

DECENTRALIZING CREATIVITY: A TENABLE CASE FOR BLOCKCHAIN ADOPTION IN THE ENTERTAINMENT INDUSTRY

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¹ J.D., Rutgers Law School, 2020; B.B.A., Temple University, 2015. All praise is due to the most high. Many thanks to the *Rutgers Computer and Technology Law Journal*, Professor David D. Troutt, and Michael S. Smith for their input and assistance throughout the publication process. To my family and friends: thank you for your unwavering support - especially this year.

ABSTRACT

Significant advancements in technology have changed entertainment and the way in which people consume it. Music distribution went from tangible products like vinyl, to digital files that you can stream anywhere. Major Hollywood studios are no longer the only silver screen producers with video-on-demand streaming services like Netflix creating the new normal. And video games have developed into a form of competitive sport. One thing that remains constant, however, is that at the foundation of entertainment lies the need to protect entertainers' rights. With these advancements comes new legal issues or old ones in new forms – commonly being copyright infringement and the use of one's likeness. Issues pertaining to music streaming have required the attention of Congress as it passed the Music Modernization Act in 2018 that would require a collective to monitor music rights and licenses. The legal debate as to whether student-athletes should be paid for the use of their name, image, and likeness has resurfaced after California passed its Fair Pay to Play Act in 2019. With several lawsuits making headlines and many often settling for millions of dollars, one cannot help but question what can be done to alleviate copyright licensing issues. Since entertainment going digital, it is appropriate to hypothesize how blockchain could be used in the entertainment industry. Blockchain, itself being a decentralized technological approach to doing all sorts of business, has garnered the attention of leaders in various industries. One blockchain developer, Ethereum, also incorporates smart contracts which could streamline transactions that would increase efficiencies and possibly lower operational costs. This article examines whether blockchain technology can appropriately address the recurring legal issues in the music, film & television, and gaming industries, and hypothesizes a way to democratize and decentralize the respective industries based on several existing models.

I. INTRODUCTION

Copyrights, patents, and trademarks drive innovation and societal evolutions. Through these legal protections, governing bodies safeguard authors' and inventors' intellectual property (IP) by ensuring the exclusive right to their writings and discoveries in hopes to promote the progress of science and art.² But akin to the famous

² U.S. CONST. art. I, § 8, cl. 8.

saying: “good artists copy, great artists steal,” intellectual property can be subject to misappropriation and infringement.³ The advancement of technology and the advent of the internet has buttressed the entertainment industry and its consumption. For example, in the first half of 2019, the U.S. music industry generated \$5.39bn in revenue with approximately \$2.86bn derived from streaming subscription services like Spotify and Apple Music.⁴ Video on demand (VOD) services have completely overtaken cable television, with Netflix leading the charge, adding more than eight million global subscribers over one quarter in 2019.⁵ E-gaming has begun to gain serious popularity as players unite worldwide to play online. A recent Fortnite World Cup championship generated e-gamer Kyle “Bugha” Giersdorf \$3 million as first-place winner in the \$30 million tournament.⁶ Innovation and the internet age ushers new forms of misappropriation that could harm artists. Despite the huge earnings in their respective industries, media services often face daunting copyright or trademark infringement lawsuits from artists and celebrities for failing to obtain proper licenses, pay owed royalties or residuals, and disputes over the use of one’s name, image or likeness.⁷

This new age of digitized media allows for worldwide dissemination that demands innovative solutions to the challenges surrounding IP protection and licensing. The introduction of blockchain technology raises the question as to whether the platform could provide a viable solution to assist in the licensing and royalty system in entertainment. A blockchain ledger allows a party to perform and track processes related to a project that, in theory, could

³ George McClellan, *Steve Jobs on Picasso Good Artists Copy Great Artists Steal*, YOUTUBE (Aug. 11, 2014), <https://www.youtube.com/watch?v=a6jeZ7m0ycw>.

⁴ Tim Ingham, *The United States Is About to Become A \$10bn Recorded Music Market Again – for the First Time Since 2007*, MUSIC BUSINESS WORLDWIDE (Sept. 5, 2019), <https://www.musicbusinessworldwide.com/the-us-recorded-music-industry-is-about-to-become-a-10bn-annual-market-once-again/>.

⁵ Todd Spangler, *Netflix Adds 8.8 Million Subscribers in Q4, Cites Competition for Lower U.S. Gains*, VARIETY (Jan. 21, 2020, 1:10 PM), <https://variety.com/2020/digital/news/netflix-q4-2019-earnings-results-1203474435/>.

⁶ Oscar Gonzalez, *A 16-Year-Old Just Won \$3M Playing in the Fortnite World Cup*, CNET (July 30, 2019, 11:28 AM), <https://www.cnet.com/how-to/a-16-year-old-just-won-3m-playing-in-the-fortnite-world-cup/>.

⁷ See generally Sarah Perez, *Spotify Settles the \$1.6B Copyright Lawsuit Filed by Music Publisher Wixen*, TECH CRUNCH (Dec. 20, 2018, 12:00 PM), <https://techcrunch.com/2018/12/20/spotify-settles-the-1-6b-copyright-lawsuit-filed-by-music-publisher-wixen/>.

enable IP owners to easily manage creative works. Blockchain's use of smart contracts allows for seamless transactions and decentralized authentication for nearly autonomous payment verification.⁸ These automatic transactions could be streamline payments to IP rightsholders.

This paper addresses recent legal issues surrounding royalty compensation within the entertainment industry and explores a landscape with the adoption of blockchain. Part II will discuss the current IP landscape, highlighting some of the headline-grabbing infringement controversies of recent years. Part III will decipher blockchain technology, smart contracts, and their origin in the crypto environment. It will also discuss the proposed use cases for smart contracts and related blockchain technology. Part IV will analyze the framework for an implementation of blockchain into the copyright licensing processes within the music, film, and gaming industries to determine if this technology could add value to the respective industry. Lastly, Part V will conclude the various findings to ultimately find that blockchain and smart contracts can help overhaul certain tasks but will not solve every issue affecting licensing and royalty administration.

II. CURRENT ROYALTY LANDSCAPE

A. MUSIC COPYRIGHTS AND ROYALTIES

U.S. Copyright law gives creatives a “bundle of rights” for their artistic works for which they own a copyright.⁹ Under 17 U.S.C. § 106, an artist has the right to publicly perform, digitally perform (for sound recordings), display, reproduce, distribute, or make derivatives of the copyrighted work.¹⁰ Persons other than the copyright owner, must use a license in order to exercise these rights.¹¹ The music industry divides a song into three components: the written composition (lyrics), the sound recording or “master,” and the beat or instrumental; all of which get separate copyright protection and

⁸ See generally *Smart Contracts and Solidity*, GITHUB, <https://github.com/ethereumbook/ethereumbook/blob/develop/07smart-contracts-solidity.asciidoc#what-is-a-smart-contract> (last visited Feb. 20, 2021).

⁹ See 17 U.S.C. § 106 (2020).

¹⁰ *Id.*

¹¹ See *id.*

require their own licenses.¹² Ownership of the three components is usually split amongst multiple songwriters or performers and, thus, a licensee will likely need to seek permission from several people before they can exercise any one of the bundle of rights.¹³ An overwhelming majority of mainstream artists assign the rights to their lyrics or masters to large record or publishing companies (music labels) in exchange for music distribution services, cash advances, and a promise of artist development.¹⁴

Over the centuries, music distribution evolved from physical products (like sheet music, vinyl and compact disks) to digitized products (like MP3 files and now streaming).¹⁵ Under the U.S. Copyright Act, anyone is allowed to “stream” music provided they obtain a license directly from the copyright owner or a compulsory license by following statutory procedures.¹⁶ The licensee must pay the copyright owner a “mechanical” royalty at a rate set by contract or, if using a compulsory license, by the Copyright Royalty Board.¹⁷ Take, for example, Spotify – a digital-service provider (DSP) with a streaming platform that offers catalogs from popular musicians, like Drake, and charges a monthly fee to users for unlimited access to their favorite Drake albums.¹⁸ In order to lawfully provide his catalog, Spotify must obtain licenses from the rightsholders which, in this case, could be Drake, his music label, and anyone else who contributed to the lyrics or beat.¹⁹

¹² See Justin Jacobson, *Copyrights 101*, TUNECORE, <https://www.tunecore.com/guides/copyrights-101> (last visited Feb. 20, 2021); see also Coe W. Ramsey & Amanda M. Whorton, *Music Law 101: Who owns the Copyright In a Song?*, REVERBNATION (May 9, 2018), <https://blog.reverbnation.com/2018/05/09/music-law-101-owns-copyright-song/>.

¹³ Ramsey & Whorton, *supra* note 12.

¹⁴ Cliff Goldmacher, *The Pros & Cons of Signing a Publishing Deal*, BROADCAST MUSIC, INC. (May 25, 2010),

https://www.bmi.com/news/entry/the_pros_cons_of_signing_a_publishing_deal.

¹⁵ *The History of Music Distribution*, MN2S.COM (Nov. 18, 2015), <https://mn2s.com/news/label-services/the-history-of-music-distribution/>.

¹⁶ Jacobson, *supra* note 12.

¹⁷ *Id.*; see also Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), 84 Fed. Reg. 24,1918 (Feb. 5, 2019) (to be codified at 37 C.F.R. pt. 385).

¹⁸ *About Us*, SPOTIFY, <https://www.spotify.com/us/about-us/contact/> (last visited Feb. 20, 2021).

¹⁹ See generally Henry Schoonmaker, *How Spotify Streams Turn into Royalties*, SONGTRUST (Jan. 2, 2020), <https://blog.songtrust.com/how-spotify-streams-turn-into-royalties>.

After obtaining a license, Spotify would owe Drake a royalty every time a user streams a copyrighted work.²⁰ The administration of licenses and royalties is usually done by a third party like The Harry Fox Agency (HFA) or Music Reports, Inc. (MRI).²¹ HFA or MRI would collect the mechanical royalties from Spotify, and then pay that money to each rightsholder.²² But even with the current process, however, Spotify and other DSPs still run the risk of infringing the rights of singers and songwriters. In fact, several musicians have brought numerous lawsuits against Spotify, in particular.²³ For example, in 2016, the National Music Publishers Association (NMPA), a publisher rights advocacy group, received a \$30 million settlement resulting from a dispute over the service's use of songs owned by its member-songwriters.²⁴ The next year, Spotify paid \$43.4 million to songwriters and publishers for unpaid mechanical royalties after David Lowery of Camper van Beethoven and singer-songwriter Melissa Ferrick filed class action suits for infringement.²⁵

The largest suit came at the end of 2017, when Spotify paid \$1.6 billion to publishers who represented artists like Tom Petty and Missy Elliot.²⁶ While the plaintiffs alleged that Spotify "brazenly disregards United States Copyright law [by committing] willful, ongoing copyright infringement," the parties settled before any evidence revealed willful infringement.²⁷ A Spotify spokesperson commented on the matter saying, "the data necessary to confirm the appropriate rights holders is often missing, wrong, or incomplete. When rights holders are not immediately clear, we set aside the royalties we owe until we are able to confirm their identities."²⁸ Given this statement, one cannot immediately paint Spotify as a villain here. It is plausible

²⁰ *Id.*

²¹ Jacobson, *supra* note 12.

²² Schoonmaker, *supra* note 19.

²³ Perez, *supra* note 7.

²⁴ Robert Levine, *Spotify Settles Class Action Lawsuits Filed by David Lowery and Melissa Ferrick with \$43.4 Million Fund*, BILLBOARD (May 26, 2017), <https://www.billboard.com/articles/business/7809561/spotify-settles-class-action-lawsuits-filed-by-david-lowery-and-melissa>.

²⁵ *Id.*

²⁶ Perez, *supra* note 7.

²⁷ Complaint at 25, *Wixen Music Publ'g, Inc. v. Spotify USA Inc.*, No. 2:17cv9288 (C.D. Cal. filed Dec. 29, 2017).

²⁸ Legal Entertainment, *Spotify Settles \$43 Million Class Action Copyright Lawsuit*, FORBES (June 1, 2017), <https://www.forbes.com/sites/legalentertainment/2017/06/01/spotify-settles-43-million-class-action-copyright-lawsuit/?sh=33a83c5e1e3f>.

that the company simply worked with the best information it was given. Consider a scenario where a DSP pays for a music label's entire catalog. This catalog could have numerous songs with similar titles (such as "Intro"), all produced by different songwriters whose contact information is missing because they were "vibing" during a studio session and forgot to fill out the paperwork.

The Orrin G. Hatch Music Modernization Act (MMA) is an attempt to address the problem so that artists get paid and companies like Spotify can avoid legal action.²⁹ Prior to its passage, the Copyright Office issued a notice of inquiry regarding Title I of the MMA and sought public comments concerning the royalty issue.³⁰ The NMPA submitted a comment with the following:

[F]or far too long, it has been difficult to identify the copyright owner of most copyrighted works, especially in the music industry where works are routinely commercialized before all of the rights have been cleared and documented. This has led to significant challenges in ensuring fair and timely payment to all creators even when the licensee can identify the proper individuals to pay As Congress recognized, 'this situation must end so that all artists are paid for their creations and that so-called 'black box' revenue is not a drain on the success of the entire industry.'³¹

Signed in 2018, the MMA "establishes a 'mechanical licensing collective' (MLC) to administer the blanket license, and a 'digital licensee coordinator' (DLC) to coordinate the activities of the licensees."³² The law calls for a public database containing song ownership information to help songwriters identify which songs have

²⁹ *The Music Modernization Act*, U.S. COPYRIGHT OFF., <https://www.copyright.gov/music-modernization/115/> (last visited Feb. 20, 2020).

³⁰ See generally Music Modernization Act Implementing Regulations for the Blanket License for Digital Uses and Mechanical Licensing Collective, 84 Fed. Reg. 49, 966 (proposed Sept. 24, 2019) (to be codified at 84 FR 49966), <https://www.govinfo.gov/app/details/FR-2019-09-24/2019-20318>.

³¹ National Music Publishers' Association, Comment Letter on Proposed Rule on Music Modernization Act Implementing Regulations for the Blanket License for Digital Uses and Mechanical Licensing, REGULATIONS (Dec. 20, 2019), <https://www.regulations.gov/document?D=COLC-2019-0002-0029>.

³² The Music Modernization Act, *supra* note 29.

or have not been properly attributed to them.³³ This new legislation will allow creators to rightfully claim their work so they then can pursue their royalties. Part IV of this paper will explore a blockchain system with smart contracts that could provide a mechanism to pay out royalties based on an MMA-mandated or independently constructed database.

B. FILM AND TELEVISION RESIDUALS

Operating under a business model similar to that in the music industry, screenwriters, directors, and actors assign any rights in production, scripts, and characters to large studios in the film and television industry.³⁴ The creatives instead agree to receive revenue in the form of a “residual.”³⁵ The caveat here is that these agreements are usually “works made for hire” turning the creatives into employees or independent contractors of the studio.³⁶ This arrangement is critical because, as employees, they do not individually negotiate terms or rates with their employer, but rather collectively through a labor union. Thus, residual rates for writers, directors, and actors are negotiated by three main unions: the Writers Guild of America (WGA), the Screen Actors Guild/American Federation of Television and Radio Artists (SAG-AFTRA), and the Directors Guild of America (DGA).³⁷

For better or for worse, unions negotiate for the community while individual creatives are left to accept the terms and reality. The impact of this arrangement becomes clear in the case of the WGA strike in 2007. The strike, which lasted more than one hundred days and cost the Los Angeles economy an estimated \$3 billion, was the result of failed contract negotiations with WGA and the Alliance of Motion Picture and Television Producers (AMPTP), a producer’s

³³ Dani Deahl, *The Music Modernization Act has been signed into law*, THE VERGE (Oct. 11, 2018), <https://www.theverge.com/2018/10/11/17963804/music-modernization-act-mma-copyright-law-bill-labels-congress>.

³⁴ *Film and Television Royalties*, ROYALTY EXCHANGE (June 26, 2014), https://www.royaltyexchange.com/blog/film-and-television-royalties#sthash.3bjI8rYM.dpbs_.

³⁵ *History of Residuals*, SAG-AFTRA, <https://www.sagaftra.org/membership-benefits/residuals/history-residuals> (last visited Feb. 20, 2021) (providing context on the origin of “residuals”).

³⁶ *Works Made for Hire*, U.S. COPYRIGHT OFF. 1-2 (Sept. 2012), <https://www.copyright.gov/circs/circ09.pdf>.

³⁷ *Film and Television Royalties*, *supra* note 34.

union, over the revenues generated online by video streaming.³⁸ The strike resulted in the cancellation of nearly 60 television shows, which led to more users watching re-runs on other platforms.³⁹ So during the strike, prior creatives got paid from old episodes while new production stalled leaving starving artists, starved. Unions are not perfect, as SAG has both defended the residual rights of actors⁴⁰ and withheld residuals from actors.⁴¹ However, they are integral advocates for independent artists that encourage the continuation of the artform. But in the event of their arguable shortcomings, a creative should have the freedom to make the ultimate decision regarding their work and talents.

Another quality that the film and television industry struggles with is transparency. The financials of a production are often analyzed by using Hollywood Accounting - a system that may or may not strictly adhere to Generally Accepted Accounting Principles (GAAP) or other commonly-used accounting methods.⁴² As a report on Hollywood contracts explains, terms “often serve to reduce [reported] revenues, inflate costs, and eliminate the [calculated] profits upon which royalties or participations are paid to actors,

³⁸ *Hollywood writers' strike ends after 100 days*, HIST. (Nov. 13, 2009), <https://www.history.com/this-day-in-history/writers-strike-ends-after-100-days>. Similar to music, the film industry has seen the growing popularity of video on demand (VOD) or streaming services with the rise of companies like Netflix and Hulu, which constantly rebroadcast copyrighted productions to VOD subscribers globally. See generally Julia Alexander, *The entire world is streaming more than ever – and it's straining the internet*, THE VERGE (Mar. 27, 2020, 1:45 PM), <https://www.theverge.com/2020/3/27/21195358/streaming-netflix-disney-hbo-now-youtube-twitch-amazon-prime-video-coronavirus-broadband-network>.

³⁹ Alexander, *supra* note 38. More users began watching re-runs on VOD platforms that ironically boosted companies like Netflix's popularity. Kevin Leary, *Technology, Residuals, and the New Threat to Hollywood Screenwriters*, 13 PITTSBURGH. J. TECH. L. & POL'Y 1, 7 (2012).

⁴⁰ David Robb, *SAG-AFTRA Working with Disney to Resolve “Small Number” of Late Residuals*, DEADLINE (July 10, 2019), <https://deadline.com/2019/07/sag-aftra-disney-late-residuals-actors-glitch-1202644681/>. In 2019, SAG-AFTRA became aware of payment delinquencies of “several Disney features television programs.” *Id.* The union, however, explained that the cause for the delay in payments was due to Disney's recent changeover to a new residuals system. *Id.*

⁴¹ Dave McNary, *SAG-AFTRA Funds Held in Trust Rise 6.6% to \$214.8 Million*, VARIETY (Aug. 5, 2019), <https://variety.com/2019/film/news/sag-aftra-funds-held-in-trust-rise-1203292553/>.

⁴² Renee Howdeshell, *Hollywood Accounting: Another good reason to read (and audit) your contracts*, BETWEEN THE NUMBERS (Mar. 24, 2011), <https://betweenthe numbers.net/2011/03/hollywood-accounting-another-good-reason-to-read-and-audit-your-contracts/>.

writers, etc.”⁴³ The report gives *Harry Potter and the Order of the Phoenix* as an example of a film that “gross[ed] many hundreds of millions of dollars and still shows a huge loss on the participation statement.”⁴⁴ Another report on this issue names ten of some of the highest grossing films and noted that studios were denying creators residuals due to Hollywood Accounting; the films include *Fahrenheit 9/11*, Tim Burton’s *Batman*, *Forrest Gump*, *Coming to America*, *Elf*, *My Big Fat Greek Wedding*, and *Star Wars: Return of the Jedi*.⁴⁵

In 2012, filmmaker Michael Moore ended up settling a multi-million-dollar lawsuit against Harvey and Bob Weinstein’s company over the profits of *Fahrenheit 9/11*, which grossed over \$222 million worldwide.⁴⁶ Moore claimed that the company agreed to split profits from the film 50/50 but then diverted over \$2.7 million in profits from the documentary to avoid paying him, and that an audit substantiated his claims.⁴⁷ Accounting expert and certified public accountant Renee Howdeshell comments:

Many industry heavy hitters insist upon gross points rather than adjusted gross or net, in order to sidestep [the standard Hollywood] practices. However, most [creators] simply don’t have the cache to negotiate such treatment It’s often a good idea to audit the participation statements to ensure that the contract terms are being followed.⁴⁸

There is a glaring issue with the Hollywood Accounting system and with creators’ poor understanding of the terms. An increased level of transparency within payment systems could also improve the issue here, and the solution could involve blockchain.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ Alexander Pan, *10 Highest Grossing Films That Shockingly Made No Profit*, THE RICHEST (Sept. 20, 2015), <https://www.therichest.com/entertainment/10-highest-grossing-films-that-shockingly-made-no-profit/>.

⁴⁶ Matthew Belloni, *Michael Moore, Harvey Weinstein Settle ‘Fahrenheit 9/11’ Lawsuit*, HOLLYWOOD REP. (Feb. 15, 2012), <https://www.hollywoodreporter.com/thr-esq/michael-moore-harvey-weinstein-fahrenheit-911-lawsuit-291581>.

⁴⁷ *Id.*

⁴⁸ Howdeshell, *supra* note 42.

C. VIDEO AND E-GAMING NIL

Video games have always found success in using the name, image, and likeness characters from literature, film, and reality to enhance their appeal to consumers when a book, movie, or show is set to release. Video games based on or that include either fictional or non-fictional public figures have to account for the common law right of publicity and right of privacy.⁴⁹

Arguably, the most common use of a public figure's NIL comes from video games involving sports, like NBA2K or Madden NFL. With approval from professional athlete unions, companies, like Electronic Arts (EA), can use an athlete's physical features, phrases, and celebratory dances within their games.⁵⁰ Technological advancements have increased the demand for more realistic avatars; EA and other developers have obliged. These companies have gone so far as to face-scan athletes and other celebrities, digitally rendering their faces in order to provide the ultimate gaming experience.⁵¹

Prior to 2013, EA and its subsidiary, EA Sports, developed video games featuring collegiate level football and basketball athletes from National Collegiate Athletic Association (NCAA) member schools under the titles "NCAA Football" and "NCAA March Madness" (later changed to NCAA Basketball), respectively.⁵² However, lawsuits from former NCAA athletes caused both the NCAA and EA to reconsider their partnership.

In 2013, former NCAA athletes including former UCLA Bruins men's basketball star, Ed O'Bannon, filed a class action suit against EA Sports, the NCAA, and the Collegiate Licensing Committee (CLC) – the company in charge of licensing NCAA copyrights – for anticompetitive association rules that restricted compensation for

⁴⁹ See generally Robert Cumbow, *What They Do for a Living: The Right of Publicity in Video Games and Movies*, 13 LANDSLIDE, no. 1, 2020.

⁵⁰ Charles Robinson, *NFL players plan to use 'Madden' video game royalty checks in potential labor dispute*, YAHOO SPORTS (Feb. 1, 2019), <https://sports.yahoo.com/nfl-players-plan-use-madden-video-game-royalty-checks-potential-labor-dispute-202342595.html>.

⁵¹ See Adam, *NBA 2K19 - HOW TO SCAN YOUR FACE*, 2K SUPPORT, <https://support.2k.com/hc/en-us/articles/360008136554-NBA-2K19-How-To-Scan-Your-Face> (last updated July 6, 2020).

⁵² See Owen Good, *EA Sports Didn't Need the NCAA's Logo, and Maybe It Didn't Want It*, KOTAKU (July 21, 2013), <https://kotaku.com/ea-sports-didnt-need-the-ncaas-logo-and-maybe-it-did-860124604>.

men's football and basketball players.⁵³ The class sought to challenge the rules that barred student-athletes from receiving a share of the revenue earned from the sale of licenses that incorporate their NILs in videogames, live game telecasts, and other media.⁵⁴

Before the trial began, EA and the CLC settled with players for \$40 million pertaining to the NIL claims, leaving the NCAA as the only defendant.⁵⁵ The settlement was likely the result of additional pressure from the other lawsuit,⁵⁶ in which former Arizona State quarterback, Sam Keller, sued for the use of college football players' NILs.⁵⁷ Soon after, the NCAA settled the same NIL claims with the plaintiff class for \$20 million.⁵⁸ The NCAA operated under the guise that it had acted lawfully, proclaiming: "In no event do we consider this settlement [to be] pay for athletic performance."⁵⁹ Every individual member of the class of plaintiffs received a diminutive share of the settlement and,⁶⁰ as a result of the lawsuit, the NCAA decided not to renew their licensing deal with EA Sports.⁶¹ The antitrust claims related to the NCAA guidelines preventing athletes from profiting from their involvement in collegiate sports were still argued at trial.

In *O'Bannon v. Nat'l Collegiate Athletic Ass'n (O'Bannon I)*, the plaintiffs claimed that the NCAA rules restrained and caused anticompetitive effects in two related national markets:

⁵³ *O'Bannon v. Nat'l Collegiate Athletic Ass'n*, 7 F. Supp. 3d 955, 962-63 (N.D. Cal. 2014).

⁵⁴ *Id.* at 963.

⁵⁵ See Tom Farrey, *Players, game makers settle for \$40M*, ESPN (May 30, 2014), https://www.espn.com/espn/otl/story/_/id/11010455/college-athletes-reach-40-million-settlement-ea-sports-ncaa-licensing-arm.

⁵⁶ See Keller v. Elec. Arts Inc. (*In re Nat'l Collegiate Athletic Ass'n Student-Athlete Name & Likeness Licensing Litig.*), 724 F.3d 1268 (9th Cir. 2013).

⁵⁷ *Id.* at 1271.

⁵⁸ See Jon Solomon, *NCAA reaches \$20 million settlement with players in video game suit*, CBS SPORTS (June 9, 2014, 8:15 AM), <https://www.cbssports.com/college-football/news/ncaa-reaches-20-million-settlement-with-players-in-video-game-suit/>.

⁵⁹ See *id.*

⁶⁰ Jon Solomon, *College Athletes React on Twitter After Receiving EA Sports Lawsuit Checks*, CBS SPORTS (Apr. 12, 2016), <https://www.cbssports.com/college-football/news/college-athletes-react-on-twitter-after-receiving-ea-sports-lawsuit-checks/>.

⁶¹ Steve Berkowitz, *How EA Sports's NCAA Football Video Game Could Make a Comeback*, USA TODAY (May 20, 2019, 6:00 AM), <https://www.usatoday.com/story/sports/2019/05/20/how-ea-sportss-ncaa-football-video-game-could-make-comeback/3704876002/>.

(1) The ‘college education market’ in which colleges and universities compete to recruit student-athletes to play [football] or [basketball]; and (2) the ‘group licensing market,’ in which videogame developers, television networks, and others compete for group licenses to use the names, images, and likenesses of [football] and [basketball] players in videogames, telecasts, and clips.⁶²

In analyzing the restraints for the “group licensing market” under the antitrust “rule of reason” standard, the District Court for the Northern District of California found that the plaintiffs had established that, absent the challenged NCAA rules, a national submarket would exist that would create competition amongst videogame developers for group licenses to use student-athlete’s names, images, and likenesses.⁶³ Nonetheless, the court concluded that the plaintiffs failed to identify an injury to competition caused by the challenged NCAA rules against student-athlete compensation.⁶⁴

The NCAA showed sufficient proof to support the inference that some form of its rules restricting student-athlete pay would create procompetitive benefits by increasing consumer demand for its product and by facilitating efforts to integrate student-athletes into the academic communities of their member schools.⁶⁵ But the plaintiffs were able to offer two less-restrictive alternatives for achieving these goals: (1) permitting member schools to award stipends to student-athletes up to the full cost of attendance and (2) permitting member schools to hold in trust limited and equal shares of its licensing revenue to distribute to student-athletes after they leave college.⁶⁶ Ultimately, the District Court held that the NCAA rules unreasonably restrained trade in violation of §1 of the Sherman Antitrust Act,⁶⁷ and enjoined the NCAA from implementing any unreasonable elements of restraint and from enforcing any rules or bylaws that would prohibit its member schools from offering student-athletes a limited share of the revenues generated from their NIL.⁶⁸

⁶² O’Bannon v. Nat’l Collegiate Athletic Ass’n, 7 F. Supp. 3d 955, 962-63 (N.D. Cal 2014).

⁶³ *Id.* at 997.

⁶⁴ *Id.* at 998.

⁶⁵ *Id.* at 1004.

⁶⁶ *Id.* at 1005.

⁶⁷ 15 U.S.C. § 4 (2020).

⁶⁸ O’Bannon, 7 F. Supp. 3d at 1007-08.

On appeal, the Ninth Circuit rejected the NCAA's argument that the plaintiffs did not suffer an injury based on lost compensation from video game companies for the use of student-athletes' NILs because of EA and NCAA's terminated relationship.⁶⁹ However, the Ninth Circuit did find that the District Court clearly erred in finding for the less-restrictive alternative that would allow students to receive NIL cash payments "untethered to their education expenses."⁷⁰ The Court's analysis relied on the question of "whether the alternative of allowing students to be paid NIL compensation unrelated to their education expenses, is 'virtually as effective' in preserving amateurism as not allowing compensation."⁷¹ The Ninth Circuit averred that an affirmative finding in this question would precisely ignore what makes students amateurs.⁷² Based on that foundation, the District Court's order of injunction, as it related to students' deferred compensation, was partially vacated and essentially brought the issue back to square one.⁷³

Although the issue surrounding the use of student-athletes' NIL in video games has yet to be settled, there is clearly a market for its use, as EA executives have expressed interest in rebooting the NCAA Football and NCAA March Madness games.⁷⁴ If consumer demand still exists, these athletes could get paid a royalty, possibly via blockchain. Additionally, there is an increasing likelihood that these video games will return as states begin to pass legislation allowing student-athletes to profit from their NIL.⁷⁵ California's Fair Pay to Play Act, which will go into effect in 2023, allows just for that.⁷⁶ The

⁶⁹ O'Bannon v. Nat'l Collegiate Athletic Ass'n, 802 F.3d 1049, 1067 (9th Cir. 2015).

⁷⁰ *Id.* at 1076.

⁷¹ *Id.* (quoting *Cty. Of Tuolumne v. Sonora Cmty. Hosp.*, 236 F.3d 1148, 1159 (9th Cir. 2001)).

⁷² *Id.*

⁷³ *Id.* at 1079; see Michael McCann, *In denying O'Bannon case, Supreme Court leaves future of amateurism in limbo*, SPORTS ILLUSTRATED (Oct. 3, 2016), <https://www.si.com/college/2016/10/03/ed-obannon-ncaa-lawsuit-supreme-court>.

⁷⁴ Kevin Webb, *Electronic Arts wants to make college sports games again, but the biggest obstacle is still the NCAA*, BUS. INSIDER (Oct. 22, 2019), <https://www.businessinsider.com/electronic-arts-ea-college-sports-ncaa-football-basketball-2019-10>.

⁷⁵ Ralph D. Russo, *Can NCAA remain step ahead of latest threat to amateurism?*, BUS. INSIDER (Sept. 30, 2019), <https://www.businessinsider.com/can-ncaa-remain-step-ahead-of-latest-threat-to-amateurism-2019-9>.

⁷⁶ Steven Silver & Hera S. Arsen, *Is "Fair Pay to Play" Fair in College Sports? What California's New Law Means for the Future of Amateur Athletics*, THE NAT'L L. REV. (Nov. 9, 2019),

law is the first of its kind, but several other states are considering similar legislation and others may follow suit.⁷⁷

Other IP controversies involving the gaming community surround Fortnite - a highly popular online game. Fortnite is a free game, but it sells “emotes” to players to upgrade the accessories and enhance the animations for their in-game avatars.⁷⁸ This has been a very successful business model to produce revenue,⁷⁹ case in point Kyle Giersdorf who took home \$3 million in one of the game’s tournaments.⁸⁰ At least three plaintiffs have filed separate lawsuits claiming Fortnite used their original dances in the game and thus infringed their copyright.⁸¹ In one complaint, Alfonso Ribeiro (“Carlton” from the television show *The Fresh Prince of Bel-Air*) posits that Fortnite “sought to exploit [talent] . . . by copying their dances and movements,”⁸² and has infringed by “substantially copying [the dance] in digital form . . . Moreover, [Fortnite] actively and knowingly directed, caused, induced and encouraged others . . . to misappropriate [Ribeiro’s] likeness and [the dance].”⁸³ The central issue in these suits is whether dance moves are copyrightable which

<https://www.natlawreview.com/article/fair-pay-to-play-fair-college-sports-what-california-s-new-law-means-future-amateur>.

⁷⁷ *Id.*; see also *NCAA Board of Governors Federal and State Legislation Working Group Final Report and Recommendations*, NCAA (Apr. 17, 2020), https://ncaaorg.s3.amazonaws.com/committees/ncaa/wrkgrps/fslwg/Apr2020FSLWG_Report.pdf (nothing that, in 2020, the NCAA conceded to re-evaluate the student-athlete NIL guidelines, seeking congressional action for a national reform rather than state-by-state legislation).

⁷⁸ Daren Gregorian, ‘Carlton Dance’ suit against ‘Fortnite’ may have two left feet, experts say, NBC NEWS (Dec. 19, 2018), <https://www.nbcnews.com/tech/video-games/carlton-dance-suit-against-fortnite-may-have-two-left-feet-n949641>.

⁷⁹ Julia Glum, *How Does Fortnite Make Money? All the Ways the Free Video Game Cashes in on Its 200 Million Players*, MONEY (Jan. 15, 2019), <https://money.com/how-fortnite-makes-money/>.

⁸⁰ Gonzalez, *supra* note 6.

⁸¹ Noah Yoo, *Fortnite Sued By 2 Milly for Stealing “Milly Rock” Dance*, PITCHFORK (Dec. 5, 2018), <https://pitchfork.com/news/fortnite-sued-by-2-milly-for-stealing-milly-rock-dance/>; see Gregorian, *supra* note 78; see also Madison Bloom & Mathew Strauss, *BlocBoy JB Sues “Fortnite” for Use of “Shoot” Dance: Report*, PITCHFORK (Jan. 23, 2019), <https://pitchfork.com/news/blocboy-jb-sues-fortnite-for-use-of-shoot-dance-report/>.

⁸² Complaint at 25, *Alfonso Ribeiro v. Epic Games, Inc.*, No.2:18cv10412 (C.D. Cal. Dec. 17, 2018).

⁸³ *Id.*

would then require Fortnite to pay a royalty.⁸⁴ Regardless of any court's decision, with a successful business model, Fortnite would likely continue to incorporate trending dances into its gameplay. By profiting from one's likeness every time a user buys an emote, Fortnite and other developers could enter into agreements with celebrities to implement smart contracts to compensate for the use of their NILs to avoid future lawsuits or even boycotts.

Lastly, massively multiplayer online games (MMOs), which are similar to e-gaming, also face controversy with payments and ownership.⁸⁵ MMOs have sophisticated in-game economies that offer add-ons for players to purchase in order to customize their avatars.⁸⁶ Players use their in-game appearance to establish their own identity in the digital world, which has made this economy quite lucrative.⁸⁷ In-game purchases generate a lot of revenue for game developers, with one MMO generating \$3.2 billion in transactions over its lifetime.⁸⁸ However, game developers essentially retain control over digital assets since they can close their servers and block players from accessing their virtual items.⁸⁹ Part IV of this paper will look at how a public system could possibly protect players' digital assets in the future.

III. BLOCKCHAIN TECHNOLOGY AND SMART CONTRACTS

Blockchain has significant potential to address the copyright problems in the music, film/TV, and gaming industries. There are three main blockchain classifications: public, private, and consortium.⁹⁰ A public blockchain is open to everyone and anyone can validate transactions.⁹¹ A private blockchain restricts validation of transactions or executions to one entity or organization and is

⁸⁴ See Yoo, *supra* note 81; see also Gregorian, *supra* note 78; see also Bloom & Strauss, *supra* note 81.

⁸⁵ *How Smart Contracts Can Revolutionize eSports and Massive Multiplayer Online Games*, HACKERNOON (Nov. 1, 2019), <https://hackernoon.com/how-smart-contracts-can-revolutionize-esports-and-massive-multiplayer-online-games-0h1e333f> (hereinafter Hackernoon).

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ See *id.*

⁹⁰ Scott A. McKinney et al., *Smart Contracts, Blockchain, and the Next Frontier of Transactional Law*, 13 WASH. J. L. TECH. & ARTS 313, 319-21 (2018).

⁹¹ *Id.* at 320.

controlled by a central database.⁹² Consortium blockchains are validated through a pre-selected and specific set of nodes that determine whether a block is verified.⁹³

Blockchain functions as a ledger of transactions, similar to a bank ledger.⁹⁴ A huge benefit of this system, however, is that blockchain is said to be inherently transparent because it records all transactions that occur on its network and allows any party with access to see any transaction.⁹⁵ It allows anyone to reconstruct the “complete story of the division of property interests.”⁹⁶ The monetary value of a transaction on any blockchain is assessed by a type of cryptocurrency, Bitcoin being the most well-known.⁹⁷ Although similar to a transaction with a government-backed fiat currency, transactions over blockchain are more complex. For simplicity, take the following example: if Alex sends ten Bitcoins to Barry, the transaction gets encoded as a binary bit-string by software and is sent onto the peer-to-peer network where Bitcoin “miners” receive it and validate the transaction.⁹⁸ Validation indicates that (1) Alex, rather than a fraudster or hacker, created the transaction; (2) that Alex has enough Bitcoin to fund the transaction; and (3) that users do not spend the same Bitcoin more than once.⁹⁹

In addition to validation, miners (1) take the transaction’s individuals and send them; (2) verify transactions for syntactic correctness, valid signatures, and sufficient funds; (3) pool correct transactions into a transaction block; (4) perform a proof-of-work to legitimize the transaction block; and (5) broadcast the results to the community.¹⁰⁰ Once a miner validates Alex and Barry’s transaction, it is automatically added to the block, which is a consolidation of transactions waiting to be included on the official record of approved transactions via linkage to a previously accepted transaction block that forms a chain;¹⁰¹ a blockchain.

⁹² *Id.* at 320-21.

⁹³ *Id.* at 320.

⁹⁴ Marco Iansiti & Karim Lakhani, *The Truth About Blockchain*, HARV. BUS. REV. (Jan. – Feb. 2017), <https://hbr.org/2017/01/the-truth-about-blockchain>.

⁹⁵ *Id.*

⁹⁶ Jake Goldenfein & Dan Hunter, *Blockchains, Orphan Works, and the Public Domain*, 41 COLUM. J. L. & ARTS 1, 9 (2017).

⁹⁷ Iansiti & Lakhani, *supra* note 94.

⁹⁸ Scott J. Shackelford & Steve Myers, *Block-by-Block: Leveraging the Power of Blockchain Technology to Build Trust and Promote Cyber Peace*, 19 YALE J. L. & TECH. 334, 343 (2017).

⁹⁹ *Id.* at 344.

¹⁰⁰ *Id.* at 346.

¹⁰¹ *Id.*

One blockchain platform worth noting is Ethereum. Ethereum is an open-source platform with a decentralized cryptocurrency, Ether (ETH) - which means neither the platform nor the currency is controlled by a governmental or quasi-governmental system.¹⁰² The Ethereum network is supported by a member-led industry organization called the Enterprise Ethereum Alliance (EEA).¹⁰³ The EEA's objective is to drive the use of Ethereum blockchain technology as an open-standard to empower all enterprises.¹⁰⁴ Members include: The Bank of New York Mellon, Ernst & Young (EY), FedEx, Intel, JP Morgan Chase Bank, Microsoft, and Rutgers University, to name a few.¹⁰⁵

One factor distinguishing ETH from other cryptocurrencies is that it incorporates the concept of smart contracts.¹⁰⁶ As the Ethereum organization explains, a smart contract is simply "a piece of code that is running on Ethereum," noting that smart contracts can "control valuable things like ETH or other digital assets."¹⁰⁷ Smart contracts allow parties to send assets when a set of conditions are met.¹⁰⁸

Cryptographers envisioned smart contracts as an element of digital markets as early as 1996, and they are possible with other currencies, but in practice only blockchain spaces have used them.¹⁰⁹ Decentralization has its benefits as the only way to interfere with a smart contract on the Ethereum network is to take complete control over the cryptocurrency that operates on the platform and change the public ledger on the Ethereum blockchain.¹¹⁰ In theory, completely corrupting a blockchain is "virtually impossible" because one person cannot shut down the server as none exists; it would require every user to be complicit, or the absolute cessation of the internet.¹¹¹ Thus,

¹⁰² *What is Ethereum?*, ETHEREUM, <https://www.ethereum.org/beginners/> (last visited Feb. 20, 2021).

¹⁰³ *The EEA is All About Possibilities*, ENTERPRISE ETHEREUM ALLIANCE, <https://entethalliance.org/about/> (last visited Feb. 20, 2021).

¹⁰⁴ *Id.*

¹⁰⁵ *EEA Members*, ENTERPRISE ETHEREUM ALLIANCE, <https://entethalliance.org/eea-members/> (last visited Feb. 20, 2021).

¹⁰⁶ Linda Xie, *A beginner's guide to Ethereum*, COINBASE BLOG (Feb. 23, 2017), <https://blog.coinbase.com/a-beginners-guide-to-ethereum-46dd486ceecf>.

¹⁰⁷ *Learn About Ethereum*, ETHEREUM, <https://www.ethereum.org/learn/#smart-contracts> (last visited Feb. 20, 2021).

¹⁰⁸ Xie, *supra* note 106.

¹⁰⁹ McKinney, *supra* note 90, at 316-17.

¹¹⁰ Nick Vogel, *The Great Decentralization: How Web 3.0 Will Weaken Copyrights*, 15 J. MARSHALL REV. INTELL. PROP. L. 136, 141-42 (2015).

¹¹¹ *Id.* at 142 (citing Gian Volpicelli, *Smart Contracts Sound Boring, But They're More Disruptive Than Bitcoin*, VICE: MOTHERBOARD (Feb. 16, 2015),

blockchain's robust infrastructure makes it an ideal candidate for data protection and system stability.

IV. BLOCKCHAIN TECHNOLOGY AND THE ENTERTAINMENT INDUSTRY

The entertainment business and blockchain technology are respectively complex, which may suggest that combining them would only make matters worse. Nonetheless, various communities have expressed interest in such a union. For example, a 2019 report by the EEA included a "Digital Contents Distribution Platform" for telecommunication companies that allows the companies to issue credits to customers for use as rewards within their distribution networks that will create a new value chain among a list of "use cases" for blockchain technology.¹¹² The report argues that these platforms would resolve issues of illegal copying and distribution of copyrighted material while allowing content producers to capture lost revenue from secondary/non-traditional markets.¹¹³ They envision "smart contracts that calculate the distribution of royalties and other revenues between content creators, owners, distributors, promoters, and others in the value chain."¹¹⁴ Clearly, this is not a novel idea. The following sections will delve into several innovators' renditions of a blockchain-based media platform.

A. BLOCKCHAIN AND MUSIC

Copyright laws provides the structure to create the commands that would make the envisioned smart contracts work for music licensing. Section 115 of the federal copyright law provides a statutory mechanical royalty rate threshold for sound recordings.¹¹⁵ This statutory rate allows DSPs such as Spotify to obtain a compulsory license without having to contact publishers and negotiate unique terms.¹¹⁶ Spotify instead pays royalties to HFA or

<http://motherboard.vice.com/read/smart-contracts-sound-boring-but-theyre-more-disruptive-than-bitcoin>).

¹¹² *Telecommunication Use Cases for Blockchain Technology*, ENTERPRISE ETHEREUM ALLIANCE 18 (Aug. 2019), https://entethalliance.org/wp-content/uploads/2019/08/EEA_Telecom_Use_Cases.pdf.

¹¹³ *Id.*

¹¹⁴ *Id.* at 19.

¹¹⁵ *See generally Rate Proceedings*, U.S. COPYRIGHT ROYALTY BOARD, <https://www.crb.gov/rate/> (last visited Feb. 20, 2021).

¹¹⁶ Levine, *supra* note 24.

performance rights organizations (PROs) that then pay rightsholders.¹¹⁷ A compulsory license or a directly negotiated deal could be executed through a smart contract. Since the rate is statutorily set, there is no need for additional negotiations. A rightsholder would need to register on a digital platform, verify ownership of their songs, and watch the royalties come in. In a direct deal, the parties to a contract can just adjust the variable to satisfy their negotiated rates. This information on a blockchain ledger could enhance the transparency of the transactions to account for streams. Although this would solve the issue for newly created music, it does not solve the issues for existing music and its metadata.

Metadata attached to song recordings is the song credit one sees on Spotify or Apple Music including the title of the song, songwriter and producer names, the publisher(s), and the record label.¹¹⁸ Metadata is a crucial component for paying rightsholders and is often inaccurate or fractionally displaced.¹¹⁹ This displacement occurs when multiple songwriters with different publishers are credited to a single recording and multiple metadata files are created for that recording.¹²⁰

Cofounder of digital music distributor, TuneCore, and now professor at Berklee College of Music, George Howard, once believed that blockchain could address this metadata mash-up. In a blog post he wrote for *Hypebot*, a website that conflates music and tech, he envisioned performers being able to monitor how their label profits off their sound recordings via a blockchain ledger.¹²¹

¹¹⁷ Steve Gordon, *Direct Licensing Controversy: Will Publishers Be Able to License Public Performing Rights to Digital Music Services Directly (Instead of Through the Performing Rights Organizations) and What are the Consequences for Songwriters?*, 25 N.Y.S.B.A. ENT., ARTS & SPORTS L. J., Summer 2014, at 74. Ironically, larger publishers like Sony/ATV Music Publishing, Universal Music Publishing Group, and Warner/Chappell Music have sought to by-pass PROs and directly negotiate with DSPs for a higher rate to use of their catalogs. *Id.*

¹¹⁸ Dani Deahl, *Metadata is the Biggest Little Problem Plaguing the Music Industry*, THE VERGE (May 29, 2019), <https://www.theverge.com/2019/5/29/18531476/music-industry-song-royalties-metadata-credit-problems>.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ George Howard, *The Bitcoin Blockchain Might Save The Music Industry...If Only We Could Understand It*, HYPEBOT (July 23, 2015), <https://www.hypebot.com/hypebot/2015/07/the-bitcoin-blockchain-might-save-the-music-industry-if-only-we-could-understand-it.html>.

However, in a follow-up post, he noted that the lack of transparency in the music industry would ultimately make this unworkable.¹²²

Howard predicted that the parties who benefit most from the lack of transparency – labels, publishers, and streaming services – would resist change.¹²³ He noted: “The [music] industry was built upon a firmament of information asymmetry . . . at the extreme end, this meant blatantly lying to artists who were under-educated, under-represented, or under-experienced [and depriving them] of their rights.”¹²⁴ What better way to educate, represent and provide experience for artists than to allow them to assist in the management of their art? For exploration, blockchain could cross-reference a centralized database with the correct information, but music industry participants would have to formulate a sound method to inspect the accuracy of the metadata in their possession. Actually, a ledger that allows artists to account for plays, distributions, and reproductions of sound recordings does not sound far-fetched. For example, the ledger could track such activity using International Standard Recording Codes (ISRCs), which are unique permanent identifiers for a sound recording.¹²⁵ In fact, analytics company Nielsen Soundscan collects point-of-sale (POS) data for music sales by ISRC from venues, mass merchants, retail chains, independent record stores and digital download providers in the U.S., Canada, and Europe.¹²⁶ This data has been used as a resource for reporting information such as the Billboard charts for several years.¹²⁷ Although Soundscan tracks sales, it does not pay artists; blockchain could be the bridge between the two. It is also important to note that the database mandated by the Music Modernization Act could encourage either the MLC or DLC to create a system that incorporates both tracking and payment. However, until the metadata issue is resolved, and labels, publishers,

¹²² See George Howard, *Bitcoin Can't Save The Music Industry If The Music Industry Continues To Resist Transparency*, HYPEBOT (July 24, 2015), <https://www.hypebot.com/hypebot/2015/07/bitcoin-cant-save-the-music-industry-if-the-music-industry-continues-to-resist-transparency.html>.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *What is an ISRC?*, USISRC.ORG, <https://www.usisrc.org/about/index.html> (last visited Feb. 20, 2021); see also *The International Standard Recording Code*, INT'L ISRC AGENCY, <https://isrc.ifpi.org/en/> (last visited Feb. 20, 2021).

¹²⁶ *Music Sales Measurement*, NIELSEN CO., <https://www.nielsen.com/ca/en/solutions/measurement/music-sales-measurement> (last visited Feb. 20, 2021).

¹²⁷ *Id.*

and DSPs are on board, it is unlikely that blockchain or smart contracts will address the conflicts regarding music royalties.

Other uses for blockchain within the music industry have been explored and could lead to widespread adoption. For example, a tech start-up with a unique business model permits fans to “crowdfund” an artist’s upcoming song or project.¹²⁸ Vezt is an app that allows music listeners to purchase a portion of the royalties of a song through an “Initial Song Offering.”¹²⁹ The rights owner obtains money upfront instead of waiting until after recoupment to earn a profit.¹³⁰ In fact it follows a model David Bowie used in 1977 when he sold the royalties for twenty-five of his albums for \$55 million in “Bowie Bonds” to Prudential Insurance.¹³¹ The only difference is that the blockchain technology allows fans to track transactions and royalty revenue on Vezt. This type of technology democratizes the industry by empowering both the individual fan and independent artist. But with the possibility of this integration into the music industry, music labels, publishers, signed artists, independent artist, and listeners can all benefit from the ease of transactions, the transparency, or the individual empowerment that blockchain could provide.

B. BLOCKCHAIN AND FILM

Adopting blockchain technology in the film and television industry is likely easier than implementing such a system in music. Film residuals are not set by statute and most profit splits or participation percentages are usually negotiated on a deal-by-deal basis to allow for the use of a smart contract to execute the deal. Even if a creative is not represented by a union, they could easily manage their own rights, licenses, and residuals. This also gives the creative the additional freedom to work on projects independently and monitor their success without third parties to negotiate the creative’s rights and compensation.

Two concepts have surfaced that aim to give individuals in the film industry a chance to better capture the residuals due from their rights as creatives, and both concepts rely on blockchain. First,

¹²⁸ See Jack Denton, *Does Vezt Provide Songwriters With Their Business Model of the Future?*, PAC. STANDARD: ECON (Nov. 15, 2018), <https://psmag.com/economics/does-vezt-provide-songwriters-with-their-business-model-of-the-future>.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

Breaker offers an entertainment rights management platform that “allows transparent distribution of funds to the creators, investors, crew, actors, and others involved in a project.”¹³² Breaker is a blockchain-powered entertainment platform that allows users to upload content and control how it is monetized while visitors buy or rent content directly from the creator.¹³³ Second, a blockchain-based movie and television series called “21Million Project” created to “disrupt the film business.”¹³⁴ The project’s strategy is to decentralize film to block out studios, agents, and all other “middlemen.”¹³⁵ Investors will obtain a share of royalties in perpetuity through the “21M Coin.”¹³⁶ Each token linked to the value of the content created (the movie and television series) that would be syndicated and sold to TV networks.¹³⁷ The project’s creator told *Forbes*, “One needs \$100 million in Hollywood to make a film and grease the middlemen . . . In a 21Million production there are no middlemen to grease the palm of, so a \$5 million budget for 21Million delivers \$30 million.”¹³⁸ Removing unnecessary go-betweens inherently provides an open, transparent platform for rightsholders’ to track the management and distribution of royalties and residuals, much like Breaker.¹³⁹

Both projects are based on the understanding that implementing a blockchain system with smart contracts could provide the transparency in the film world that will allow creatives to monitor their revenue stream. The blockchain ledger would provide a flow of transactions that would give an actor (or their manager, lawyer, or accountant) real-time information on plays and could siphon residuals faster, that could better monitor production expenditures and profitability to provide a solution to the “Hollywood Accounting” system.¹⁴⁰

¹³² Xie, *supra* note 106; *see also* *Welcome to the Breaker Artist Portal*, BREAKER, <https://pro.breaker.io/faq> (last visited Feb. 20, 2021).

¹³³ *Welcome to the Breaker Artist Portal*, BREAKER, <https://pro.breaker.io/faq> (last visited Feb. 20, 2021).

¹³⁴ Roger Aitken, *Decentralizing The Hollywood Machine With Blockchain Tech And ‘Libertarian’ Filmmaking*, FORBES (June 13, 2017), <https://www.forbes.com/sites/rogeraitken/2017/06/13/decentralizing-the-hollywood-machine-with-blockchain-tech-libertarian-filmmaking/#1513dcbf5da1>.

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *See* Howdeshell, *supra* note 42.

C. BLOCKCHAIN AND GAMING

Since a video game, similar to a movie or television show, incorporates copyrighted material from other artistic industries, the gaming industry could benefit from a smart contract's ability to execute unique performance instructions and a decentralized blockchain ledger to monitor royalty transactions. Microsoft is working to create a blockchain platform for its video game business partner, Ubisoft Entertainment, in hopes of diminishing the inefficiencies in the gaming royalty system.¹⁴¹ Currently, accounting personnel calculate royalty payments manually; a process that can take up to forty-five days.¹⁴² Microsoft has proposed to implement a blockchain system through its cloud computing service – Azure – that would render payments in a day.¹⁴³ With these blockchain capabilities, the accounting becomes more cost-efficient and enables a game developer to handle rightsowners' contracts at a greater scale.¹⁴⁴

To solve issues with the ownership of digital items in the MMO environment, blockchain technology could allow players to store items on a ledger.¹⁴⁵ This would offer players a new avenue to hold, buy, sell, or trade the items they previously purchased.¹⁴⁶ As an added benefit, it would allow gamers to store items from one game and transfer those items to another game in the gaming ecosystem.¹⁴⁷ This would eliminate the redundancy of in-game identities for discontinued games and allow players to have a completely

¹⁴¹ Andrew Munro, *Microsoft turns to blockchain smart contracts for royalty payments*, FINDER (June 25, 2018), <https://www.finder.com.au/microsoft-turns-to-blockchain-smart-contracts-for-royalty-payments>.

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*; see also Hackernoon, *supra* note 85. The argument for the use of smart contracts and blockchain to compensate e-game creators is even more compelling. E-gamers typically compete from the comfort of their own homes, and oftentimes against other gamers from other countries, operating tournament agreements and contracts on a digital platform is ideal. Hackernoon, *supra* note 85. Typically, professional players would rely on eSports team managers to handle gameplay and to ensure players were treated fairly. *Id.* With the added technology, professional gamers could easily join an eSports team via smart contract and blockchain could track various metrics like “time played for the team,” “tournaments won,” and “scores attained.” *Id.*

¹⁴⁵ Hackernoon, *supra* note 85.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

personalized avatar throughout the ecosystem of games.¹⁴⁸ If players continue to trade an item that a game developer has licensed, this could continue to generate royalty revenue for the developer based on an algorithm within the smart contract encoded in the blockchain.

CONCLUSION

Plaguing the entertainment industry is a set of subpar royalty systems that have cost music, film and gaming companies millions of dollars in infringement lawsuits. Countless creatives and entertainers fail to be fully compensated for their talents with little recourse.

The royalty problem in the music industry surrounds the accurate collection of metadata and recognition of each rightsholder on a musical composition. A blockchain ledger is only as good as the data in the system so without a robust metadata database, blockchain could not help to ensure royalty payments are executed any better than the current systems do. However, the statutorily set mechanical royalty rate provides for easily negotiated agreement terms to utilize a smart contract for compulsory licenses. With the Music Modernization Act soon to be in effect, incorporating blockchain into the newly called for database could allow independent artists to manage and administer their copyrights. A smart contract could also execute the necessary functions for larger music labels and publishers in direct deals with DSPs. Additionally, the technology is facilitating the “crowdfund” concept used by Vezev that could seriously democratize the industry.

Film and television industry royalty issues stand to benefit from blockchain technology as well. A blockchain ledger would help cure the “Hollywood Accounting” pitfalls by offering the needed transparency for all creatives. It would keep honest people honest. This empowers screenwriters, actors, and producers by allowing them to manage and even negotiate their residuals on certain productions, all while smart contracts could be used to execute those payments on a regular basis.

The gaming industry could also benefit from the use of blockchain technology. Regardless of the current disposition of student-athlete NIL cases, game developers could easily negotiate payments to celebrities for the use of their NIL in games and carry out such agreements by using smart contracts. As e-gaming continues to grow and with successful business models used by

¹⁴⁸ *Id.*

colossal games like Fortnite, this new technology could make execution more efficient. There could be a time where a celebrity, who is also a gamer, creates a profile and uses face-scan technology to create new moves. The celebrity could then sell this emote whenever on a gaming platform and both the celebrity and game developers split the revenue. The possibilities here are boundless.

Blockchain technology can provide a decentralized ledger that would deliver transparency for rightsholders and the automatic execution of contractual payments. Tech and financial industries have rhapsodized the technology, but the entertainment industry has yet to commit. As these industries continue to expand and offer less-centralized ways for people to create and consume, blockchain's practicability will continue to be unveiled. As a means to promote the progress of science and art, set out in the Constitution, blockchain technology can provide serious value to the entertainment industry and allow the show to go on.