interactive digital works like video games continues to be fractious.

191. There is a range of responses when it comes to potentially infringing uses and practices – from video game companies encouraging, tolerating, negotiating and compromising on certain areas, to enforcing their exclusive rights – and the analysis indicates that not all uses and practices in question pose a commercial threat. In fact, some unauthorized activities might even be directly or indirectly beneficial to the right holder in, for example, addressing bugs, improving and expanding the content through streaming, modding or creating fan works. There is a distinction between uses and practices that are detrimental to the users and their game experience (such as cheat software), those that are detrimental to the publishers (such as cloning) and those that are, conversely, an intrinsic part of a thriving user community (in-game creations and UGC). The level of risk associated with copyright infringement, the likelihood of success of copyright and other litigation is represented in the study's heat map below.

192. The evaluation in each section demonstrates that video game companies should have a multi-layered strategy and not rely solely on copyright.

193. Litigation might not always be the best option, especially when success is not guaranteed. In fact, enforcement might not result in the desired or anticipated solution, leading only to temporary or unsatisfactory outcomes (as illustrated by the “Streisand effect”¹⁶⁶ and the “whack-a-mole” problem¹⁶⁷ applicable to all identified uses and practices), or an entirely counterproductive legal precedent. Often, alternative approaches are available (which might also be more cost-effective) and video game companies should, of course, investigate all possible technological solutions in tandem with legal options.

194. The video game industry has been innovative and proactive in finding alternatives to litigation by reaching out directly to the alleged infringers or implementing contractual and/or technical solutions. In some cases, right holders have embraced creative uses of video games through unconventional license schemes. Examples of these schemes are the usage policies for UGC and live streaming.

195. The importance of maintaining an honest reputation and a positive relationship with the player base should not be underestimated. Aggressive enforcement may undermine the goodwill between the company and its player base. Video game companies should refrain from pursuing players directly.

¹⁶⁶ Named after an incident involving the US singer Barbara Streisand, this describes a phenomenon where attempts to suppress information have the inadvertent effect of spreading that information further.

¹⁶⁷ A phenomenon where a pervasive problem keeps recurring even after it is supposedly resolved.

2. HEAT MAP

196. The following section uses a heat map to visualize the fundamental findings from the analysis above. The grid consists of two dimensions, the vertical one represents a list of key uses and practices and the horizontal one outlines the three aspects of the analysis – potential negative impact on the video game company, their profits, market size and reputation, the likelihood of success of copyright litigation and the likelihood of success of other enforcement strategies. Each color – red, orange and green – then shows the magnitude of the combined traits of both dimensions.

	Potential negative impact	Likelihood of success of copyright litigation	Likelihood of success of other enforcement strategies
Cloning	High	Poor	Medium
Emulators and ROMs	Low	Good	Good
Key Selling	Medium	Good	Good
Account Transfer	Medium	Good	Good
Modding	Low	Poor	Medium
Interfering with the Integrity of a Video Game	High	Medium	Good
User-Generated Content (in particular Let's Play videos)	Medium	Good	Good
Livestreaming and E-sports	Medium	Good	Good

Note: Unauthorized use of third-party IP and in-game user creations are not listed in this table as they involve copyright litigation avoidance strategies rather than enforcement strategies.

3. CONCLUDING REMARKS

197. As the video game industry continues its rapid growth and expansion, it is clear that the approaches to interpretation and application of IPRs, and copyright in particular, will develop in line with this evolution. When developing national or international legislative responses, attention should be paid to jurisdictions with mature industry presence and involvement as well as the interests of all the relevant stakeholders in the industry's value chain, from video game companies of all sizes, other individuals involved in the creation of video games, to the wider video game community.

198. The sophistication and complexity of video games as digital products (and services) can be expected to increase in the future. It will be necessary to address the disparity between copyright and contractual provisions governing the use of video games and the nature of video games. As it stands, the inherent interactive and immersive characteristics of video games distinguish them from other, more static, copyright-protected works, which means that they do not easily fit within the protectable subject matter. In addition, the format of license agreements is not necessarily accessible and user-friendly.

199. The player experience increasingly involves creating and re-creating new content, within and outside of the video game. This aspect has now gained a fundamental economic and social value and it will be crucial for sustainable growth of the industry to adjust the balance between exclusive rights and exceptions and limitations.

200. This is especially pertinent with the view of looking ahead. The enforcement of IP rights and licensing agreements are likely to play an even bigger role in this fast paced, cutting-edge industry, from cross-licensing agreements to inter-operability issues arising from the expansion of user-generated content in video games and the Metaverse.

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