

DIGITAL STREAMING SERVICES

Alec Williams*

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I. INTRODUCTION

Technology has pervasively altered how people consume goods and services, creating niches for novel market actors. The entertainment and music industries have not been immune from these ongoing, dramatic changes.¹ From the proliferation of electronic music genres like dubstep to the rapid growth of interactive virtual concerts during the COVID-19 pandemic,

* Georgetown University Law Center, J.D. Candidate 2022. University of Nebraska-Lincoln, B.S. Biological Sciences and Economics 2018. Thank you to all of the amazing local musicians in Nebraska and Colorado who inspired me to research and write this piece. Without your tireless dedication to fostering creative, inclusive communities, this paper would not have been possible.

¹ Joel Waldfoegel, *How Digitization Has Created a Golden Age of Music, Movies, Books, and Television*, 31 J. ECON. PERSPECTIVES 195, 195–96 (2017), [<https://perma.cc/9UJP-U3ZS>].

technology continues to rapidly transform the contours of—and practices within—the music industry.²

Relatedly, the rise of digital streaming services has fundamentally altered music consumption. Beyond aesthetic concerns and the ears of the most opinionated listener,³ non-digital phonorecords⁴ have decreased in popularity for most consumers.⁵ Indeed, this transition, characterized as the departure from a “sales model” and the embrace of an “access model,” has been characterized by updates to the Copyright Act of 1976 (the “Act”),⁶ and the emergence of new markets in the music industry. Technology giants like Spotify and Apple Music have garnered prominence by providing consumers with access to online and downloadable forms of songs. Consistent with the constitutional roots and statutory doctrine of copyright,⁷ musicians can easily share their work through such platforms, and many consumers can access the recordings for a nominal cost.

However, not all have warmly received these services. Since inception, digital streaming services have been mired in legal challenges; such issues often originate with highly-publicized disputes between music publishers or artists critical of a service’s business practices.⁸ For instance, vocal critics, including Thom Yorke of Radiohead, have declined to license some of their

² See generally JIM ROGERS, *THE DEATH AND LIFE OF THE MUSIC INDUSTRY IN THE DIGITAL AGE* 1–9 (2013) (describing other ways in which technology continues to transform the music industry).

³ Talia Smith, *High Fidelity Music Streaming: Can You Tell the Difference?*, BERKLEE ONLINE, <https://online.berklee.edu/takenote/high-fidelity-music-streaming-can-you-tell-the-difference/> [<https://perma.cc/LZU6-QUHB>].

⁴ 17 U.S.C. § 101 (2010) (defining phonorecords as “material objects in which sounds . . . are fixed . . . and from which sounds can be perceived, reproduced, and otherwise communicated”).

⁵ See Brian R. Day, *Collective Management of Music Copyright in the Digital Age: The Online Clearinghouse*, 18 TEX. INTELL. PROP. L.J. 195, 196–97 (2010); see also JULIE ROSS & MICHAEL HUPPE, *MUSIC LAW: CHANGING LANDSCAPE IN THE MUSIC INDUSTRY AND THE LAW THAT GOVERNS IT* 8–11 (2020).

⁶ See generally ROSS & HUPPE, *supra* note 5; Congress passed the Music Modernization Act (the “MMA”) in 2018. The MMA, amongst other things, amended the Act with regard to the administration of mechanical licenses for digital streaming services; this included creating a new non-profit organization to administer these licenses. See *About the MLC*, THE MLC, <https://www.themlc.com/our-story> [<https://perma.cc/5QQR-PVPH>].

⁷ U.S. CONST. art. I, § 8, cl. 8; see also Scott L. Bach, *Music Recording, Publishing, and Compulsory Licenses: Toward a Consistent Copyright Law*, 14 HOFSTRA L. REV. 379, 396–97 (1986).

⁸ See generally Marc Hogan, *Why the Eminem Vs. Spotify Case May Be Headed to the Supreme Court*, PITCHFORK (Aug. 23, 2019), <https://pitchfork.com/thepitch/eminem-spotify-lawsuit-music-modernization-act/> [<https://perma.cc/DKB8-7DDB>].

music to Spotify over disputes concerning royalties.⁹ Despite these rampant—and perhaps well-founded—critiques,¹⁰ digital streaming services are an important social fixture in music. Indeed, the establishment of the Mechanical Licensing Collective (the “MLC”) reflects the contemporary salience of digital streaming services to the music industry. To understand the various complexities and legal implications of digital streaming services, it is prudent to understand the underlying technologies they employ.

II. THE TECHNOLOGY OF DIGITAL MUSIC STREAMING SERVICES

Since the development of Napster in the late 1990s, digital music downloads have served as viable alternatives to traditional phonorecords like cassette tapes and compact discs (CDs).¹¹ Digital music technology continued along a steep developmental trajectory through social outlets and services such as Myspace, culminating in current platforms like Spotify, SoundCloud, and Apple Music.¹² Though the user interface and technological nuances have since advanced, some of the principles underlying digital music sharing have remained relatively consonant with the groundwork provided by Napster.¹³ This section discusses key technological mechanisms orchestrated within digital streaming services.

⁹ Stuart Dredge, *Thom Yorke Calls Spotify ‘The Last Desperate Fart of a Dying Corpse’*, THE GUARDIAN (Oct. 7, 2013, 3:00 PM), <https://www.theguardian.com/technology/2013/oct/07/spotify-thom-yorke-dying-corpse> [<https://perma.cc/TY7T-3ACE>].

¹⁰ See, e.g., Paula Meija, *The Success of Streaming Has Been Great for Some, But is There a Better Way?*, NAT’L PUB. RADIO (July 22, 2019), <https://www.npr.org/2019/07/22/743775196/the-success-of-streaming-has-been-great-for-some-but-is-there-a-better-way> [<https://perma.cc/MCL6-L8HF>] (discussing a popular critique of Spotify—the favoritism such digital music streaming services grant larger, well-known artists).

¹¹ See Peter J. Honigsberg, *The Evolution and Revolution of Napster*, 36 U. S.F. L. REV. 473, 474–76 (2002).

¹² See generally John S. Wilson, *Myspace, Your Space, or Our Space—New Frontiers in Electronic Evidence*, 86 OR. L. REV. 1201, 1222–24 (2007); see also Michael Liedtke, *Myspace Tries to Strike New Chord in Digital Music*, THE SYDNEY MORNING HERALD (Sept. 25, 2008), <https://www.smh.com.au/technology/myspace-tries-to-strike-new-chord-in-digital-music-20080925-4nke.html> [<https://perma.cc/TYF7-CAN8>].

¹³ See Elliott Obermaier, *Napster: The Black Market that Publicly Dominated the Music Industry*, in PERSPECTIVES ON BLACK MARKETS v.3 (Michael Morrone ed. 2019), <https://iu.pressbooks.pub/perspectives3/chapter/napster-the-black-market-that-publicly-dominated-the-music-industry/> [<https://perma.cc/WY2Z-H3QS>]; see also James H. Richardson, *The Spotify Paradox: How the Creation of a Compulsory License Scheme for Streaming on-Demand Music Platforms Can Save the Music Industry*, 22 UCLA ENT. L. REV. 45, 47–48 (2014).

A. Uploading Music and Audio Files to a Streaming Service Server

Before digital music streaming services can provide users with access to a requested sound recording, the particular song must be on their servers. This begins with an author—for instance, a musician. As a musician records vocals or instrumentation with producers, the track is collected as an amalgamation of high-quality analog or digital waveforms (i.e., sound waves).¹⁴ Thereafter, for non-digital phonorecords, the track could be mixed and transferred to a physical medium, retaining a high quality audio recording.¹⁵

However, audio must be digitized and compressed to get to a digital streaming service's servers. This procedure makes recordings more accessible and easier to manipulate, but it can negatively impact audio quality.¹⁶ The digitization process requires a program to convert analog sound waves from their source (i.e., an electric guitar) into binary bits, which are then consolidated in an audio coding format—an MP3 or WAV, for example.¹⁷ Once stored in a digitized form, the song can be edited by sound engineers, transmitted to a streaming service's servers, or converted back to analog for a producer's listening pleasure.

This audio file transmission process, upon completion of the final sonic product, has developed into a novel intermediate market in the music industry.¹⁸ A musician can either independently send their digitized music to each streaming platform, or they can send their files to digital music distributors that will subsequently send the song to all major streaming platforms for an annual fee. For convenience and efficiency, many artists now opt for the latter approach.¹⁹

¹⁴ JENNIFER BURG ET AL., *DIGITAL SOUND & MUSIC: CONCEPTS, APPLICATIONS, AND SCIENCE* § 5.1.1 (2016).

¹⁵ See generally RICHARD OSBORNE, *VINYL: A HISTORY OF THE ANALOGUE RECORD*, CHAPTER 4: THE FACTORY RECORD (2012) (describing the process of analog disc manufacturing).

¹⁶ See generally Brian F.G. Katz and Fabien Prezat, *The Effect of Audio Compression Techniques on Binaural Audio Rendering*, AUDIO ENGINEERING SOC'Y (2006), <https://www.aes.org/e-lib/browse.cfm?elib=13508> [<https://perma.cc/JTP7-3D4E>] (empirically commenting on how the various compression processes progressively decrease audio quality).

¹⁷ BURG ET AL., *supra* note 14 at § 5.1.2.

¹⁸ Bryson Mortenson, *Choral Music in the Digital Age: Distributing Your Music Online*, CHORAL J., May 2010, at 63, 64 (2010) [<https://perma.cc/AK9X-EWA4>].

¹⁹ Craig Brown, *Distrokid Review: Is It Worth It?*, MUSIC GATEWAY (Aug. 8, 2020), <https://www.musicgateway.com/blog/how-to/distrokid-review-is-it-worth-it> [<https://perma.cc/9XWU-NTJS>].

B. Streaming Music and Audio Files from General Digital Streaming Services

Before the mass market proliferation of digital streaming services, consumers had to maintain audio files on a hard drive to listen to music stored on their computer.²⁰ However, streaming services have obviated that formerly imperative technology; users can now listen without actively or permanently downloading a copy of the audio file on their computer.²¹ Digital streaming services accomplish this through a fairly straightforward procedure.

First, a consumer or subscriber requests to listen to a song through a “player” provided by the digital streaming service; this may be a webpage (e.g., Soundcloud or Bandcamp), or a downloadable application (e.g., Spotify or Apple Music).²² In response, the associated digital music streaming service locates the requested audio file on its servers and prepares the song for transmission by using codec programs to compress the audio file.²³

Because the codecs for audio files are lossy—as opposed to lossless—there is an inverse relationship between transmission speed and audio quality.²⁴ To achieve the “real-time” effect many subscribers desire (i.e., nearly instantaneous streaming),²⁵ the streaming service typically diminishes sound quality below that of vinyl or CDs. Though the difference in quality only may be detectable by astute listeners, digital music streaming services have yet to

²⁰ Mark Harris, *What is Streaming Music?*, LIFEWIRE (Mar. 9, 2020), <https://www.lifewire.com/what-is-streaming-music-2438445> [<https://perma.cc/46PW-PN5J>].

²¹ *Id.*

²² Tracy V. Wilson, *How Streaming Video and Audio Work*, HOW STUFF WORKS, <https://computer.howstuffworks.com/internet/basics/streaming-video-and-audio.htm> [<https://perma.cc/V5LX-C4XH>].

²³ Jan Ozer, *What is a Codec?*, STREAMING MEDIA (Mar. 21, 2011), <https://www.streamingmedia.com/Articles/ReadArticle.aspx?ArticleID=74487> [<https://perma.cc/627T-UT94>].

²⁴ *Id.* (explaining that lossless codec programs perfectly reproduce the compressed files upon decompression; however, lossy codec programs do not, and therefore typically result in lower audio quality. For lossy codec programs, as transmission speed increases, audio quality decreases).

²⁵ See generally Tim Siglin, *Achieving Zero Latency for Video and Audio is a Zero-Sum Game*, STREAMING MEDIA (Sept. 20, 2019), <https://www.streamingmedia.com/Articles/ReadArticle.aspx?ArticleID=134201> [<https://perma.cc/9T3M-BEV2>].

efficiently solve this dilemma,²⁶ which may have important economic implications for these companies.²⁷

After the initial compression, the digital streaming service software partitions the compressed audio file into smaller pieces of data called “packets”²⁸ using real-time protocols (RTPs), a set of instructions for how programs manage receipt of real-time transmissions.²⁹ Through RTPs, the server transmits a constant, steady stream of data to the subscriber’s player, allowing consumers to stream “real-time” by ensuring the requested audio file arrives at the consumer’s player quickly and in the right order.³⁰

The player on the subscriber’s hard drive receives and buffers³¹ the stream of packets before decompressing and decoding the audio file.³² As long as the stream of data from the digital music server remains steady, the audio file is displayed to the subscriber as a cogent, seamless piece of music. The data from the transmission is discarded from the player after the subscriber listens to the audio file.³³

C. Case Study: Spotify’s Attributes and Ingenuity as a Streaming Service

Given the massive contemporary demand for digital streaming services, top companies like Spotify and Apple Music compete for subscribers. This requires each service to strike a delicate and calculated balance between efficiency, speed, and quality of the provided audio file streams. Spotify has

²⁶ See Adam Kagan, *HD Music Streaming: Can you Actually Hear the Difference?*, SONAR WORKS BLOG: TIPS AND TRICKS (Oct. 30, 2019), <https://www.sonarworks.com/blog/learn/hd-music-streaming-can-you-actually-hear-the-difference/> [https://perma.cc/66XP-BC6H].

²⁷ See, e.g., David Samuels, *Neil Young’s Lonely Quest to Save Music*, N.Y. TIMES (Aug. 20, 2019), <https://www.nytimes.com/2019/08/20/magazine/neil-young-streaming-music.html> [https://perma.cc/SWQ5-JVFC]; see also REUTERS, *Neil Young Bans His Music from Streaming Due to ‘Worst’ Sound Quality*, THE GUARDIAN (July 15, 2015), <https://www.theguardian.com/music/2015/jul/16/neil-young-bans-his-music-from-streaming-due-to-worst-sound-quality> [https://perma.cc/6BJR-64CT].

²⁸ Chris Woodford, *Streaming Media*, EXPLAIN THAT STUFF! (May 4, 2020), <https://www.explainthatstuff.com/streamingmedia.html> [https://perma.cc/U7KX-N2GZ].

²⁹ Wilson, *supra* note 22.

³⁰ Harris, *supra* note 20.

³¹ See generally Chris Chafe et al., *A Simplified Approach to High Quality Music and Sound Over IP*, in PROCEEDINGS OF THE COST G-6 CONFERENCE ON DIGITAL AUDIO EFFECTS (Davide Rocchesso & Mirko Signoretto eds., 2000), https://ccrma.stanford.edu/groups/soundwire/publications/papers/chafe_DAFX2000.pdf [https://perma.cc/7VNJ-XWB8] (discussing buffering, a process by which the received coagulated data is temporarily stored and transferred to another part of the computer).

³² *Id.*

³³ Woodford, *supra* note 28.

revolutionized this effort by supplanting the aforementioned audio streaming framework with innovative techniques and approaches. The following section highlights some of Spotify's key features as a digital streaming service.

1. Trajectory of Spotify's Technology

To start, Spotify streamlines operations by making use of data generated by a subscriber's selected playlists and albums. In the final seconds of a song on a subscriber's playlist or album, Spotify begins to stream the next queued song, eliminating latency periods between songs.³⁴ This gives the subscriber the experience of listening to a seamless collection of songs without notable delay. However, if the subscriber chooses to select a different song than Spotify anticipates, the program proceeds through the steps discussed below to minimize stress on its servers.³⁵

Spotify does not discard streamed audio files after a subscriber requests a new song.³⁶ Instead, the desktop software stores the track in a temporary location called a "cache" on a subscriber's hard drive.³⁷ The rationale for this approach is that a subscriber who plays a song once is likely to play the song again. By temporarily storing the song, Spotify does not need to go directly to the servers for the audio file.³⁸ The cache has a limited size, and when it fills, the software simply overwrites and deletes the oldest audio files.³⁹

Before 2014, if a requested song was not stored in a subscriber's cache, Spotify streamed the first fifteen seconds of an audio file directly from its then-limited number of servers.⁴⁰ During that interim period, the requesting subscriber's Spotify program accessed the user-unique peer-to-peer network formed with other Spotify subscribers.⁴¹ This network transmitted audio files between subscribers, uploading and downloading requested tracks from the

³⁴ Martin Irvine, *Understanding How Spotify Works* (Nov. 19, 2013), <https://blogs.common.georgetown.edu/cctp-797-fall2013/archives/557> [<https://perma.cc/A42C-G6QN>].

³⁵ John Haupt, *Digital Media Reviews: Spotify*, 69 NOTES 132, 135 (2012), <https://www.jstor.org/stable/23271778?seq=1> [<https://perma.cc/CS2M-8NDC>].

³⁶ MARIA ERIKSSON ET. AL., SPOTIFY TEARDOWN: INSIDE THE BLACK BOX OF STREAMING MUSIC 90 (2019).

³⁷ Kathleen C. Riley, *Data Scraping as a Cause of Action: Limiting Use of the CFAA and Trespass in Online Copying Cases*, 29 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 245, 251–52, 252 n.38 (2019).

³⁸ *Id.*

³⁹ Kim Gilmour, *How Spotify Works*, FOR DUMMIES (2011), <https://www.dummies.com/social-media/spotify/how-spotify-works/> [<https://perma.cc/S3YQ-7E3N>].

⁴⁰ Irvine, *supra* note 34.

⁴¹ ERIKSSON ET. AL., *supra* note 36.

caches of other Spotify users.⁴² Though this process greatly decreased the burden on Spotify's servers and improved the services for subscribers, it posed significant threats to cybersecurity. To alleviate such concerns and potential legal repercussions as the company grew, Spotify reportedly began to reduce its use of peer-to-peer networks and increasingly relied on its own servers.⁴³

2. Anti-Piracy Technology

Spotify also allows subscribers to download audio files and play them offline. In the past, with services like Napster, this posed substantial piracy concerns.⁴⁴ However, Spotify appears to have successfully mitigated at least some of the traditional concerns with piracy through digital rights management (DRM) technologies. DRM functions as access-control software by limiting the uses of copyrighted or proprietary digital information.⁴⁵ For Spotify, this entails cabining subscribers' access to songs strictly through the downloaded Spotify application.⁴⁶ This has the effect of precluding the removal of audio files from Spotify's network or using these audio files without Spotify's services.⁴⁷ This and other Spotify mechanisms have largely alleviated the once-prevalent concerns of digital music piracy.⁴⁸

III. LEGAL ISSUES FOR DIGITAL STREAMING SERVICES

As with many emerging technologies, digital streaming services spawned novel developments and applications of the laws regulating the music industry. Such services have become the frequent targets of litigation efforts initiated by artists, music publishers, and record labels. The following section describes some potential legal dilemmas arising from an increasingly streaming-based music industry.

⁴² Gilmour, *supra* note 39.

⁴³ Roman Dillet, *Spotify Removes Peer-To-Peer Technology from its Desktop Client*, TECH CRUNCH (Apr. 17, 2014, 9:34 AM), <https://techcrunch.com/2014/04/17/spotify-removes-peer-to-peer-technology-from-its-desktop-client/> [<https://perma.cc/27JE-SN79>].

⁴⁴ See generally Annemarie Bridy, *Why Pirates (Still) Won't Behave: Regulating Peer-to-Peer in the Decade After Napster*, 40 RUTGERS L.J. 565 (2009).

⁴⁵ EC-COUNCIL, COMPUTER FORENSICS: INVESTIGATING NETWORK INTRUSIONS AND CYBER CRIME 9–26 (2009).

⁴⁶ Irvine, *supra* note 34.

⁴⁷ *Id.*

⁴⁸ Andre Paine, *'Spotify Has Everything': Piracy Drops as Streaming Wins Over Illegal Downloaders*, MUSIC WEEK (Aug. 2, 2018, 12:01 AM), <https://www.musicweek.com/digital/read/spotify-has-everything-piracy-drops-as-streaming-wins-over-illegal-downloaders/073373> [<https://perma.cc/8TBY-VG33>].

A. General Concerns in Music Copyright Law

At the outset, songs in a digital streaming service's library contain two legally salient components: a copyright in the underlying music composition and a copyright in the sound recording.⁴⁹ Initially, authors of either component maintain an exclusive right to reproduce, distribute, and publicly perform the work.⁵⁰ However, for reasons including efficiency and convenience, authors of music compositions and sound recordings do not typically keep, maintain, or enforce their own copyrights.⁵¹

Instead, authors (i.e., songwriters) of music compositions⁵² assign all of their copyrights in a work to music publishers in exchange for an even split of royalty payments.⁵³ Thereafter, music publishers administer and manage relevant licensing protocols on behalf of the songwriter. Likewise, many authors (i.e., performing artists) of sound recordings⁵⁴ often assign all of their copyrights in the work to a record label in exchange for some payment.⁵⁵ Record labels subsequently help produce, publicize and market the sound recording.

Hence, most streaming services must obtain various licenses from the relevant copyright owners—generally music publishers or record labels—to use and distribute the song,⁵⁶ and to publicly perform the work.⁵⁷ Predictably, legal infractions arise from this scheme. Lawsuits implicating digital streaming services generally fall into two categories: (1) the failure to justly and fully compensate the sound recording copyright holder and (2) the unauthorized use of a musical work.

1. Issues with Royalty Distribution

Digital streaming services have received ongoing critique for royalty distribution practices, including failure to pay royalties owed for licensing⁵⁸

⁴⁹ Henry Schoonmaker, *How Spotify Streams Turn into Royalties*, SONG TRUST (Jan. 2, 2020), <https://blog.songtrust.com/how-spotify-streams-turn-into-royalties> [https://perma.cc/4JZE-F5Y7].

⁵⁰ 17 U.S.C. § 106(1)–(4), (6) (2002).

⁵¹ Schoonmaker, *supra* note 49.

⁵² *See SoundExchange, Inc. v. Libr. of Cong.*, 571 F.3d 1220, 1222 (D.C. Cir. 2009) (providing a description of what constitutes a music composition).

⁵³ COHEN ET AL., *COPYRIGHT IN A GLOBAL INFORMATION ECONOMY* 415 (5th ed. 2020).

⁵⁴ *See Music Choice v. Copyright Royalty Bd.*, 774 F.3d 1000, 1004 (D.C. Cir. 2014) (providing a description of what constitutes a sound recording).

⁵⁵ COHEN ET AL. *supra* note 53.

⁵⁶ 17 U.S.C. § 106(1), (3) (2002).

⁵⁷ *Id.* § 106(4), (6).

⁵⁸ *See, e.g.,* Evan Minsker, *Spotify's \$112.5 Million Class-Action Copyright Lawsuit Settlement Approved*, PITCHFORK (May 23, 2018), <https://pitchfork.com/news/spotify->

and unjust enrichment.⁵⁹ Recently, some contend the services like Spotify instituted a “payola” regime,⁶⁰ whereby artists could pay to increase their reach on the platform. Under this framework, artists provide digital streaming services, like Spotify, with a cut of their royalties in exchange for placement opportunity on popular playlists.⁶¹ As is, Spotify has a complex scheme⁶² for distributing the royalties for sound recordings to copyright owners.⁶³ This artist-contested approach comes on the heels of the Copyright Royalties Board’s increase in the royalty rate for sound recording copyrights.⁶⁴ Spotify and other digital streaming services unsuccessfully contested that decision, claiming the updated royalty rates were too high.⁶⁵ In reality, private third-party playlist curators have engaged in such conduct well before Spotify’s new program.⁶⁶ Whether such novel digital streaming service programming, perhaps in response to the Board’s decision to increase royalty rates, will subsist remains an open question. However, one reality is certain: the foregoing regulatory approach to royalties has made it increasingly difficult

dollar1125-million-class-action-copyright-lawsuit-settlement-approved/
[<https://perma.cc/3XZK-NC23>].

⁵⁹ Complaint at 40, *Pro Music Rights v. Spotify*, No. 2:19-cv-00843 (M.D. Fla. Nov. 25, 2019), <https://www.scribd.com/document/462514957/NochSpotify> [<https://perma.cc/8NAV-HHMP>].

⁶⁰ Kim Kelly, *A Brief History of American Payola*, VICE (Feb. 14, 2016), <https://www.vice.com/en/article/64y8y9/a-brief-history-of-american-payola> [<https://perma.cc/8M5N-R3XR>].

⁶¹ Alex Hern, *Spotify to Let Artists Promote Music for Cut in Royalty Rates*, THE GUARDIAN (Nov. 3, 2020), <https://www.theguardian.com/technology/2020/nov/03/spotify-artists-promote-music-exchange-cut-royalty-rates-payola-algorithm> [<https://perma.cc/3UHK-26H2>] (placement on a digital streaming service’s self-curated playlists can appreciably extend a musician’s reach and fanbase).

⁶² See generally *U.S. Music Streaming Royalties Explained*, MANATT, PHELPS & PHILLIPS, LLP (2016), <https://www.manatt.com/Manatt/media/Media/PDF/US-Streaming-Royalties-Explained.pdf> [<https://perma.cc/4YF9-457S>] (provides an understandable set of infographics comparing the royalty regimes and distribution strategies of Spotify and Apple Music).

⁶³ 17 U.S.C. § 115 (2018); 17 U.S.C. § 801(a)–(b)(1) (2018) (the purpose of the Copyright Royalty Board is to make “determinations and adjustments of reasonable terms and rates of royalty payments” every five years).

⁶⁴ Determination of Royalty Rates and Terms for Ephemeral Recording and Digital Performance of Sound Recordings (Web V), 84 Fed. Reg. 57833–36 (proposed Oct. 23, 2019) (to be codified at 7 C.F.R. pt. 380.30–31), <https://www.govinfo.gov/content/pkg/FR-2019-10-29/pdf/2019-23542.pdf> [<https://perma.cc/2L4U-SN2Q>].

⁶⁵ See *Johnson v. Copyright Royalty Bd.*, 969 F.3d 363 (D.C. Cir. 2020).

⁶⁶ Elias Leight, *There’s So Much Music on Spotify, Artists Are Paying for You to (Hopefully) Find Them*, ROLLING STONE (July 28, 2020, 4:05 PM), <https://www.rollingstone.com/music/music-features/spotify-streams-third-party-playlisting-1033700/> [<https://perma.cc/L4JA-SYPL>].

for artists—from popular to DIY musicians—to rely on digital streaming as a reliable source of income.⁶⁷

2. Issues with Copyright Infringement

In the years leading up to the passage of the Music Modernization Act (the “MMA”), digital streaming services have also contended with massive lawsuits alleging copyright infringement. Notably, this included actions brought by music publishers *Wixen*⁶⁸ and *Eight Mile Style*⁶⁹ implicating the compositions of multiple high-profile, such as artists like Tom Petty and Eminem. In both cases, the complaining parties alleged Spotify reproduced and distributed their discography without obtaining the necessary mechanical licenses.⁷⁰ Though the former lawsuit settled out-of-court, the fate of the latter remains unclear. Importantly, as the subsequent section describes further, stipulations of the MMA⁷¹ may remove future legal challenges of this sort.⁷² However, given the novelty of the updated regulatory regime, there remains uncertainty as to how this will impact the scope and prominence of future litigation.

B. Impact of the MMA in Music Copyright Law

⁶⁷ Tim Ingham, *Spotify Dreams of Artists Making a Living. It Probably Won't Come True*, ROLLING STONE (Aug. 3, 2020, 1:38 PM), <https://www.rollingstone.com/pro/features/spotify-million-artists-royalties-1038408/> [<https://perma.cc/V6FS-3AE7>].

⁶⁸ Amy X. Wang, *Spotify Settles Its \$1.6 Billion Publishing Lawsuit*, ROLLING STONE (Dec. 20, 2018, 4:05 PM), <https://www.rollingstone.com/pro/news/spotify-settles-its-1-6-billion-publishing-lawsuit-771557/> [<https://perma.cc/GM25-EKDW>].

⁶⁹ Althea Legaspi, *Eminem Publisher Sues Spotify for Copyright Infringement*, ROLLING STONE (Aug. 21, 2019, 9:33 PM), <https://www.rollingstone.com/music/music-news/eminem-publisher-spotify-copyright-infringement-lawsuit-874956/> [<https://perma.cc/Q83N-4CBD>].

⁷⁰ Complaint at 9, *Wixen Music Publishing v. Spotify*, No. 2:17-cv-09288 (C.D. Cal. Dec. 29, 2017), <https://www.scribd.com/document/396094073/Spotify-Wixen> [<https://perma.cc/ACS9-JPJ3>]; Complaint at 20–25, *Eight Mile Style v. Spotify*, No. 3:19-cv-00736 (E.D. Tenn. Aug. 21, 2019), <https://musictechpolicy.files.wordpress.com/2020/07/eight-mile-style-amended-complaint.pdf> [<https://perma.cc/6WWG-KMQP>].

⁷¹ See 17 U.S.C. § 115(d)–(e) (2018).

⁷² Matthew Pangle & Christopher Cotropia, *Can IP Rights Be Reconceived Via Music Modernization Act?*, LAW 360 (Apr. 21, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3718772 [<https://perma.cc/9CZD-YDVD>].

Upon passage of the MMA in 2018, Congress formally codified years of discussion on compulsory license reform.⁷³ The MMA transformed the industry's legal framework favorably for digital streaming services and cemented their newfound centrality in the music world. The MMA installed a specific blanket mechanical license for digital streaming services' use of musical compositions.⁷⁴ This new license, set to fundamentally change the distribution of a major revenue stream in the music industry, is to be administered by the MLC. Recognizing the dire need for an amendment to the current legal framework provided by the Copyright Act, the installation of the MLC sparked optimism in key industry players and digital streaming services.⁷⁵ However, others believed the MLC was just another sign of diluted legal protections for songwriters and music publishers.⁷⁶

To be sure, digital streaming services are arguably the primary beneficiaries of the MLC. From an efficiency standpoint, licensing operations for digital streaming services were decentralized before the MMA; the previous system required services to obtain mechanical licenses for the use of a composition on a per-work, song-by-song regimen.⁷⁷ Under the MLC, the centralized system provides blanket statutory licenses for certain uses, including most activities in which a digital streaming service would engage.⁷⁸ In addition to streamlining licensing practices, the impending threat of liability for *past* copyright infringement, like that alleged above in either *Wixen* or *Eight Mile Style*, is seemingly annulled under the MMA.⁷⁹ So, even though

⁷³ See generally Section 115 Compulsory License: Hearing Before the Subcommittee on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary, 108th Cong. 2d Sess. (2004) (statement of Marybeth Peters, Register of Copyrights).

⁷⁴ See U.S. COPYRIGHT OFFICE, CIRCULAR 73B: MAKING AND DISTRIBUTING DIGITAL PHONORECORDS AND LIMITATIONS ON LIABILITY PRIOR TO THE LICENSE AVAILABILITY DATE (2019), <https://www.copyright.gov/circs/circ73b.pdf> [<https://perma.cc/JL7C-KF3Y>] (providing a general overview of the MLC).

⁷⁵ See, e.g., U.S. COPYRIGHT OFFICE, COPYRIGHT AND THE MUSIC MARKETPLACE 112 (2015) (describing comments from the Digital Media Alliance and Spotify, professing ardent support for a blanket mechanical license).

⁷⁶ See, e.g., David Lowery, *Good Data in Garbage Out: The MLC/HFA Data*, THE TRICHORDIST (Aug. 10, 2020), <https://thetrichordist.com/2020/08/10/good-data-in-garbage-out-the-mlc-hfa-data-disaster/> [<https://perma.cc/HQ5-ERTY>] (description of some of the externalities and costs musicians have to bear following installment of the MLC, including the tedious process of having to re-input necessary data).

⁷⁷ See U.S. COPYRIGHT OFFICE, COPYRIGHT AND THE MUSIC MARKETPLACE 5, 107 (2015).

⁷⁸ See CIRCULAR 73B, *supra* note 74.

⁷⁹ 17 U.S.C. § 115(d)(10)(A) (2018) (description of the legal immunity digital streaming services enjoyed under the MMA). Indeed, digital streaming services appear to avoid excessive litigation costs by paying into the MLC. See Murray Stassen, *Mechanical Licensing Collective Reaches Funding Deal*, MUSIC BUSINESS WORLDWIDE (Nov. 9, 2019), <https://www.musicbusinessworldwide.com/mechanical-licensing-collective-reaches-funding-deal-will-receive-33-5m-for-start-up-costs/>. But see Jillian J. Dahrooge, *The Real*

digital streaming services fund the MLC, they remain—in an appreciable sense—the “winners” under the new regime.⁸⁰ Ultimately, though, the novelty of the MLC makes it difficult to predict how this other industry of actors, including artists and music publishers, will be impacted.

IV. CONCLUSION

As of 2021, digital streaming services are of paramount importance in music sharing and consumption across the globe. The innovations underlying digital streaming services like Spotify and Apple Music are revolutionary feats of technological innovation in the music industry. Though such services are implicated in a handful of licensing and royalty disputes, updates to federal statutory law aimed at obtaining more fair and equitable standards are set to take effect—whether they achieve those goals is subject to some speculation.⁸¹ Nonetheless, music streaming platforms will, for the foreseeable future, continue to develop novel technologies and further transform the consumption of music.

Slim Shady: How Spotify and Other Music Streaming Services Are Taking Advantage of the Loopholes Within the Music Modernization Act, 21 J. HIGH TECH. L. 199, 225–26 (2019).

⁸⁰ *See id.*

⁸¹ COHEN ET AL., *supra* note 53, at 419; *see also* Lowery, *supra* note 76; Jason Koransky, *Digital Dilemmas: The Music Industry Confronts Licensing for On-Demand Streaming Services*, 8 LANDSLIDE (2016),

https://www.americanbar.org/groups/intellectual_property_law/publications/landslide/2015-16/january-february/digital-dilemmas-music-industry-confronts-licensing-on-demand-streaming-services/ [<https://perma.cc/XV7L-VKXU>].