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DMCA § 1201: EFFECTIVE OR OUTDATED?

Sydney Yazzolino*

Creators have gone digital and so have copyrights. To combat rampant piracy, creators flock to digital rights management systems (DRM), which control user access to copyrighted material through technology. However, DRM can be bypassed, and file-sharing networks make it easy to distribute and download illegal copies. In response, Congress enacted the Digital Millennium Copyright Act (DMCA), which makes it illegal to circumvent digital rights management technologies. This Note will analyze the effectiveness of the DMCA in the light of DRM technology in 2022. Both copyright holders and users of the copyrighted works have legitimate concerns over how digital copyrights are treated and enforced. Copyright holders are concerned with digital piracy, while consumers are concerned that the use of DRM will interfere with their right to fair use and the exhaustion principle. As it currently stands, the DMCA does not adequately address the rights of consumers. It favors the copyright holder and needlessly expands the boundaries of copyright protections. To restore the balance between consumers and copyright holders, § 1201 of the DMCA should be amended to address circumvention of technological measures that facilitates copyright infringement—not all circumvention. By narrowing the language, the DMCA will properly address consumer interest while still allowing copyright holders to protect their copyrights.

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I. INTRODUCTION

Digital media has permeated society and with it so has copyright infringement. The ability to create perfect copies of digital media that are compact, easily archived, and that do not degrade (e.g., cassettes or records) means that digital media can now be spread far and wide over the internet with the click of a mouse or tap of a keyboard.¹ As a result, “[a]lmost everyone has recorded copyrighted television broadcasts, photocopied copyrighted writings, or made duplicates of cassette tapes

1. Eric Matthew Hinkes, *Access Controls in the Digital Era and the Fair Use/First Sale Doctrines*, 23 SANTA CLARA COMPUTER & HIGH TECH. L. J. 685, 686 (2007).

or compact discs containing copyrighted songs.”² From e-books to music to movies, almost everyone has downloaded or made copies of copyrighted files from the internet. While we might like to think that all our downloads are legal, it is all too easy for an illegal use to occur.

Some safeguards attempt to prevent copyright infringement. For example, it is nearly impossible to use the internet without encountering digital rights management (DRM) technology in some form or fashion. DRM technology is “technology that controls access to content on digital devices.”³ From bingeing episodes on Netflix to downloading Kindle books or Spotify playlists, it is highly likely that you have run into a DRM. Copyright creators have been adding DRM technology to their works since the late 1980’s.⁴ Although DRM technology has changed, almost forty years later, the sentiment remains the same: to limit what consumers can do with the products that they buy. Consumer actions are also limited by U.S. copyright law. The Digital Media Copyright Act of 1998 (DMCA) makes it illegal to circumvent the “technological measures” that copyright holders have put in place through DRM technology.⁵

This Note will analyze the effectiveness of the DMCA in the light of DRM technology in 2021. Both copyright holders and users of copyrighted works have legitimate concerns over how digital copyrights are treated and enforced. The digital copyright holders are concerned with digital piracy, while consumers are interested in fair use and the exhaustion principle. As it currently stands, the DMCA does not adequately address the rights of the consumer. It favors the copyright holder and needlessly expands the boundaries of copyright protections. To restore the balance between the interests of consumers and copyright holders, § 1201 of the DMCA should be amended to address circumvention of DRM that facilitates copyright infringement. By narrowing the language, the DMCA will address consumer interests like

2. Ann Bartow, *Arresting Technology: An Essay*, 1 BUFF. INTELL. PROP. L. J. 95, 96 (2001).

3. Frederick W. Dingley & Alex Berrio Matamoros, *What Is Digital Rights Management?*, in DIGITAL RIGHTS MANAGEMENT: THE LIBRARIAN’S GUIDE 1, 1 (Catherine A. Lemmer & Carla P. Wale eds., 2016), <https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1121&context=libpubs>.

4. See Database Usage Metering and Protection Sys. & Method, U.S. Patent No. 4,827,508 (filed Oct. 14, 1985) (issued May 2, 1989); Ernie Smith, *The Incredibly Technical History of Digital Rights Management*, VICE (Oct. 19, 2017, 8:00 AM), <https://www.vice.com/en/article/evbgkn/the-incredibly-technical-history-of-digital-rights-management>.

5. 17 U.S.C.A. § 1201(a)(1)(A) (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

fair use and exhaustion while still allowing copyright holders to protect their copyrights.

II. BACKGROUND

A. *What is DRM?*

Digital Rights Management (DRM) technology has a simple definition: “technology that controls access to content on digital devices.”⁶ DRM “crafts the relationship between the digital content owner and user. It can be interjected at the very outset by controlling how the content is accessed or during the transfer and use of the content.”⁷ DRM technology is often used to prevent users from using their digital media in ways not authorized by the copyright holder.⁸ It is important to distinguish DRM technology from copyright. DRM is not copyright. Instead, it is technology used to protect the rights of a copyright holder.⁹

DRM technologies come in many different forms including both hardware and software implementations. On the hardware side, DVDs, printers, Smart TVs, and even home and kitchen appliances all utilize DRM to control what users can and cannot do with their products.¹⁰ On the software side, digital music, videos and books, apps, commercial software, and video games also utilize DRM.¹¹ Some examples of popular DRM include Google Widevine, Apple Fairplay, and Microsoft PlayReady.¹²

DRM technology covers a vast range of implementations, but, for the most part, they all have one thing in common. DRM technologies “can be used to impose direct functionality restrictions on digital content”¹³ to prevent copying, extracting, or transferring data to another

6. Dingley & Matamoros, *supra* note 3, at 1.

7. *Id.* at 4.

8. *DRM*, ELECTRONIC FRONTIER FOUND., <https://www EFF.ORG/issues/drm> (last visited Dec. 27, 2020).

9. Dingley & Matamoros, *supra* note 3, at 1.

10. Paul Bischoff, *A complete guide to DRM for beginners*, COMPARITECH (Jan. 27, 2017), <https://www.comparitech.com/blog/information-security/a-beginners-guide-to-drm/>.

11. *Id.*

12. *Widevine DRM*, WIDEVINE, <https://www.widevine.com/solutions/widevine-drm> (last visited Dec. 28, 2020); *FairPlay Streaming*, APPLE DEVELOPER, <https://developer.apple.com/streaming/fps/> (last visited Dec. 28, 2020); *Frequently Asked Questions (FAQ)*, MICROSOFT PLAYREADY, <https://www.microsoft.com/playready/licensing/faq/> (last visited Dec. 28, 2020).

13. Julie Cohen, *The Challenge of Digital Rights Management Technologies*, in *THE ROLE OF SCIENTIFIC AND TECHNICAL DATA AND INFORMATION IN THE PUBLIC DOMAIN: PROCEEDINGS OF A SYMPOSIUM* 109, 109 (Julie M. Esanu & Paul F. Uhlir eds., 2003).

device.¹⁴ DRM can be as simple as encryption to restrict access to a database to only those who have the correct password or key. Alternatively, DRM can involve more complex restrictions like preventing users from taking a certain action with data or regulating a users' use of that data.¹⁵ DRM technologies can also be used to disable access to databases "if the system detects an attempt to engage in some sort of impermissible action, or detects unauthorized files residing on the user's computer."¹⁶

DRM also includes the use of metadata,¹⁷ or digital watermarking where files contain identifiers used to track illegal uses.¹⁸ Some models rely on trusted computing, which is a "system in which software and content providers can require the user's PC to expose stored identification data in order to access protected works."¹⁹ Current DRM technology could be replaced in the future with DRM based on blockchain and blockchain-based smart contracts.²⁰

Spotify, Amazon Kindle, and Netflix all utilize DRM.²¹ Even YouTube, a service that allows free access to most of its videos, uses DRM. YouTube uses its ContentID system as well as its Encrypted Media Extensions, plugins that allow YouTube to attach DRM to their videos to prevent an individual from downloading a copy of a video to their computer's hard drive.²² Surprisingly, some copyright heavyweights have removed DRM from at least some of their products and services. One notable example is Apple with its removal of DRM from iTunes.²³ Additionally, Amazon sells DRM-free MP3 files.

14. *Id.* at 109-10.

15. *Id.* at 110.

16. *Id.*

17. JENQ-NENG HWANG, MULTIMEDIA NETWORKING: FROM THEORY TO PRACTICE 410 (2009).

18. Mai-Trang D. Dang & Esther H. Lim, *IP Rights and DRM: The Copyright Holder's Guide to Navigating DRM Technology through Hostile Territory*, FINNEGAN (Nov. 2006), <https://www.finnegan.com/en/insights/articles/ip-rights-and-drm-the-copyright-holder-s-guide-to-navigating-drm.html>.

19. *Id.*

20. Michèle Finck & Valentina Moscon, *Copyright Law on Blockchains: Between New Forms of Rights Administration and Digital Rights Management 2.0*, 50 INT'L REV. OF INTELL. PROP. & COMPETITION L. 77, 89 (2018).

21. *Listen offline*, SPOTIFY, <https://support.spotify.com/us/article/listen-offline-troubleshooting/> (last visited Dec. 28, 2020); Ramble Productions, *What is Kindle DRM?*, AMAZON, <https://www.amazon.com/vdp/40497402b4964431885bbd4c5523cbb5> (last visited Dec. 28, 2020); *DRM playback and compatibility issues*, NETFLIX, <https://help.netflix.com/en/node/395> (last visited Dec. 28, 2020).

22. Dingley & Matamoros, *supra* note 3, at 9.

23. Apple Music User Guide, *Intro to the iTunes Store in Music on Mac*, APPLE, <https://support.apple.com/en-in/guide/music/mus3e2346c2/mac> (last visited Dec. 28, 2020). However, it appears that music downloaded from Apple Music does still have DRM. *See also*

According to Amazon, “every song from Amazon MP3 is DRM-free.”²⁴ Even so, completely DRM-free companies are few and far between. One DRM-free example is CD Projekt Red, makers of the *Witcher* video game series, which released the last two installments of the series without DRM.²⁵

B. Why Do We Need DRM?

1. General Copyright Background

Because DRM technology is used to protect copyright, it is important to have a basic knowledge of U.S. copyright law to understand how DRM and the principles of intellectual property law intersect. Copyright law strives to strike “a balance between the artist’s right to control [her] work . . . and the public’s need for access.”²⁶ Copyright is a collection of rights automatically vested to an author once they have created an original work.²⁷ These rights include the rights of reproduction, distribution, public performance, public display and the right to prepare derivative works.²⁸ Some limitations on these rights include the doctrines of fair use and first sale or exhaustion.²⁹ Copyright protection is automatic. After the creation of the copyrighted work, the author is not required to take any action to obtain a copyright.³⁰ However, registration of the copyright with the U.S. Copyright Office is required before a litigant can bring an action for copyright infringement in court.³¹

FairPlay Streaming, *supra* note 12; *Subscribe to iTunes Match*, APPLE, <https://support.apple.com/en-us/HT204146> (last visited Jan. 29, 2021).

24. *Adding Music to Your MP3 Player*, AMAZON, <https://www.amazon.com/gp/feature.html?ie=UTF8&docId=1000265101> (last visited Jan. 30, 2021).

25. *The Witcher 2 Becomes DRM-Free: Patch 1.1 Released*, CD PROJEKT RED (May 26, 2011), <https://en.cdprojektred.com/news/the-witcher-2-becomes-drm-free-patch-1-1-released/>; *No DRM in The Witcher 3: Wild Hunt – an open letter to the community*, CD PROJEKT RED (Oct. 30, 2013), <https://en.cdprojektred.com/news/drm-witcher-3-wild-hunt-open-letter-community/>.

26. *Stewart v. Abend*, 495 U.S. 207, 228 (1990).

27. *What Is The Difference Between Copyright, Patent, and Trademark?*, COPYRIGHT ALLIANCE, https://copyrightalliance.org/ca_faq_post/difference-copyright-patent-trademark/ (last visited Jan. 30, 2021).

28. 17 U.S.C.A. § 106 (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

29. *Limitations on a Copyright Owner’s Rights*, Section in *Copyright Law Explained*, COPYRIGHT ALLIANCE, <https://copyrightalliance.org/education/copyright-law-explained/exceptions-and-limitations-to-a-copyright-owners-rights/> (last visited Jan. 30, 2021).

30. *Id.*

31. *Fourth Estate v. Wall-Street.com*, COPYRIGHT ALLIANCE, <https://copyrightalliance.org/copyright-law/copyright-cases/fourth-estate-v-wall-street-com/> (last visited Jan. 30, 2021).

2. What is Digital Piracy?

Piracy is, “by its very nature, infringement”³² of a copyright. Digital piracy refers to “the illegal act of duplicating, copying, or sharing a digital work without the permission of the copyright holder.”³³ Digital piracy grew out of computer-hacking among hobbyists in the 1970’s, but has since become common among the general public.³⁴ There are many ways to pirate. Peer-to-peer networks like Limewire or BitTorrent are a popular method of exchanging illegal files over the internet.³⁵ Another popular method of illicitly gaining access to copyrighted material are piracy cyberlockers, which allow users to share content by directly uploading it for others to download.³⁶ And the popularity of “stream-ripping,” websites and programs that allow a user to turn a digital file being played on streaming platforms into one that can be downloaded and kept permanently, is rising.³⁷ While piracy is not confined to any one particular digital medium, three primary areas of media dominate: music, video, and software.³⁸

3. Why Do People Pirate?

Individuals might justify online piracy for a whole host of reasons. For many pirates, economic factors are their primary concern. Some pirates do not believe that the value of the pirated product is as high as the market price suggests.³⁹ As a result, the price they are willing to pay for the copyrighted product is much lower than retail prices.⁴⁰ Some pirates believe the price for digital media is too high and that the copyright holders “do not deserve it,” especially given the economic

32. Joshua Schwartz, *Thinking Outside the Pandora’s Box: Why the DMCA is Unconstitutional Under Article I, § 8 of the U.S. Constitution*, 10 J. TECH. L. & POL’Y 93, 118 (2005).

33. Jason R. Ingram, *Digital Piracy*, in THE ENCYCLOPEDIA OF CRIMINOLOGY AND CRIMINAL JUSTICE (2014), <https://doi.org/10.1002/9781118517383.wbeccj116>.

34. *Id.*

35. *Id.*

36. *How does online piracy of movies and TV series actually work?*, SMART PROTECTION (May 23, 2019), <https://smartprotection.com/en/media/how-does-film-series-online-piracy-work/>.

37. Hugh McIntyre, *What Exactly Is Stream-Ripping, The New Way People Are Stealing Music*, FORBES (Aug. 11, 2017, 10:40 AM), <https://www.forbes.com/sites/hughmcintyre/2017/08/11/what-exactly-is-stream-ripping-the-new-way-people-are-stealing-music/?sh=74ccc3ee1956>.

38. Ingram, *supra* note 33.

39. Peter Williams, David Nicholas & Ian Rowlands, *The Attitudes and Behaviours of Illegal Downloaders*, 62 ASLIB PROC. 283, 293 (2010).

40. *Id.*

success of copyright holders.⁴¹ Some pirates believe that online piracy is a victimless crime⁴² because it does not harm or hurt anyone.⁴³ The victims, individual software engineers, artists, or large companies, are perceived to be distant, far-removed, and impersonal to the individual doing the pirating.⁴⁴ For example, an individual may believe that making just one illegal copy of Microsoft Office does not really harm Microsoft.⁴⁵ Other pirates might take solace in the anonymity that the internet brings.⁴⁶ Regardless of their motives or intentions, people pirate and they do it at enormous rates.

4. *Digital Copyright Background*

As long as creators have been creating works, people have been pirating them. In fact, piracy even predates statutory copyright. For example, book pirates were an extensive problem for authors and printers in the fifteenth and sixteenth centuries.⁴⁷ While the problem of piracy is nothing new, the focus of copyright protection has evolved from its source in tangible print-based media since it first came about in eighteenth century England⁴⁸ to the ethereal digital media that permeates modern culture.⁴⁹ Unlike media based in physical copies, digital media elicits some special concerns for both copyright holders and consumers alike.

a. *Concerns of the Copyright Holder*

One major area of concern from the copyright holders' perspective, as highlighted above, is piracy.⁵⁰ Now more than ever, advances in technology have made it easier to make copies.⁵¹ An individual does not need a printing press, a recording device, nor a copier to make a copy.

41. Charles W.L. Hill, *Digital piracy: Causes, consequences, and strategic responses*, 24 ASIA PAC. J. MGMT 9, 12 (2007).

42. Williams, Nicholas & Rowlands, *supra* note 39, at 289.

43. Ingram, *supra* note 33.

44. Williams, Nicholas & Rowlands, *supra* note 39, at 290.

45. Hill, *supra* note 41, at 13.

46. Williams, Nicholas & Rowlands, *supra* note 39, at 294.

47. Kevin Liftig, *The Evolution of Copyright Law in the Arts 7-8* (Dec. 10, 2009) (unpublished Honors Scholar Program thesis, University of Connecticut) (on file with UCONN Library Open Commons, University of Connecticut), https://opencommons.uconn.edu/cgi/viewcontent.cgi?article=1114&context=srhonors_theses.

48. See Benedict Atkinson & Brian Fitzgerald, *Origins*, in A SHORT HISTORY OF COPYRIGHT: THE GENIE OF INFORMATION 3-13 (2014).

49. Paul Edward Geller, *Copyright History and the Future: What's Culture got to do with it?*, 47 J. COPYRIGHT SOC'Y UNITED STATES 209, 235 (2000).

50. Dingley & Matamoros, *supra* note 3, at 2.

51. *Id.*

Now they can create a “free perfect digital copy of a work with a few clicks of a mouse”⁵² from the comfort of their living room. For example, the fifth season finale of *Games of Thrones* broke piracy records when it was downloaded nearly 1.5 million times within eight hours of its release.⁵³ Copyright holders are understandably interested in using DRM to prevent such unauthorized copying.⁵⁴

Another concern for copyright holders is the ability of motivated and skilled persons to overcome DRM and the ease of distribution once DRM has been circumvented⁵⁵ through avenues such as online file-sharing⁵⁶ and peer-to-peer networks.⁵⁷ Copyright holders are concerned that even if they put proper technological safeguards in place “not only can technological safeguards be disabled with enough time and effort, but once protected materials are released into cyberspace, they tend to migrate uncontrollably across that space.”⁵⁸ Once a digital work has been released to the public, even if the release itself was illegal, it is near impossible for the copyright holder to regain control of their works.⁵⁹ Without legal protections like the DMCA or technological protections like DRM, digital copyright holders argue that they will not be able to effectively prevent others from gaining access to their works,⁶⁰ which defeats the purpose of having a copyright in the first place.

b. Concerns of the Consumer

While digital content creators argue that DRM helps them protect their intellectual property, many digital consumers and digital consumer advocacy groups, like the Electronic Frontier Association and the American Library Association, oppose the use of DRM,⁶¹ arguing that

52. *Id.*

53. Ernesto Van der Sar, *Game of Thrones Season Finale Breaks Piracy Records*, TORRENTFREAK (June 15, 2015), <https://torrentfreak.com/game-of-thrones-season-finale-breaks-piracy-record-150615/>.

54. Dingley & Matamoros, *supra* note 3, at 2.

55. Geller, *supra* note 49, at 239-40.

56. See Peter K. Yu, *Digital Copyright and Confuzzling Rhetoric*, 13 VAND. J. ENT. & TECH. L. 881, 892 (2011).

57. Jessica A. Wood, *The Darknet: A Digital Copyright Revolution*, 16 RICH. J.L. & TECH. 1, 3-4 (2010).

58. Geller, *supra* note 49, at 239.

59. See Cory Doctorow, *DRM's Dead Canary: How We Just Lost the Web, What We Learned from It, and What We Need to Do Next*, ELECTRONIC FRONTIER FOUND. (Nov. 27, 2017), <https://www.eff.org/deeplinks/2017/10/drms-dead-canary-how-we-just-lost-web-what-we-learned-it-and-what-we-need-do-next>; J. Alex Halderman, *AACS Updated, Broken Again*, FREEDOM TO TINKER (May 18, 2007), <https://freedom-to-tinker.com/index.php?s=aacs>.

60. See Yu, *supra* note 56, at 892.

61. Dingley & Matamoros, *supra* note 3, at 14.

its use is not the right way to balance the rights of consumers and copyright holders.⁶²

The right of first sale or exhaustion is of particular concern to consumers. The exhaustion doctrine “provides that once copyright owners transfer ownership in copies of their works, their rights to control future distribution of those copies is exhausted. The buyers are therefore free to transfer the copies as they please.”⁶³ Under U.S. law, the doctrine of exhaustion states, “the owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord.”⁶⁴ Exhaustion of copyright in print sources is relatively clear, but when the right in question is digital, exhaustion of that right is not so clear.⁶⁵

There are several issues with exhaustion and digital media that exacerbate this grey area. First, unlike its print counterpart, digital media has no tangible form.⁶⁶ Second, digital media is often licensed or rented, not purchased.⁶⁷ Third, with print form, one is able to loan or sell a physical copy of a book, but with digital media, one generally needs to make copies of the work, which might put the work beyond the scope of exhaustion.⁶⁸

Another issue that often concerns consumers is that of fair use. Fair use is one of the most well-known exceptions to U.S. copyright protection⁶⁹ and is found in § 107 of the U.S. Copyright Code. Section 107 states “fair use of a copyrighted work . . . for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.”⁷⁰ According to the Stanford Copyright and Fair Use Center, “[i]n its most general sense, a fair use is any copying of copyrighted material done for a limited and ‘transformative’ purpose, such as to

62. *Id.*

63. Guy A. Rub, *Rebalancing Copyright Exhaustion*, 64 EMORY L.J. 741, 744 (2015) (footnote omitted).

64. 17 U.S.C.A. § 109 (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

65. Donna L. Ferullo & Aline Soules, *Managing Copyright in a Digital World*, 3 INT’L J. DIGITAL LIBR. SYS. 1, 4 (2012).

66. *Id.*

67. *Id.*

68. Ferullo & Soules, *supra* note 65; see *Capitol Records, LLC v. ReDigi Inc.*, 910 F.3d 649 (2d Cir. 2018).

69. Dingley & Matamoros, *supra* note 3, at 15.

70. 17 U.S.C.A. § 107 (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

comment upon, criticize, or parody a copyrighted work.”⁷¹ The U.S. Copyright Office characterizes fair use as a “legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances.”⁷²

When determining fair use, courts generally weigh four factors: 1) the purpose or character of the use, 2) the nature of the copyrighted work, 3) the amount or substantiality of the portion used, and 4) the effect of the use upon the potential market for or value of the copyrighted work.⁷³ Fair use is a balancing test that is hard to define and is evaluated on a case-by-case basis.⁷⁴ The U.S. Copyright Office notes “[t]here is no formula to ensure that a predetermined percentage or amount of a work—or specific number of words, lines, pages, copies—may be used without permission.”⁷⁵

Consumers are concerned that the use of DRM technology will interfere with their right to fair use under copyright law.⁷⁶ With the implementation of DRM technology, copyright holders can prevent all kinds of use, even use that is fair use, and there is little to nothing that the user can do about it.⁷⁷ For example, there are several instances in which copyright holders have used YouTube and its DRM, ContentID, to take down videos that are fair use. One notable video is Jonathan McIntosh’s “Buffy vs Edward: Twilight Remixed,” a commentary on representations of gender roles in popular media.⁷⁸ The video was flagged by the studio, Lionsgate, as copyright infringement and the video was taken down.⁷⁹ Although the McIntosh video has since been reinstated along with several other disputed videos,⁸⁰ it cost McIntosh

71. Rich Stim, *What Is Fair Use?*, STAN. LIBR. COPYRIGHT & FAIR USE, <https://fairuse.stanford.edu/overview/fair-use/what-is-fair-use/> (last visited Jan. 30, 2021).

72. *More Information on Fair Use*, U.S. COPYRIGHT OFF., <https://www.copyright.gov/fair-use/more-info.html> (last visited Jan. 30, 2021).

73. § 107 (Westlaw).

74. Kenneth D. Crews, *Fair Use*, COLUM. U. LIBR., <https://copyright.columbia.edu/basics/fair-use.html> (last visited Jan. 30, 2021).

75. *More Information on Fair Use*, *supra* note 72.

76. Dingley & Matamoros, *supra* note 3, at 15-16.

77. *Id.* at 15-16.

78. *Id.* at 15.

79. Pop Culture Detective, *Buffy vs Edward: Twilight Remixed—[original version]*, YOUTUBE (June 19, 2009), <https://www.youtube.com/watch?v=RZwM3GvaTRM>; Parker Higgins, *Copyright Vampires Attempt to Suck the Lifeblood Out of Fair Use Video*, ELECTRONIC FRONTIER FOUND. (Jan. 10, 2013), <https://www.eff.org/deeplinks/2013/01/copyright-vampires-attempt-suck-lifeblood-out-fair-use-video>.

80. Reinstated videos include “Mountain Dew’s Weird, Racist, Misogynist Ad” by The Young Turks, “Mike Huckabee Pushes Fake Diabetes Cure” by Secular Talk, and “No Offense” by NationForMarriage. *Fair Use on YouTube*, YOUTUBE HELP, <https://support.google.com/youtube/answer/9783148?hl=en> (last visited Jan. 30, 2021).

substantial time and legal fees to come to this resolution.⁸¹ Other consumers are concerned that this might happen to them.

The intangible nature of intellectual property itself also plays into the conflict between consumers and copyright holders. Copyright holders often treat copyrights as tangible property using language like “stealing” when referring to piracy.⁸² But copyrights are not tangible property like a car or a house.⁸³ Unlike tangible property, current economic scholarship assumes that copyrightable works are a public good⁸⁴ and are both non-excludable and non-rivalrous.⁸⁵ That is, that “producers cannot provide their benefits to one consumer without simultaneously providing the benefits to other consumers”⁸⁶ (non-excludable) and “that the consumption of the good by one consumer does not reduce the supply available for consumption by others” (non-rivalrous).⁸⁷ This is especially true in regard to digital copyright, which, as mentioned above, has no physical form. Users can consume copies of digital books, songs, or movies without affecting other consumers’ access to those goods because these copies can be created instantly and with very little effort. This could be one of the reasons behind the negative perception of DRM in protecting digital copyrights.

5. DMCA Background

DRM, by their nature, annoy consumers because DRM technologies are designed to prevent or limit access to copyrighted works.⁸⁸ Since it is relatively easy to circumvent DRM, consumers will likely continue to bypass them unless discouraged to do otherwise. With the Digital Media Copyright Act of 1998 (DMCA), Congress provided such a deterrent.⁸⁹ The DMCA was created to bring U.S. law into compliance with two international treaties: the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.⁹⁰ The DMCA

81. Higgins, *supra* note 79.

82. See Yu, *supra* note 56, at 891-92.

83. *Id.*

84. Christopher S. Yoo, *Copyright and Public Good Economics: A Misunderstood Relation*, 155 U. PA. L. REV. 635, 637 (2007).

85. Yu, *supra* note 56, at 892.

86. Yoo, *supra* note 84, at 637.

87. *Id.*

88. See Dingley & Matamoros, *supra* note 3, at 1.

89. See generally 17 U.S.C.A. §§ 512, 1201-05, 1301-32 (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)); 28 U.S.C.A. § 4001 (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

90. U.S. COPYRIGHT OFFICE, THE DIGITAL MILLENNIUM COPYRIGHT ACT OF 1998 U.S. COPYRIGHT OFFICE SUMMARY (1998), <https://www.copyright.gov/legislation/dmca.pdf>;

“prohibits the circumvention of technological measures used by copyright owners to control access to their works”⁹¹ and bans devices whose “primary purpose is to enable circumvention of technical protection systems”⁹² (i.e., DRM). In addition, the DMCA added civil remedies and criminal penalties for violating these prohibitions.⁹³

The DMCA is a long and complicated law, but for the purposes of this Note, I will only focus on the “anti-circumvention” and “anti-device” provisions in § 1201. Section 1201(a)(1)(A) states “[n]o person shall circumvent a technological measure that effectively controls access to a work protected under this title.”⁹⁴ Section 1201 divides technological measures into two categories: 1) those that prevent unauthorized access to a copyrighted work and 2) those that prevent unauthorized copying of a copyrighted work.⁹⁵

Section 1201(a)(2) forbids manufacturing or selling devices or services that are 1) “primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a [protected] work,”⁹⁶ 2) have “only limited commercially significant purpose or use other than to circumvent” such a measure,⁹⁷ or 3) are “marketed . . . for use in circumventing” such a technological measure.⁹⁸ These “anti-device provisions” apply both to devices designed for circumventing access and to devices designed for circumventing technological measures that effectively protect rights of the copyright owner, such as copying.⁹⁹ Under § 1201, to “circumvent a technological measure” means to “descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner.”¹⁰⁰

It is important to note that while §1201(a)(2) addresses *devices* designed to circumvent technological measures, it does not address the *actual act* of circumventing those technological measures. On a practical level, this means that circumventing technological measures

U.S. COPYRIGHT OFF. DMCA SEC. 104 REP. 16 (2001), <https://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf>.

91. Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 519 (1999).

92. *Id.*

93. U.S. COPYRIGHT OFFICE, *supra* note 90.

94. § 1201(a)(1)(A) (Westlaw).

95. U.S. COPYRIGHT OFFICE, *supra* note 90.

96. § 1201(a)(2)(A) (Westlaw).

97. § 1201(a)(2)(B) (Westlaw).

98. § 1201(a)(2)(C) (Westlaw).

99. Cohen, *supra* note 13, at 111.

100. § 1201(a)(3)(A) (Westlaw).

that prevent *the act* of copying is not prohibited by § 1201(a)(2)¹⁰¹ because copying a work may be fair use under certain circumstances. However, fair use is never a defense when users circumvent technological measures preventing unauthorized access to copyrighted content. This distinction is important to ensure that the public has access to fair use of a copyrighted work.¹⁰²

There are a number of exceptions to § 1201's prohibitions, such as exceptions for law enforcement, intelligence, and other governmental activities,¹⁰³ nonprofit libraries, archives and educational institutions,¹⁰⁴ reverse engineering,¹⁰⁵ encryption research,¹⁰⁶ protection of minors,¹⁰⁷ personal privacy,¹⁰⁸ and security testing.¹⁰⁹ Despite these exceptions, the scope of the DMCA is quite broad. Though the statute refers only to "effective" technological measures, effective does not mean "hack-proof."¹¹⁰ Instead, "the statute protects any measure that requires the application of authorized information or an authorized process to gain access to the work, or that prevents or restricts the exercise of a right of the copyright owner."¹¹¹ In addition, one can be liable for knowingly linking to another site that offers a circumvention tool,¹¹² even if the server hosting the circumvention tool is based outside of the United States.¹¹³

If an individual circumvents DRM or manufactures or sells devices or services that are primarily designed to circumvent DRM, they are faced with both criminal and civil penalties. On the civil side, a plaintiff can elect to recover statutory damages for each violation of § 1201 in

101. U.S. COPYRIGHT OFFICE, *supra* note 90; Cohen, *supra* note 13, at 111.

102. U.S. COPYRIGHT OFFICE, *supra* note 90.

103. § 1201(e) (Westlaw).

104. § 1201(d) (Westlaw).

105. § 1201(f) (Westlaw).

106. § 1201(g) (Westlaw).

107. § 1201(h) (Westlaw).

108. § 1201(i) (Westlaw).

109. § 1201(j) (Westlaw).

110. See Cohen, *supra* note 13, at 111; Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 294 (S.D.N.Y. 2000), *aff'd sub nom.* Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) (The access control defendant circumvented was a "Content Scramble System" (CSS) which is "an encryption-based system that requires the use of appropriately configured hardware such as a DVD player or a computer DVD drive to decrypt, unscramble and play back, but not copy, motion pictures on DVDs." *Id.* at 308. Defendant circumvented the CSS by posting the source and object code for a DeCSS on his website making it available to download. *Id.* at 309. A DeCSS is "a software utility, or computer program, that enables users to break the CSS copy protection system and hence to view DVDs on unlicensed players and make digital copies of DVD movies." *Id.* at 308).

111. Cohen, *supra* note 13, at 113.

112. See *Universal City Studios, Inc.*, 111 F. Supp. 2d.

113. Cohen, *supra* note 13, at 113.

amounts between \$200-\$2,500 “per act of circumvention, device, product, component, offer, or performance of service.”¹¹⁴ For repeated violations within three years, the court may increase the award of damages up to triple the amount that would otherwise be awarded.¹¹⁵ Criminal penalties include up to a \$500,000 fine and five year prison sentence for a first violation.¹¹⁶ Subsequent violations could garner up to a \$1,000,000 fine and ten years in prison.¹¹⁷ These penalties are not something that should be taken lightly.

III. IDENTIFICATION OF THE LEGAL PROBLEM

Despite the broad range of DRM technologies, consumers still find it relatively easy to bypass DRM. A quick google search for DRM used by popular companies, e.g., Netflix, YouTube, Spotify, and Amazon Kindle, will lead to a multitude of links specifying how to remove the DRM. Generally, if a file is encrypted by DRM, one has to have a key in order to access the data.¹¹⁸ But the key cannot just be given to the user, otherwise it would defeat the purpose of having DRM in the first place.¹¹⁹ So the copyright holder hides a key somewhere on the accessing device, often in a browser extension or an app.¹²⁰ Once a key is out in the open, it is impossible for the company to get it back. Anyone with the key anywhere can access the data the DRM was protecting.¹²¹ These keys escape regularly so it is hard for copyright holders to keep up.¹²²

To combat such rampant piracy, creators argue that stronger copyright laws, like the DMCA, are necessary to protect their intellectual property rights.¹²³ The ability to create perfect copies that are compact, easily archived, and that do not degrade (e.g., cassettes or records) means that digital media can now be spread far and wide quickly over the internet.¹²⁴ Without the legal protections provided by the DMCA, copyright holders will not be able to keep up with the growing rates of piracy. Increasing rates of piracy disincentivizes authors from spending

114. 17 U.S.C.A. § 1203(c)(3)(A) (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

115. § 1203(c)(4) (Westlaw).

116. 17 U.S.C.A. § 1204(a)(1) (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

117. § 1204(a)(2) (Westlaw).

118. Doctorow, *supra* note 59.

119. *Id.*

120. *Id.*

121. *Id.*

122. Halderman, *supra* note 59.

123. *DRM*, *supra* note 8.

124. Hinkes, *supra* note 1, at 686.

the time, energy, and expense required to create new works. This results in a loss to creators and the public alike.¹²⁵ However, this risk must be balanced with the needs of consumers who are frustrated that perfectly legal actions can be blocked by DRM because the anti-circumvention provisions of the DMCA are so broad. Consumers and other advocates, like the Electronic Frontier Foundation, push back against DRM,¹²⁶ arguing that consumer rights like fair use and exhaustion are being limited by the technological abilities of DRM technology and are not adequately addressed by the DMCA.

IV. ANALYSIS

Both copyright holders and consumers have legitimate concerns when it comes to digital media and copyright. The Electronic Frontier Foundation argues “[c]orporations claim that DRM is necessary to fight copyright infringement online and keep consumers safe from viruses. But there is no evidence that DRM helps fight either of those. Instead, DRM helps big business stifle innovation and competition by making it easy to quash ‘unauthorized’ uses of media and technology.”¹²⁷ While this Note does not wholly endorse Electronic Frontier Foundation’s broad assertions, it does take the position that the DMCA overwhelmingly supports the protections of the copyright holder.

The DMCA prohibits circumvention of “a technological measure that effectively controls access to a work.”¹²⁸ The DMCA has been interpreted broadly so that the DMCA covers not only the act of circumvention of DRM, but also the manufacturing or selling of devices that are primarily designed to circumvent DRM. This allows copyright holders wide berth in using DRM and enforcing circumvention of DRM. Copyright holders argue that this is necessary to protect their rights in a world where a copy can be made instantaneously with a click of a mouse.¹²⁹ But many consumers argue that the DMCA provisions are too friendly to copyright holders and ignore their legitimate concerns.¹³⁰ And they are right, the DMCA, as it stands today, does not adequately

125. See FRED VON LOHMANN, ELEC. FRONTIER FOUND., FAIR USE AND DIGITAL RIGHTS MANAGEMENT: PRELIMINARY THOUGHTS ON THE (IRRECONCILABLE?) TENSION BETWEEN THEM 7 (2002), https://www.eff.org/sites/default/files/cfp_fair_use_and_drm_0.pdf.

126. *DRM*, *supra* note 8.

127. *Id.*

128. 17 U.S.C.A. § 1201(a)(1)(A) (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

129. See *supra* Section II(B)(4)(a).

130. See *supra* Section II(B)(4)(b).

balance the rights of copyright holders and consumers given the limitations of DRM technology.

A. Is the DMCA Even Working for Its Intended Purpose?

In a Senate Report on the DMCA in 1998, the Senate stated that the DMCA “is designed to facilitate the robust development and world-wide expansion of electronic commerce, communications, research, development, and education in the digital age.”¹³¹ The report further stated:

Due to the ease with which digital works can be copied and distributed worldwide virtually instantaneously, copyright owners will hesitate to make their works readily available on the Internet without reasonable assurance that they will be protected against massive piracy. Legislation implementing the treaties provides this protection and creates the legal platform for launching the global digital on-line marketplace for copyrighted works.¹³²

Subsequent case law supports this legislative intent. In *Universal City Studios, Inc. v. Corley*, the Second Circuit asserted that Congress enacted the DMCA to “combat copyright piracy in its earlier stages, before the work was even copied.”¹³³ Even though the purpose of the DMCA to deter online piracy is clear, the jury is still out on whether the DMCA is effectively working for its intended purpose.

Over twenty years after the enactment of the DMCA, online piracy is still a widespread problem.¹³⁴ Approximately 26.6 billion viewings of U.S.-produced movies and 126.7 billion viewings of U.S.-produced TV episodes are pirated digitally each year.¹³⁵ A 2019 report by the Global Innovation Policy Center and the U.S. Chamber of Commerce estimates that online piracy costs the U.S. economy between \$29.2-\$71 billion in lost revenue each year.¹³⁶ This represents a revenue reduction of between eleven to twenty-four percent.¹³⁷ Online piracy also results in

131. S. REP. NO. 105-190, at 1-2 (1998).

132. *Id.* at 8.

133. *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 435 (2d Cir. 2001).

134. Ashley Johnson, *22 Years After the DMCA, Online Piracy Is Still a Widespread Problem*, INFO. TECH. & INNOVATION FOUND. (Feb. 7, 2020), <https://itif.org/publications/2020/02/07/22-years-after-dmca-online-piracy-still-widespread-problem#:~:text=The%20U.S.%20Chamber%20of%20Commerce's,produced%20TV%20episodes%20every%20year>.

135. DAVID BLACKBURN, JEFFREY A. EISENACH & DAVID HARRISON, *IMPACTS OF DIGITAL VIDEO PIRACY ON THE U.S. ECONOMY*, at ii (2019), <https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf> (study uses data from 2017).

136. *Id.* at 12.

137. *Id.*

losses to the U.S. economy of between 230,000 and 560,000 jobs and between \$47.5 billion-\$115.3 billion in reduced gross domestic product each year.¹³⁸ Interestingly, most of these losses are due to piracy of U.S. content from non-U.S. citizens.¹³⁹

These eye-staggering amounts are not confined to the United States. A 2016 report from Frontier Economics estimated the total value of global digital film piracy at \$160 billion in 2015.¹⁴⁰ And the numbers do not seem to be getting any better in the future. The same report forecasts global digital piracy in music, movies, and software to cost \$384-\$856 billion in 2022.¹⁴¹

Online piracy affects more than just TV shows and movies. In 2019, the Authors Guild estimated that eBook piracy is responsible for \$300 million in lost publisher income each year.¹⁴² A survey by PC Gamer in 2016 indicated that ninety percent of over 50,000 respondents have pirated a game at some point in their lifetime and twenty-five percent have pirated more than fifty games.¹⁴³ The same survey found thirty-five percent of respondents were active pirates.¹⁴⁴ According to the 2018 BSA Global Software Survey, the rate of unlicensed software installation on personal computers in the United States was fifteen percent in 2017, which cost an estimated \$8.6 billion.¹⁴⁵

The music industry has been similarly affected by online piracy, showing a decrease in yearly revenue from \$14.6 billion in 1999 to \$11.1 billion in 2019, even as the use of digital downloads and streaming services have increased.¹⁴⁶ The number of individuals “stream-ripping,” using illegal stream ripping sites to create downloadable files of music

138. *Id.* at 14.

139. *Id.*

140. FRONTIER ECON., THE ECONOMIC IMPACTS OF COUNTERFEITING AND PIRACY 23 (2017), <https://cdn.iccwbo.org/content/uploads/sites/3/2017/02/ICC-BASCAP-Frontier-report-2016.pdf>.

141. *Id.* at 8-9.

142. Adam Rowe, *U.S. Publishers Are Still Losing \$300 Million Annually To Ebook Piracy*, FORBES (July 28, 2019, 4:02 PM), <https://www.forbes.com/sites/adamrowe1/2019/07/28/us-publishers-are-still-losing-300-million-annually-to-ebook-piracy/?sh=42d60bdc319e>.

143. Wes Fenlon, *PC piracy survey results: 35 percent of PC gamers pirate*, PC GAMER (Aug. 26, 2016), <https://www.pcgamer.com/pc-piracy-survey-results-35-percent-of-pc-gamers-pirate/>.

144. *Id.*

145. BSA FOUND., SOFTWARE MANAGEMENT: SECURITY IMPERATIVE, BUSINESS OPPORTUNITY 11 (2018), https://gss.bsa.org/wp-content/uploads/2018/05/2018_BSA_GSS_Report_en.pdf.

146. *U.S. Sales Database*, RECORDING INDUSTRY ASS'N AM., <https://www.riaa.com/u-s-sales-database/> (last visited Jan. 30, 2021).

“ripped” from online streaming sites, has increased from fifteen million in 2017 to seventeen million in 2018.¹⁴⁷

If the DMCA is working to combat piracy as Congress intended, one would think that there would be at least some reduction in online piracy. However, there is no evidence of a reduction. On the contrary, online piracy seems to pose an even worse problem now than it did in 1998. Edward Damich, Chief Intellectual Property Counsel of the Senate Judiciary Committee at the time, remarked in a Senate Judiciary Subcommittee hearing, “[w]e thought [piracy] was massive at the time, now its scale defies description.”¹⁴⁸

The broad sweeping language of § 1201 was based on a faulty premise that legal protection would prevent infringing activity, but clearly it has not.¹⁴⁹ Piracy is more popular than ever.¹⁵⁰ Because there are so many reasons why an individual would engage in piracy ranging from monetary motivations to personal beliefs,¹⁵¹ perhaps broad statutory language coupled with severe legal ramifications are not the best deterrents to stop a person from engaging in piracy.

B. The DMCA Lanugage Is Too Broad and Does Not Address Why People Pirate Today

The original DMCA was not designed for the global online data platforms that have developed since it was enacted. In 1998, the internet was still in its infancy, Google had just filed for incorporation¹⁵² and smartphones were a thing of the distant future. When it passed the DMCA, Congress “perceived that service providers had three functions: (1) email, (2) hosting websites, and (3) providing access to the internet to individual users.”¹⁵³ However, “technology has greatly advanced

147. Russ Crupnick, *Thanks to Stream-Ripping, Music Piracy Still a Scourge*, MUSICWATCH (May 30, 2019), <https://www.musicwatchinc.com/blog/thanks-to-stream-ripping-music-piracy-still-a-scourge/>.

148. *The Digital Millennium Copyright Act at 22: What is it, why was it enacted, and where are we now: Hearing Before the Subcomm. on Intellectual Prop. of the S. Comm. on the Judiciary*, 116th Cong. 7 (2020) [hereinafter *DMCA Hearing*] (questions for the record for Hon. Edward J. Damich, Senior J., United States Court of Federal Claims), <https://www.judiciary.senate.gov/imo/media/doc/Damich%20Responses%20to%20QFRs.pdf>.

149. *See supra* Section IV(A).

150. *See supra* Section IV(A).

151. *See supra* Section II(B)(3).

152. *From the garage to the Googleplex*, GOOGLE, <https://about.google/our-story/> (last visited Jan. 30, 2021).

153. *DMCA Hearing*, *supra* note 148, at 7 (questions for the record for Hon. Edward J. Damich).

from the bulletin board-based websites of the 1990s to the sophisticated social media sites of today.”¹⁵⁴

Since the DMCA was passed, the internet’s capabilities have since grown exponentially. When asked in a Senate Judiciary Subcommittee hearing in February 2020, “[w]hat are some of the practical challenges posed by the digital age that were unforeseen when the DMCA was enacted?,”¹⁵⁵ Senior Judge Edward Damich remarked, “[o]ne example is the advent of YouTube. . . . This platform opened up the whole question of user-generated content. Another example is the explosion of file-sharing websites.”¹⁵⁶ The broad language of the anti-circumvention provisions has not kept up with the advances in technology over the last two decades, leading to disgruntled users who are frustrated with working within the confines of DRM even if what they are doing with the digital media is entirely legal. These disgruntled users may turn to piracy to do what they cannot do currently with a work utilizing DRM protection, a possible reason for the increase in the illegal activity.

The DMCA was ill-prepared to take on the technological advances of the 21st century because the DMCA was created with copyright owners and internet service providers in mind and largely ignored the concerns of the user.¹⁵⁷ According to Senior Judge Damich in a Senate Judiciary Hearing, Congress found the copyright holders’ argument that the lack of “control over access [of their work] would open the door to massive, largely undetectable, infringement”¹⁵⁸ persuasive. In the same Senate Judiciary Subcommittee Hearing, Senior Judge Damich remarked, “[t]he chief stakeholders were the major copyright owners—movies, music, computer software programs, literary works—and the internet service providers. Most of the negotiation sessions involved these parties.”¹⁵⁹ In the same Senate Judiciary Subcommittee Hearing, Professor Sandra Aistars commented “although several musicians testified, most of the participants in the hearings and negotiations were major industry representatives or representatives of institutions like libraries and educational institutions.”¹⁶⁰

154. *Id.* at 13 (questions for the record for Professor Sandra Aistars, Antonin Scalia Law School), <https://www.judiciary.senate.gov/imo/media/doc/Aistars%20Responses%20to%20QFRs.pdf>.

155. *Id.* at 2 (questions for the record for Hon. Edward J. Damich).

156. *Id.*

157. *Id.* at 2 (statement of Hon. Edward J. Damich), <https://www.judiciary.senate.gov/imo/media/doc/Damich%20Testimony.pdf>.

158. *Id.* at 4.

159. *DMCA Hearing, supra* note 148, at 2 (questions for the record for Hon. Edward J. Damich).

160. *Id.* at 5 (questions for the record for Professor Sandra Aistars).

To appease some parties, § 1201 does have exceptions to the anti-circumvention and anti-device provisions for law enforcement, intelligence, and other governmental activities,¹⁶¹ nonprofit libraries, archives, and educational institutions,¹⁶² reverse engineering,¹⁶³ encryption research,¹⁶⁴ protection of minors,¹⁶⁵ personal privacy,¹⁶⁶ and security testing.¹⁶⁷ However, these exceptions do not adequately encompass the rights of consumers, who are the vast majority of the users of digital content. These are the same consumers who were largely absent from the hearings and negotiations when the DMCA was making its way through Congress. Thus, it is not too surprising that the DMCA neglects to address the concerns of consumers adequately.

C. The DMCA Neglects to Address the Concerns of Consumers Adequately

1. Exhaustion Is Not Addressed Adequately by the DMCA

For instance, the doctrine of exhaustion is not addressed adequately by the DMCA. The exhaustion doctrine provides “that once copyright owners transfer ownership in copies of their works, their rights to control future distribution of those copies is exhausted. The buyers are therefore free to transfer the copies as they please.”¹⁶⁸ But digital works are not treated the same as physical works under copyright law. The “shift to a digital marketplace gives rights holders greater control not only over the pricing and availability of their works but also over the uses consumers can make with their purchases.”¹⁶⁹ For example, consider a consumer who buys a digital song or an e-book with a limit on how many times the item can played/read on a certain number of devices, a classic example of DRM. If the DMCA prevents any person from circumventing any type of DRM, then it would be illegal for that person to circumvent the DRM, even if that person “owns” the item.¹⁷⁰ However, if that same item was a physical copy of a CD or a book, then

161. 17 U.S.C.A. § 1201(e) (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

162. § 1201(d) (Westlaw).

163. § 1201(f) (Westlaw).

164. § 1201(g) (Westlaw).

165. § 1201(h) (Westlaw).

166. § 1201(i) (Westlaw).

167. § 1201(j) (Westlaw).

168. Rub, *supra* note 63, at 744 (footnote omitted).

169. Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 891 (2011).

170. See Schwartz, *supra* note 32, at 98.

the principle of exhaustion would apply, and that person could do with that copy as they please.¹⁷¹

The issue is that digital media is not the same as physical media when it comes to the actual act of copying.¹⁷² To sell a book, the person actually has to give away that particular copy of the book. But if someone downloads a digital file, they get a perfect copy of the master file. This subtle difference might put digital copies outside of the narrow bounds of the exhaustion doctrine.¹⁷³ To add to the confusion, most digital files are not purchased, they are licensed.¹⁷⁴ Despite all this confusion, the DMCA is silent about exhaustion, which leaves consumers of digital content in a gray area between exercising their lawful rights under copyright law and illegal actions under copyright law.

2. Fair Use Is Not Addressed Adequately by the DMCA

Like exhaustion, fair use is not adequately addressed by the DMCA. Unlike exhaustion, fair use is expressly addressed in the DMCA.¹⁷⁵ Despite explicitly addressing fair use, it is not done so effectively.

Fair use is a balancing test that is hard to define and is evaluated on a case-by-case basis.¹⁷⁶ The US Copyright Office notes “[t]here is no formula to ensure that a predetermined percentage or amount of a work—or specific number of words, lines, pages, copies—may be used without permission.”¹⁷⁷ Fair use is defined by four amorphous factors which includes concepts like whether use of the work is transformative, the effects of the use upon the market, and whether the work is commercial or nonprofit in nature.¹⁷⁸ Furthermore, fair use has changed over time and will continue to evolve.¹⁷⁹ Technologies like DRM do not handle this complexity well. Because fair use “cannot be defined with precision,”¹⁸⁰ it is not something that a machine can decide. YouTube outwardly admits this about its ContentID DRM system, stating,

171. Rub, *supra* note 63, at 744.

172. Hinkes, *supra* note 1, at 686.

173. See *Capitol Records, LLC v. ReDigi Inc.*, 910 F.3d 649 (2d Cir. 2018).

174. Ferullo & Soules, *supra* note 65 at 4.

175. 17 U.S.C.A. § 1201(e) (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

176. Crews, *supra* note 74.

177. *More Information on Fair Use*, *supra* note 72.

178. *Id.*

179. VON LOHMANN, *supra* note 125, at 4.

180. *Id.* at 2.

“[a]utomated systems...can’t decide fair use”¹⁸¹ on its fair use support pages.

Even though fair use has been technically accounted for in the text of the DMCA, the express mention is only a façade provided to appease users in an otherwise copyright holder-friendly law. In practical effect, the inclusion of fair use language in the anti-circumvention provisions of the DMCA has not protected the user’s right to fair use. If the DRM technology in place blocks access to the work, one cannot utilize it for fair use.¹⁸² The blanket use of DRM to prevent access to fair use content on sites such as YouTube are eroding this important “safety valve” to copyright.¹⁸³ The Electronic Frontier Foundation argues that DRM stunts the fair use doctrines evolutionary and innovative nature because it frustrates the use of copyrighted material from the outset and does not allow new uses to be defined in the courts.¹⁸⁴ The use of DRM to control access tips the balance between the copyright holders’ exclusive rights and the public’s right to parody and criticize through fair use toward the copyright holder.

D. The DMCA Expands the Boundaries of Copyright at the Expense of the Consumer

By not adequately accounting for exhaustion and fair use, the DMCA does more than just tip the balance in favor of the copyright holder, it expands the boundaries of copyright protections greatly. Joshua Schwartz argues that

The DMCA creates a new type of copyright without calling this right a copyright. . . . The DMCA does this by controlling the means to make copies. The DMCA prevents trafficking in the technology, the means by which access and copying is achieved to reach the end, or a copy.¹⁸⁵

181. *How does Content ID work with fair use?*, Section in *Frequently asked questions about fair use*, YOUTUBE HELP, <https://support.google.com/youtube/answer/6396261?hl=en#zippy=%2Chow-does-content-id-work-with-fair-use>, (last visited Jan. 30, 2021).

182. Hinkes, *supra* note 1, at 688.

183. VON LOHMANN, *supra* note 125, at 2. Fair use serves as a safety valve to copyright because it allows the public to use otherwise copyrighted material for purposes such as freedom of expression or commonplace use, thereby limiting the rights of copyright holders. DRM erodes this safety valve because it often blocks access to fair use content. If you do not have access to the work due to DRM, you cannot use it for fair use. *Id.*

184. *Id.* at 3.

185. Schwartz, *supra* note 32, at 100.

As Eric Matthew Hinkes put it, “[i]n enacting §1201(a) of the DMCA, Congress effectively created an additional exclusive right for content providers: controlling access to a work.”¹⁸⁶

Jonathan Band remarked in testimony before the Senate Judiciary Subcommittee that “[t]he impetus for the anti-circumvention provisions was a belief that a legal prohibition on the circumvention of technological protection measures [], and on the trafficking of circumvention devices, would prevent infringing activity on digital networks.”¹⁸⁷ However, Band argues “[w]hile [technological protective measures] have been extremely helpful to the development of legitimate digital business models, the critical element has been the technological protection provided by [technological protective measures], not the legal prohibition on circumvention and circumvention tools.”¹⁸⁸ This illustrates that it is not the legal protection provided by the DMCA that has led to the uprise of digital business models, but the technological protection provided by DRM.

Copyright holders, on the other hand, argue that the “[a]nti-circumvention provisions [within the DMCA] are necessary because DRM can’t protect itself, and it is also expensive to continuously reengineer.”¹⁸⁹ Legal protection is necessary because the technological protection provided by DRM can be overcome with enough time and effort¹⁹⁰ and once the DRM is overcome, it “threatens the protections on every article utilizing that [DRM] scheme that has been sold up to that point.”¹⁹¹ Once a digital work has been released to the public it is near impossible for the copyright holder to regain control of their works.¹⁹² This is the case, even if the release itself was illegal.¹⁹³ All it takes is one leaked key and the DRM in place is no longer effective.¹⁹⁴ Copyright holders might argue that the DMCA’s broad language is necessary otherwise the rates of digital piracy will continue to increase.¹⁹⁵

186. Hinkes, *supra* note 1, at 690.

187. *DMCA Hearing*, *supra* note 148, at 1 (questions for the record for Jonathan Band, Jonathan Band PLLC), <https://www.judiciary.senate.gov/imo/media/doc/Band%20Responses%20to%20QFRs.pdf>.

188. *Id.* at 7 n.8 (statement of Jonathan Band), <https://www.judiciary.senate.gov/imo/media/doc/Band%20Testimony.pdf>.

189. Hinkes, *supra* note 1, at 693.

190. Geller, *supra* note 49, at 239.

191. Hinkes, *supra* note 1, at 693.

192. See Doctorow, *supra* note 59; J. Alex Halderman, *AACS Updated, Broken Again*, Freedom To Tinker (May 18, 2007), <https://freedom-to-tinker.com/index.php?s=aacs>.

193. *Id.*

194. *Id.*

195. See *supra* Section IV(A).

Copyright holders also argue that narrowing the DMCA's language will lessen the value of their copyright. For every digital copy pirated, copyright holders are missing out on the royalties from legitimate copies.¹⁹⁶ Piracy affects more than just monetary compensation. Rampant piracy undermines the incentives for copyright holders to make new content.¹⁹⁷ If copyright holders cannot make a return on their investment in creating new content, they will stop making new content.¹⁹⁸ If copyright holders quit making new content, this will be devastating to the public, who will not get to benefit from those works.

However, there are some examples of successful companies that have eliminated the use of DRM that turn these arguments on their head. Apple's iTunes Music Store, for instance, had a nuanced DRM system that was arguably "the most successful implementation of digitally protected downloadable content to date."¹⁹⁹ Through iTunes, Apple was "able to regulate what consumers do with their purchased music by using a technologically implemented combination of copyright law and contractual provisions."²⁰⁰ Yet Apple, a company that had arguably "achiev[ed] a proper balance on DRM,"²⁰¹ decided to remove the iTunes DRM in 2009,²⁰² even though one of the major record labels, EMI, had already been selling music DRM free on iTunes since 2007.²⁰³ According to Apple's website, "[a]ll songs offered by the iTunes Store come without Digital Rights Management (DRM) protection. These DRM-free songs . . . have no usage restrictions and feature high-quality, 256 kbps AAC (Advanced Audio Coding) encoding."²⁰⁴

Because EMI stopped selling songs with DRM two years before iTunes and the other major record labels, it is a great case study in evaluating the effects of removing DRM. Did the fact that EMI sold its music DRM free increase piracy as copyright owners might fear? "The statistics show that there's no effect on piracy."²⁰⁵ Although Apple has since dumped iTunes for MacOS Catalina in favor of its subscription service, Apple

196. See 17 U.S.C.A. § 1004 (Westlaw through Pub. L. No. 117-36 (excluding Pub. L. No. 116-283, Div. A, Title XVIII)).

197. VON LOHMANN, *supra* note 125, at 7.

198. *Id.*

199. Hinkes, *supra* note 1, at 687.

200. *Id.*

201. *Id.* at 719.

202. Brad Stone, *Want to Copy iTunes Music? Go Ahead, Apple Says*, N.Y. TIMES (Jan. 6, 2009), <https://www.nytimes.com/2009/01/07/technology/companies/07apple.html>.

203. *How Apple is changing DRM*, THE GUARDIAN (May 14, 2008, 7:43 PM), <https://www.theguardian.com/technology/2008/may/15/drm.apple>.

204. *Intro to the iTunes Store in Music on Mac*, APPLE MUSIC USER GUIDE, <https://support.apple.com/en-in/guide/music/mus3e2346c2/mac> (last visited Dec. 28, 2020).

205. THE GUARDIAN, *supra* note 203.

Music,²⁰⁶ iTunes serves as an example that an app whose sole purpose was to sell digital copies of music can be successful without DRM.

V. PROPOSAL

At the time that the DMCA was passed in 1998, Congress recognized that:

Copyright laws have struggled through the years to keep pace with emerging technology from the struggle over music played on a player piano roll in the 1900's to the introduction of the VCR in the 1980's. With this constant evolution in technology, the law must adapt in order to make digital networks safe places to disseminate and exploit copyrighted materials.²⁰⁷

Digital technology today looks a lot different today than it did five years ago, and that change has only been amplified over the twenty or so years since Congress passed the DMCA. Over two decades later, it has become clear that the DMCA needs to adapt to keep pace with evolving technology. If the DMCA as it currently stands is too broad and does not adequately weigh the concerns of both copyright holders and consumers, what should we do about it?

Band argues that the DMCA should address infringement.²⁰⁸ He argues “because [§ 1201] is not limited to circumvention (and circumvention tools) that facilitate infringement, it interferes with lawful uses. . . .The number of these [lawful] uses continues to grow as more devices are controlled by software, which in turn is protected by [technological protective measures].”²⁰⁹

According to Professor Rebecca Tushnet, “Section 1201 is broken: it is mostly used to suppress competition rather than protect copyrighted works from infringement.”²¹⁰ She agrees that § 1201 “would benefit from a requirement of some nexus between circumvention and copyright infringement. Professor Tushnet further proposes “Section 1201(a)(1) should allow circumvention for the purpose of making a noninfringing

206. Mary Meisenzahl, *Apple is killing its most-hated app, iTunes. Here's how it went from a popular music player to an outdated relic.*, BUS. INSIDER (Oct. 10, 2019, 8:24 AM), <https://www.businessinsider.com/apple-discontinues-itunes-after-18-years-history-rise-and-fall-2019-10>; *What happened to iTunes?*, APPLE SUPPORT, <https://support.apple.com/en-us/HT210200> (last visited Jan. 30, 2021).

207. S. REP. NO. 105-190, at 2 (1998) (footnotes omitted).

208. *DMCA Hearing*, *supra* note 148, at 6 (questions for the record for Jonathan Band).

209. *Id.* at 7 n.8 (statement of Jonathan Band).

210. *DMCA Hearing*, *supra* note 148, at 2 (statement of Professor Rebecca Tushnet, Harvard Law School), <https://www.judiciary.senate.gov/imo/media/doc/Tushnet%20Testimony.pdf>.

use of a protected work,”²¹¹ and “Section 1201(a)(2) and Section (b)(1) should be amended to permit the making and distribution of tools capable of enabling substantial non-infringing use of a work, in order to give those making lawful uses the practical ability to circumvent.”²¹²

Similarly, Professor Jessica Litman proposes “[n]arrowing the scope of the prohibitions so that they apply only to circumvention for the purpose of copyright infringement might make the provisions more effective because members of the public would be more likely to appreciate them as legitimate anti-piracy measures.”²¹³

In 2003, Congress considered the Digital Media Consumers’ Rights Act, which, among other titles of the U.S. Code, proposed to amend § 1201 of the DMCA to restore fair use to some extent. Section 5 of the bill states:

b) FAIR USE RESTORATION - Section 1201(c) of title 17, United States Code, is amended –

(1) in paragraph (1), by inserting before the period at the end the following: “and it is not a violation of this section to circumvent a technological measure in connection with access to, or the use of, a work if such circumvention does not result in an infringement of the copyright in the work”; and

(2) by adding at the end the following new paragraph: “(5) It shall not be a violation of this title to manufacture, distribute, or make noninfringing use of a hardware or software product capable of enabling significant noninfringing use of a copyrighted work.”²¹⁴

The Digital Media Consumers’ Rights Act did not make it past the House.²¹⁵ But it does address some of the concerns consumer’s set forth. First, under the proposed amendments, it would not be a violation of the DMCA to circumvent DRM technology “if such circumvention does not result in an infringement of the copyright in the work.”²¹⁶ This is similar to Jonathan Band’s, Professor Tushnet’s, and Professor Litman’s proposal to include some nexus to infringement.²¹⁷ Tying circumvention to infringement sufficiently narrows the language of the DMCA to address consumer interests like fair use and the exhaustion principle

211. *Id.* at 29.

212. *Id.*

213. *DMCA Hearing, supra* note 148, at 12 (questions for the record for Professor Jessica Litman, University of Michigan Law School), <https://www.judiciary.senate.gov/imo/media/doc/Litman%20Responses%20to%20QFRs.pdf>.

214. Digital Media Consumers’ Rights Act of 2003, H.R. 107, 108th Cong. § 5 (2003), <https://www.congress.gov/bill/108th-congress/house-bill/107/text?q=H.R.+107>.

215. *Id.*

216. *Id.*

217. *DMCA Hearing, supra* note 148, at 6 (questions for the record for Jonathan Band).

while still allowing copyright holders to exercise their copyright protections. Second, the “significant noninfringing use” language in the proposed amendment addresses Professor Tushnet’s concern that “those making lawful uses” should be given the “practical ability to circumvent.”²¹⁸

However, this amendment does not address the current technological limitations of DRM. Until the technology can be improved to the point where an algorithm can decide fair use, and that seems unlikely, current copyright law will have to work within those limitations. The proposed amendments to § 1201 of the DMCA in section 5 of the Digital Media Consumers’ Rights Act of 2003 balance the rights of the copyright holder with the concerns of consumers better than the current version of the DMCA and should be reconsidered by Congress.

VI. CONCLUSION

In a report in 2001, the U.S. Copyright Office remarked “[t]he Digital Millennium Copyright Act of 1998 (DMCA) was the foundation of an effort by Congress to implement United States treaty obligations and to move the nation’s copyright law into the digital age. But as Congress recognized, the only thing that remains constant is change.”²¹⁹ The technological makeup of the digital world has changed greatly since the DMCA was enacted over two decades ago. Congress enacted the DMCA to address the issue of digital piracy and provide legal remedies for the circumvention of DRM. But the DMCA has not kept up with the advances in technology, such as file-sharing websites or user-generated content, nor does it address why individuals pirate today. Additionally, DRM technology is limited. Such limitations combined with the broad language of the DMCA favor the rights of the copyright holder over the interests of the consumer.

Because exhaustion and fair use are not adequately addressed by the DMCA, consumers can be prevented from accessing digital media for perfectly legal uses. Ultimately, the DMCA increases copyright protections at the expense of consumers. To restore a proper balance between the interests of copyright holders and consumers, both this Note and scholars argue that the DMCA should address circumvention of DRM that facilitates copyright infringement—not all circumvention. The DMCA’s remedies should not apply to all circumvention because

218. *Id.* at 29 (statement of Professor Rebecca Tushnet).

219. U.S. COPYRIGHT OFF. DMCA SEC. 104 REP., at v (2001) (from a Report of the Register of Copyrights Pursuant to the DMCA), <https://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf>.

circumvention may be used for lawful purposes. The Digital Media Consumers' Rights Act of 2003 proposed amendments to § 1201 that seemed to address these issues, but the bill did not make it out of the House. Going forward, Congress should reconsider these proposed amendments as they restore the balance between the rights of the copyright holder and consumers' interests.