# AN EMPIRICAL STUDY OF THE DMCA'S ANTI-CIRCUMVENTION PROVISIONS

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ABSTRACT

*The Digital Millennium Copyright Act ("DMCA") has been a flashpoint during most of its twenty-five-year existence. One of the most controversial parts of the DMCA is section 1201. Among other things, section 1201 prohibits third parties from circumventing certain controls to copyrighted content or trafficking in tools that enable circumvention of technological controls. However, despite its nearly quarter-of-a-century lifespan, we know very little about section 1201 empirically. While empiricists have assessed parts of the DMCA, they have left section 1201 largely untouched. Our understanding of section 1201 is largely based on anecdotal evidence, in the form of leading opinions from historically prominent copyright circuits. In this Article, we seek to bolster these anecdotes with greater empirical evidence for ongoing discussions about how section 1201 is performing and whether it needs revising.*

*To do so, we conducted a broad-based search of Westlaw to collect every issued opinion, whether reported or not, where a court purported to apply some part of section 1201. We then reviewed these cases to glean as much information about section 1201 as possible. This review led to a number of important and, in some cases, surprising results. First, section 1201 opinions are a relative rarity. In the nearly quarter of a century since the DMCA's enactment, we could find only a little over 200 opinions, with only about sixty of those being published. The average number of opinions during the DMCA's existence has been around nine annually, which pales in comparison to other types of copyright cases. Second, despite the Second Circuit receiving much attention in anecdotal accounts of section 1201, courts within it issue section 1201 opinions infrequently. The Ninth Circuit is the dominant section 1201 court, both in terms of citations to its opinions and overall number of opinions, and the Sixth and Eleventh Circuits both issue more section 1201 opinions than the Second Circuit. This result stands in contrast to other types of copyright litigation, where the Second Circuit is a behemoth. Third, the most common subject matter in dispute in section 1201 cases is computer software, followed distantly by audiovisual material such as movies. Music stands in last place,*

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*showing up in only a couple issued opinions. Debates at the time of the DMCA's enactment were informed by widespread fears of copyright infringement relating to digital music and other types of digital content. Yet section 1201 litigation has resulted in but few written opinions involving those subject matters. Fourth, suits and defaults against individuals happen relatively frequently in the section 1201 context, with courts often assessing large statutory damages against those individuals. As we discuss in this Article, this result raises important equity issues. Fifth, despite section 1201 including a number of statutory exemptions, these exemptions basically never make their way into issued opinions. Fair use, too, only infrequently enters courts' section 1201 discussions. This means, effectively, that the primary way to escape section 1201 liability is through administrative exemptions granted by the Library of Congress on a triennial basis. But as we shall see, this process has significant holes. Finally, plaintiffs disproportionately win section 1201 cases. This result is somewhat bloated because of the frequency of defaults against individuals. Setting these aside, plaintiffs still enjoy tremendous success under section 1201. However, when looking at opinions only outside of the Ninth Circuit, win rates become mostly even.*

*I conclude with several calls for DMCA reform. These include bolstering statutory exemptions and more closely tying section 1201 to copyright infringement. Pursuing these reforms will more faithfully align section 1201 with its purported objectives.*

## INTRODUCTION

Twenty-five years after its passage, the Digital Millennium Copyright Act ("DMCA") remains a lightning rod.[1] Enacted to help address copyright issues in the digital age, the DMCA sought to strike a balance between the interests of technology providers and copyright owners.[2] On the one hand, technology providers argued that without limitations on their liability, they would be hard-pressed to offer their innovative services to the public because those services often incorporated the copyrighted materials of others.[3] YouTube may have never gotten off the ground, for instance, if it was liable for all the copyright infringement occurring on the platform in its early days. The DMCA's concession to technology providers: a series of safe harbors from liability so long as the technology provider satisfies certain conditions.[4] Indeed, these safe harbors are precisely how a young YouTube escaped crushing liability despite rampant copyright infringement on the site.[5]

On the other hand, copyright owners argued that digital technologies would overwhelm their ability to curb copyright infringement without additional legal protections.[6] The DMCA's concession to them is one of the DMCA's most divisive bestowals (and the focus of this study): granting copyright owners new anti-circumvention and anti-trafficking powers.[7] These powers, codified in 17 U.S.C. § 1201 ("section 1201"), allow copyright owners to prevent third parties from both circumventing access controls to their copyrighted works and traf-

1. Kevin Madigan, *Senate DMCA Hearing Explores the Current State of Section 1201*, COPYRIGHT ALL. (Sept. 18, 2020), https://copyrightalliance.org/senate-dmca-hearing-explores-the-current-state-of-section-1201/ [https://perma.cc/Q38R-8JLP] (discussing recent Senate hearings on section 1201); Cory Doctorow, *America's Broken Digital Copyright Law Is About to Be Challenged in Court*, GUARDIAN (July 21, 2016), https://www.theguardian.com/technology/2016/jul/21/digital-millennium-copyright-act-eff-supreme-court [https://perma.cc/AW95-NLUX] (describing litigation over section 1201 that is ongoing).

2. David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. PA. L. REV. 673, 681-82 (2000) ("In order to understand the thrust of the law, it is essential to appreciate Congress's concern with balancing the interests of copyright proprietors, on the one hand, against the interests of the community of users, scholars, equipment manufacturers, and on-line service providers, on the other.").

3. U.S. COPYRIGHT OFF., SECTION 512 OF TITLE 17: A REPORT OF THE REGISTER OF COPYRIGHTS 1 (2020), https://www.copyright.gov/policy/section512/section-512-full-report.pdf [https://perma.cc/4C95-3JGL] (discussing this concern).

4. *Id.* (briefly describing these).

5. Daniel S. Schecter et al., Viacom v. YouTube*: Safe Harbor Protection Upheld for Online Service Provider*, LEXOLOGY (May 6, 2013), https://www.lexology.com/library/detail.aspx?g=9cdb5105-0f40-430d-a8d0-f46c0d11b49d [https://perma.cc/6ZJR-8HNR] (summarizing the case and background).

6. Nimmer, *supra* note 2, at 681-90.

7. *Id.*

ficking in technologies that allow others to circumvent either access or copy controls to those works (more on the definition of these later).[8] A series of statutory exemptions then follows.[9]

Since its inception, section 1201 has inspired heated debates. Some argue that section 1201's protections violate the First Amendment and are currently pursuing cases in hopes of establishing section 1201's unconstitutionality.[10] Others argue to the contrary.[11] Yet another important section 1201 debate concerns the difference between access controls, whose circumvention section 1201 prohibits, and copy controls, whose circumvention section 1201 leaves be.[12] Significant concerns may arise, for instance, if copyright holders combine such controls and thereby increase their section 1201 powers beyond what the statute intended.[13] Others, including courts, have debated what role fair use, an important limitation on copyright infringement, plays with respect to section 1201 violations (if any).[14] And yet others have struggled to understand the meaning of certain statutory exemptions to section 1201 violations.[15] Beyond these important debates, other issues, including the effectiveness of a triennial exemption process to some section 1201 prohibitions, persist.[16]

Section 1201 is thus rife with questions. But empirically speaking, it is lacking in answers. Indeed, even after nearly twenty-five years, the extent and meaning of section 1201 remains unclear. Most commentators rely on a few leading cases from specific circuits for their

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8. *Id.*

9. *Id.* at 692.

10. *See, e.g.*, Press Release, Elec. Frontier Found., EFF Asks Appeals Court to Rule DMCA Anti-Circumvention Provisions Violate First Amendment (Jan. 13, 2022), https://www.eff.org/press/releases/eff-asks-appeals-court-rule-dmca-anti-circumvention-provisions-violate-first [https://perma.cc/88YB-LLSY] (arguing that section 1201 violates the First Amendment).

11. Devlin Hartline, *EFF Dealt Another Blow in Attempt to Strike Down Section 1201 of the Copyright Act*, COPYRIGHT ALL. (Sept. 2, 2021), https://copyrightalliance.org/eff-attempt-strike-down-copyright-act/ [https://perma.cc/NT7M-YNTW] (arguing that section 1201 does not violate any First Amendment rights).

12. R. Anthony Reese, *Will Merging Access Controls and Rights Controls Undermine the Structure of Anticircumvention Law?*, 18 BERKELEY TECH. L.J. 619, 623 (2003) (discussing the difference between these types of controls).

13. *Id.* at 621.

14. *See, e.g.*, Paul Goldstein, *Fair Use in a Changing World*, 50 J. COPYRIGHT SOC'Y U.S.A. 133, 144-48 (2003) (discussing aspects of this debate).

15. Aaron K. Perzanowski, *Rethinking Anticircumvention's Interoperability Policy*, 42 U.C. DAVIS L. REV. 1549, 1569-76 (2009) (discussing the meaning and scope of subsection 1201(f), an interoperability exemption to violations of other parts of section 1201).

16. Kathleen Burke, *Everything About the Section 1201 Process Is Mad*, PUB. KNOWLEDGE (Oct. 7, 2021), https://publicknowledge.org/everything-about-the-section-1201-process-is-mad/ [https://perma.cc/SA4M-9J7Q] (describing a number of issues with the triennial rulemaking process).

understanding of what section 1201 allows and prohibits.[17] While those leading cases are certainly relevant, they are anecdotal—they don't paint a complete picture. To date, no study has systematically studied the universe of section 1201 opinions to better understand how courts have actually applied section 1201 in the DMCA's nearly quarter-of-a-century lifespan.

Having this understanding is important for several reasons. First, the Supreme Court has never squarely taken on the DMCA's anti-circumvention provisions.[18] This means that rather than guidance from the Supreme Court, our current understanding of section 1201 depends on case law from the lower courts. Without a thorough understanding of that case law, therefore, we are left without a clear picture of the current state of section 1201. Such an understanding is vital to ongoing debates about the merits of section 1201 and whether and to what extent we should reform it.[19]

Second, if and when the Supreme Court does eventually address section 1201, it will be crucial for it to understand how the lower courts have understood section 1201. With only anecdotal accounts of section 1201 based on leading cases from a few circuits, however, that understanding is lacking.

Finally, the bargain the DMCA struck is currently under attack around the world. European policymakers have recently changed parts of their DMCA equivalent,[20] and U.S. policymakers are consid-

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17. *See, e.g.*, Steve P. Calandrillo & Ewa M. Davison, *The Dangers of the Digital Millennium Copyright Act: Much Ado About Nothing?*, 50 WM. & MARY L. REV. 349, 369-82 (2008) (interpreting section 1201 in light of leading section 1201 cases); Timothy K. Armstrong, *Fair Circumvention*, 74 BROOK. L. REV. 1, 1-2 (2008) (interpreting section 1201 in light of a few recent cases at the time); Jennifer Miller, Case Note, *The Battle over "Bots": Anti-Circumvention, the DMCA, and "Cheating" at World of Warcraft*, 80 U. CIN. L. REV. 653, 656 (2011) (interpreting section 1201 in light of a leading Ninth Circuit opinion); Jacqueline D. Lipton, *Solving the Digital Piracy Puzzle: Disaggregating Fair Use from the DMCA's Anti-Device Provisions*, 19 HARV. J.L. & TECH. 111, 124-37 (2005) (interpreting section 1201 in light of leading cases from the Second and Ninth Circuits); Theresa M. Troupson, Note, *Yes, It's Illegal to Cheat a Paywall: Access Rights and the DMCA's Anticircumvention Provision*, 90 N.Y.U. L. REV. 325, 339-49 (2015) (relying on leading cases from the Federal Circuit and Ninth Circuit in interpreting section 1201); Perzanowski, *supra* note 15, at 1570-75 (interpreting parts of section 1201 in light of leading cases from the Second and Ninth Circuits).

18. Robert Arthur, Comment, *Federal Circuit v. Ninth Circuit: A Split over the Conflicting Approaches to DMCA Section 1201*, 17 MARQ. INTELL. PROP. L. REV. 265, 284 (2013) (analyzing two interpretations of subsection 1201(a) and proposing that the Supreme Court resolve the circuit split in favor of the Federal Circuit's interpretation).

19. *See generally* Art Neill, *Fixing Section 1201: Legislative and Regulatory Reforms for the DMCA's Anti-Circumvention Provisions*, 19 TUL. J. TECH. & INTELL. PROP. 27 (2016) (proposing a number of changes to section 1201); Press Release, Elec. Frontier Found., EFF to Copyright Office: It's Time for Real Reform of DMCA 1201 (Oct. 27, 2016), https://www.eff.org/press/releases/eff-copyright-office-its-time-real-reform-dmca-1201 [https://perma.cc/32KQ-UPRL] (proposing reforms to section 1201).

20. Ally Boutelle & John Villasenor, *The European Copyright Directive: Potential Impacts on Free Expression and Privacy*, BROOKINGS INST. (Feb. 2, 2021),

ering similar changes to parts of the DMCA.[21] Many of these recent changes have focused on other aspects of the DMCA bargain.[22] But section 1201 and its equivalents are also receiving ongoing scrutiny.[23]

Indeed, the Library of Congress effectively reconsiders aspects of section 1201 every three years.[24] Under its rulemaking authority, as provided under the DMCA, the Library of Congress considers and either accepts or rejects proposed exemptions to section 1201 as part of its triennial process.[25] Important exemptions to section 1201, including relating to jailbreaking smartphones, have come about through this process.[26] Yet this process occurs in the shadow of an incomplete understanding of how courts have understood and applied the DMCA, including its statutory exemptions.

This Article aims to address these and other issues. It provides a comprehensive review of every available section 1201 opinion, from every circuit, issued since the DMCA went into effect. This review provides a number of important findings.

First, section 1201 opinions are somewhat rare. Between late 1998—the effective date for many of section 1201's provisions—and early 2022, my research team and I (to which I will refer to as "we" throughout this Article) only found 209 opinions.[27] Of those, only about sixty were published. That's an average of around nine total opinions per year, and less than three reported opinions annually. Furthermore, we only found a total of seventeen appellate opinions, with many circuits lacking any appellate guidance whatsoever. Combine this lack of appellate guidance with the absence of a Supreme Court section 1201 decision, and potential section 1201 litigants

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https://www.brookings.edu/blog/techtank/2021/02/02/the-european-copyright-directive-potential-impacts-on-free-expression-and-privacy/ [https://perma.cc/C3CH-AHH6] (describing a new EU law that effectively revokes Europe's implementation of safe harbors for online service providers).

21. AUTHORS ALL., A2P2 ISSUE BRIEF: CONGRESS CONSIDERS UPDATING DMCA SECTION 512 (2020), https://www.authorsalliance.org/wp-content/uploads/2020/10/20201013_IssueBrief_Section-512.pdf [https://perma.cc/3CZH-NF46] (describing some of these recent efforts).

22. *Id.*

23. *See, e.g.*, APP ASS'N, ARE REFORMS TO SECTION 1201 NEEDED AND WARRANTED? (2020), https://www.judiciary.senate.gov/imo/media/doc/Reed%20Testimony1.pdf [https://perma.cc/WYA3-KGQC] (arguing against reforming section 1201 because of the protections it provides app developers).

24. *DMCA Rulemaking*, ELEC. FRONTIER FOUND., https://www.eff.org/issues/dmca-rulemaking [https://perma.cc/A64E-3WTT] (last visited Apr. 10, 2024) (explaining this process).

25. *Id.*

26. *Id.*

27. Importantly, subsection 1201(a)(1) did not become effective until October 28, 2000, two years after enactment of the DMCA. U.S. COPYRIGHT OFF., THE DIGITAL MILLENNIUM COPYRIGHT ACT OF 1998, at 17-18 (1998), https://www.copyright.gov/legislation/dmca.pdf [https://perma.cc/S5XU-ZUCQ]. We discuss this issue in greater detail below.

simply have little guidance available to them. This dearth of section 1201 litigation becomes clearer when comparing it to other forms of copyright litigation, which significantly dwarf it. While not all section 1201 claims make their way into opinions for a variety of reasons, we might still expect more section 1201 litigation resulting in opinions over the DMCA's nearly quarter-of-a-century lifespan. In this Article, we explore some reasons why section 1201 opinions have been so uncommon.

Second, unlike in other areas of copyright law, the Second Circuit is not one of the top players in the number of section 1201 opinions. In other areas of copyright litigation, courts within the Second and Ninth Circuit typically dominate, both in terms of numbers of opinions and their opinions' influence, as reflected in how frequently other circuits cite to them. In section 1201 litigation, the Second Circuit is a distant fourth in terms of the overall number of section 1201 opinions. In terms of influence, Second Circuit opinions remain important, as they are cited in nearly 37% of opinions coming from other circuits.[28] But the Ninth Circuit is the dominant section 1201 court, both in terms of overall number of opinions and those opinions' influence on other circuits. Indeed, courts outside the Ninth Circuit cite to Ninth Circuit opinions in their section 1201 opinions over 45% of the time.[29]

The Ninth Circuit's dominance in section 1201 litigation is not surprising in light of our third finding: the most frequently litigated subject matter in section 1201 opinions is computer software. Nearly half of the time, section 1201 opinions deal with circumventing controls to code. A distant second are cases dealing with audiovisual material such as movies and television. And conspicuously absent from section 1201 litigation is music, only appearing in a couple issued opinions.

This finding is important because concerns about how new technologies would facilitate digital copyright infringement informed much of the fervor in favor of enacting section 1201.[30] The idea was that copyright holders needed additional protections in the digital age because of the ease with which third parties could pirate digital content.[31] The DMCA's solution was section 1201: provide copyright owners with the ability to stop pirates and their enablers from circumventing access restrictions copyright holders placed on their digital content.[32]

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28. *See infra* Table 1.
29. *See infra* Table 1.
30. Nimmer, *supra* note 2, at 681-90.
31. *Id.* at 683-84.
32. *Id.* at 681-90.

Yet our finding suggests that, at least in terms of section 1201 opinions, music is nearly an afterthought. This is not to say that copyright infringement with respect to music is not a concern, or that the DMCA does not play a role with respect to music outside of section 1201 opinions. But one might assume that, given the fervor with which music copyright holders argued for these protections, there would be more section 1201 litigation bearing out their fears. That simply has not been the case, and we explore reasons for this outcome later.

The frequency with which 1201 opinions involve software is also telling. Digital piracy involving software was not necessarily at the forefront of the debates surrounding the DMCA's enactment, though it was certainly part of the discussion.[33] Yet the fact that such a high percentage of section 1201 opinions involve software may point to unintended consequences, including section 1201 undermining legitimate reuses of functional components of software code, as we discuss in subsequent Sections of this Article.

Fourth, many defendants in section 1201 opinions are individuals, and many of them fail to contest the claims brought against them, frequently resulting in default judgments. Often, because the DMCA provides for statutory damages, those default judgments reach into the millions. This reality raises important equity issues, which we discuss further below.

Fifth, while section 1201 includes a number of statutory exemptions, those exemptions are crafted so narrowly that they almost never actually make their way into section 1201 opinions. They are effectively statutory bloat. Fair use, an important exception to claims of copyright infringement and which section 1201 mentions, also infrequently appears in section 1201 opinions. The primary way to get around section 1201's prohibitions seems to be through the triennial rulemaking process that the Library of Congress conducts, in which the U.S. Copyright Office recommends specific exemptions to only parts of section 1201's bans. Yet that process is cumbersome and can be arbitrary, as many have argued.[34] In this Article, we argue that the statutory exemptions should be updated to the modern age.

Finally, plaintiffs enjoy significant success when bringing section 1201 claims. The win rates are somewhat bloated because of the significant number of default judgments against individuals, as mentioned above. But even removing these, plaintiffs fare well under section 1201 generally. We hypothesize that these win rates have much

33. *Id.*

34. *See, e.g.*, Fred von Lohmann, *DMCA Triennial Rulemaking: Failing Consumers Completely*, ELEC. FRONTIER FOUND.: DEEPLINKS BLOG (Nov. 30, 2005), https://www.eff.org/deeplinks/2005/11/dmca-triennial-rulemaking-failing-consumers-completely [https://perma.cc/BM8H-DJYB].

to do with how several leading cases have interpreted section 1201 not to require copyright infringement as a predicate offense. Indeed, this hypothesis is born out when removing opinions from the Ninth Circuit, where case law makes plain that copyright infringement is unnecessary to establish a section 1201 violation: doing so brings win rates nearly into equilibrium.

We conclude by arguing that section 1201 is in need of reform. First, section 1201 violations should be tied more clearly to copyright infringement, as some courts, particularly the Court of Appeals for the Federal Circuit, have required. Second, statutory exemptions to section 1201 should be expanded to cover meaningful activity. Currently, they are so narrowly crafted as to cover very little, if anything. And, as we explore in greater detail below, primarily relying on the triennial rulemaking process has a number of troubling features.

## I. A DMCA PRIMER

This Part briefly outlines the contours of 17 U.S.C. § 1201, which the DMCA enacted into law. As noted above, because we lack robust empirical evidence about section 1201, one of the purposes of this Article is to provide greater clarity about what section 1201 is and how courts in various circuits have applied it. Hence, this Part provides a general understanding of section 1201, largely in line with the stylized accounts of it, while acknowledging the incompleteness of those accounts. Helping fill in the holes is Part II's objective.

### *A. A Brief History of the DMCA*

Congress enacted the DMCA in 1998 as part of its obligations under the World Intellectual Property Organization ("WIPO") Copyright Treaty and the WIPO Performances and Phonograms Treaty (together, the "WIPO Treaties").[35] The WIPO Treaties required contracting parties to

> provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.[36]

35. Thomas A. Mitchell, Note, *Copyright, Congress, and Constitutionality: How the Digital Millennium Copyright Act Goes Too Far*, 79 NOTRE DAME L. REV. 2115, 2154-55 (2004).

36. WIPO Copyright Treaty art. 11, Dec. 20, 1996, S. TREATY DOC. NO. 105-17 (1997).

Even prior to the WIPO Treaties, Congress had begun to worry about how new digital technologies would impact the copyright ecosystem.[37] In particular, Congress seemed cognizant of at least two significant issues. First, while emerging digital technologies held significant promise, providers of those technologies might be reluctant to develop them for fear of excessive copyright liability.[38] For instance, if the providers of technologies that allow third parties to post content on their sites were broadly liable for the infringing activities of their users, the risks of copyright liability may frequently outweigh the potential benefits of providing those technologies. Consequently, some argued that additional legal assurances were needed to help persuade technology providers to pursue socially beneficial technological innovation.[39]

Second, copyright owners argued that digital technologies enabled copyright infringement on a scale never seen before.[40] Congress and copyright owners thus worried that the amount of infringement would overwhelm copyright owners' ability to earn fair returns on their creative investments.[41] This worry was grounded in the utilitarian theory behind copyright, predominant in the United States, which postulates that creative parties will be reluctant to create copyrightable works without the ability to recoup the costs of their investments.[42] Hence, many argued that copyright owners needed additional legal tools to help them combat the feared onslaught of copyright infringement that digital technologies seemed to foreshadow.[43]

The DMCA sought to address both issues. On the one hand, the DMCA's "safe harbors" provided technology providers with immunity from copyright infringement so long as those parties satisfied certain conditions.[44] This Article does not focus on the DMCA safe harbor provisions, so it will not further discuss these going forward.

Section 1201 represents the DMCA's appeasement of copyright owners in this balancing act. Section 1201 provides copyright owners with several new tools for combatting copyright infringement (and

37. *See generally* 5 WILLIAM H. MANZ, FEDERAL COPYRIGHT LAW: THE LEGISLATIVE HISTORIES OF THE MAJOR ENACTMENTS OF THE 105TH CONGRESS (1999) (compendium of legislative histories spanning over one year relating to the Digital Millennium Copyright Act).

38. Mike Scott, Note, *Safe Harbors Under the Digital Millennium Copyright Act*, 9 N.Y.U. J. LEGIS. & PUB. POL'Y 99, 99 (2005) (highlighting this concern from the legislative history).

39. *Id.*

40. Calandrillo & Davison, *supra* note 17, at 353-60 (summarizing this history).

41. *Id.*

42. Sara K. Stadler, *Forging a Truly Utilitarian Copyright*, 91 IOWA L. REV. 609, 625-34 (2006) (articulating this theory).

43. Calandrillo & Davison, *supra* note 17.

44. *See generally* Scott, *supra* note 38 (providing an overview of these).

beyond, as explained more below). First, subsection 1201(a)(1) allows copyright owners to prohibit third parties from circumventing access controls, defined under the statute as "technological measure[s] that effectively control[] access" to a copyrighted work.[45] Whether a control effectively controls access to a work is defined broadly: so long as the circumventor must apply "information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work," then the access control is effective.[46] Effectiveness thus does not depend on whether the control actually does a good job of controlling access, as a number of courts have opined;[47] easily circumvented controls suffice. Ultimately, it boils down to whether there is any sort of control in place at all.

Access controls can thus be any sort of control that a copyright owner applies to their work. Most would likely think of encryption, digital rights management, or some similar sophisticated technology as examples of access controls. But courts have even deemed login credentials for copyrighted websites as "access controls" under section 1201's broad definition.[48]

Section 1201 includes more than just a ban on circumventing access controls, though. Subsections 1201(a)(2) and 1201(b) prohibit parties from manufacturing or trafficking in technologies that are primarily designed for circumventing access and what some refer to as copy controls, which have "only limited commercially significant purpose or use" other than to circumvent either access or copy controls, or which are marketed for such purposes.[49] These anti-trafficking bans thus apply not only to technology that enables circumvention of access controls, but to copy controls as well.

Together, these subsections mean that section 1201 prohibits anyone from making or distributing technology that enables others to circumvent either access or copy controls, even though section 1201 does not prohibit circumventing copy controls.[50] Essentially, if one wishes to circumvent a copy control, which section 1201 does not address, one must find their own means of doing so, because section 1201 prohibits others from supplying the means. And even develop-

45. 17 U.S.C. § 1201(a)(1), (3).

46. *Id.*

47. *See, e.g.*, Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 294, 316-18 (S.D.N.Y. 2000) (finding that an access control need not be a strong control to be considered effective).

48. Universal City Studios, Inc. v. Corley, 273 F.3d 429, 435 (2d Cir. 2001) ("The DMCA therefore backed with legal sanctions the efforts of copyright owners to protect their works from piracy behind digital walls such as encryption codes or password protections.").

49. 17 U.S.C. § 1201(a)(2), (b)(1).

50. *See* Justin Hughes, *Motion Pictures, Markets, and Copylocks*, 23 GEO. MASON L. REV. 941, 951 (2016) (providing a summary of these distinctions).

ing one's own means could be a section 1201 violation, because the bans in subsections 1201(a)(2) and (b) apply to anyone "manufactur[ing]" such technology as well.[51] Of course, the term "manufacture" seems to entail building such tools at scale, potentially meaning that an individual coming up with their own private means of circumvention is outside section 1201's grasp. But since the term is left undefined, we are left without clear answers.

In addition to this ambiguity, confusion surrounds what exactly copy controls are and how they differ from access controls. This is a key question that has befuddled courts.[52] It is key because, as discussed above, section 1201 does not address, and therefore implicitly allows, circumvention of copy controls. Section 1201 defines copy controls as "a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof."[53] Hence, a copy control is one that prevents a third party from exercising a right under copyright, including the rights to reproduce, prepare derivative works, distribute, publicly perform, and publicly display the work.[54] Similar to access controls, whether a copy control is effective in protecting such rights is defined broadly to include any measure that, "in the ordinary course of its operation, prevents, restricts, or otherwise limits the exercise" of a right under copyright.[55]

One way to understand the difference between access and copy controls is to understand that not all access requires exercise of a right under copyright law. For instance, I might access some copyrighted content, such as a copyrighted book, without reproducing it, changing it, distributing it, publicly performing it, or publicly displaying it. Similarly, I might access some audiovisual content without having to exercise any of these rights in the copyrighted work.[56]

Yet in the digital context, section 1201's primary focus, it becomes more difficult to find situations where access and copy controls do not essentially merge. To illustrate: if someone pays for access to a movie and subsequently downloads it to their computing device, the distributor of that downloaded movie will almost certainly have wrapped the movie file in technological protections to prevent the user from doing anything other than viewing the movie on an ap-

51. 17 U.S.C. § 1201(a)(2), (b)(1).

52. Reese, *supra* note 12, at 641-47 (discussing some of the early cases on this topic where copyright owners merged access controls with what Professor Reese refers to as "rights" controls, which we refer to as copy controls).

53. 17 U.S.C. § 1201(b)(1)(A).

54. Reese, *supra* note 12, at 623.

55. 17 U.S.C. § 1201(b)(2)(B).

56. Even in this scenario, though, it might be said that the party is publicly performing the audiovisual work by merely accessing it, given the broad definition of public performance under the Copyright Act.

proved device. Those protections thus prevent the user from exercising copyright rights in the digital file; they cannot reproduce the file (outside of what the technology allows for the movie to play on the device); they cannot alter the file; they cannot distribute it to others; and the protections may prevent the user from transmitting the movie to others, thus preventing certain public performances or displays of the copyrighted content.[57]

One reading of section 1201 is that the user is free to circumvent those protections to exercise rights under copyright in the content. So, for instance, circumventing the protections to copy, modify, distribute, or publicly perform or display the work arguably would not result in a section 1201 violation because that section only prohibits circumvention of access controls, not copy controls. Of course, the user may certainly face repercussions under standard copyright law for exercise of those rights.[58] But at least under the DMCA, the user is in the clear.

Or are they? If those copy controls are also considered access controls, then their circumvention implicates subsection 1201(a)(1)'s prohibition. One might persuasively argue not so: the user paid for access to the digital content, so they have legitimate access to it. Hence, these controls cannot simultaneously be access controls—they are merely copy controls and thus circumventable under section 1201. But the key question becomes: what access did they purchase? Some courts have found that such copy controls are also access controls because the access granted the user was to the movie, in its locked form, but not to the underlying digital content, free of any controls.[59] In this way, at least some courts have effectively conflated the definitions of access and copy controls such that it can be difficult to differentiate between the two.[60] Indeed, as mentioned, in the digital context, such controls may nearly always be, or easily made, both access and copy restrictions.[61]

The statute is ambiguous on other questions as well. Subsection 1201(c) follows the prohibitions in subsections 1201(a) and (b) and indicates that nothing in section 1201 "shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use,

57. *See, e.g.*, Kelsi Gillan, *How to Remove DRM from iTunes Movies [Free and Safe]*, TUNEFAB, https://www.tunefab.com/tutorials/remove-drm-from-ituns-movies.html [https://perma.cc/9KT5-ZEAB] (last updated Mar. 28, 2024) (discussing Apple's use of DRM on the movies it sells to customers through iTunes).

58. Reese, *supra* note 12, at 623.

59. *See, e.g.*, Disney Enters., Inc. v. VidAngel, Inc., 224 F. Supp. 3d 957, 966-67 (C.D. Cal. 2016) (finding that "space-shifting" runs afoul of subsection 1201(a)(1) because the user was only granted access to the underlying content in its encrypted form).

60. *Id.*

61. Hughes, *supra* note 50, at 952 (discussing how access controls might also often be copy controls).

under this title."[62] Some have argued that this means that fair use can be a defense to section 1201 violations, and at least some courts have interpreted section 1201 in a way that is somewhat consistent with that viewpoint.[63] Others, however, have argued that all subsection 1201(c) does is to make clear that claims of copyright infringement are still subject to a fair use defense, but that violations of section 1201 are distinct from copyright infringement claims.[64] Hence, the fair use defense has no bearing on whether someone has violated section 1201's prohibitions.[65] A number of courts have agreed with this premise.[66]

Resolving this issue is significant because the view that fair use plays no role with respect to section 1201 violations untethers section 1201 from its purpose of combatting copyright infringement. As some have argued, section 1201 is replete with mentions of copyrighted works—the focus clearly seems to be protecting such works from copyright infringement.[67] Indeed, the debates leading up to the DMCA's enactment all focused heavily on concerns about rampant digital copyright infringement.[68] Hence, to the extent that copyright owners effectively merge access and copy controls and are thereby able to prevent circumventions that would otherwise allow fair use of a work, section 1201 arguably has gone astray. In fact, the prohibition on trafficking in technology that allows circumvention of copy controls does not even require such a merger of the types of controls—trafficking in technology that allows others to exercise copyright rights is enough. And to the extent that fair use is no defense to such 1201(b) violations because no nexus is needed between DMCA violations and copyright infringement, section 1201 expands the rights of copyright owners beyond what some envisioned at the time of the DMCA's enactment.[69]

Subsection 1201(c) is followed by subsections 1201(d)-(k), which include a number of statutory exemptions, primarily to subsection

62. 17 U.S.C. § 1201(c).

63. Armstrong, *supra* note 17, at 14-27 (making an argument in favor of a fair circumvention defense to violations of section 1201 and pointing to recent cases that seem to so hold while relying on standard copyright doctrines such as fair use).

64. Katharine Trendacosta & Corynne McSherry, *What Really Does and Doesn't Work for Fair Use in the DMCA*, ELEC. FRONTIER FOUND.: DEEPLINKS BLOG (July 31, 2020), https://www.eff.org/deeplinks/2020/07/what-really-does-and-doesnt-work-fair-use-dmca [https://perma.cc/BQH9-Y4XX] (articulating this view and arguing against it).

65. *Id.*

66. *See, e.g.*, Universal City Studios, Inc. v. Reimerdes, 82 F. Supp. 2d 211, 219 (S.D.N.Y. 2000) ("If Congress had meant the fair use defense to apply to such actions, it would have said so.").

67. Armstrong, *supra* note 17, at 29-30.

68. Nimmer, *supra* note 2, at 681-84.

69. *Id.* at 736-39.

1201(a)(1)'s prohibition on circumventing access controls; in a few instances, some of these exemptions excuse certain activities from the anti-trafficking provisions under subsections 1201(a)(2) and (b) as well.[70] Some of these exemptions relate to allowing for the circumvention of access controls to enable interoperability, security and encryption research and testing, and reverse engineering.[71] Others relate to law enforcement activities.[72] Mostly, these exemptions are defined very narrowly. And as we will see, they very rarely show up in litigation. We discuss later why.

Notice, again, that exemptions to the anti-trafficking provisions in subsections 1201(a)(2) and (b) are mostly off the table. Hence, as discussed, section 1201 does not address circumventing copy controls—and thereby implicitly allows such activity—and also includes a number of statutory exemptions for circumventing access controls. But it prohibits anyone from making the technology for performing such circumvention or distributing it to others, with few exceptions.

Indeed, despite these statutory exemptions to circumventing access controls, the primary means by which the government grants exemptions to section 1201 is through a triennial rulemaking process, conducted by the Library of Congress.[73] As part of this process, every three years the Copyright Office entertains requests for exemptions to subsection 1201(a)(1)'s prohibition on circumventing access controls.[74] Some of these petitions may relate to previously granted exemptions—that is, exemptions granted as part of this process are not permanent, but instead must be renewed every three years.[75] Others are new, in that they have been rejected in the past or are entirely original.[76] After gathering input, the Office decides which, if any, exemptions to grant, making its recommendation to the Librarian of Congress accordingly. Through this process, the Library of Congress has granted a number of meaningful exemptions in the past, including ones relating to jailbreaking cell phones, accessibility on devices, and security testing.[77]

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70. *See, e.g.*, 17 U.S.C. § 1201(f)(2) (exempting certain reverse engineering activities from subsections 1201(a)(2) and (b)); *id.* § 1201(g)(4) (exempting certain research activities from subsection 1201(a)(2)).

71. *Id.* § 1201(f)-(g).

72. *Id.* § 1201(e).

73. For an overview and information about which exemptions have been granted, see *Rulemaking Proceedings Under Section 1201 of Title 17*, U.S. COPYRIGHT OFF., https://www.copyright.gov/1201/ [https://perma.cc/TP75-RWHU] (last visited Apr. 10, 2024).

74. *Id.* (choose "Background").

75. *Id.* (choose "Streamlined Renewals").

76. *Id.* (choose "Background").

77. *Id.* (choose "Current Temporary Exemptions").

Despite these successes, many point to problems with the process.[78] For starters, users are completely dependent on the Library of Congress's decisions before they can legally engage in their desired activities.[79] As previously discussed, users cannot easily rely on standard defenses to claims of copyright infringement, since the DMCA, at least as some courts have interpreted it, is a distinct regime from copyright law.[80]

Second, because exemptions are not permanent, it becomes difficult for users to effectively plan their research and other activities that may rely on such an exemption. For instance, a researcher whose activities depend on an exemption may need more than three years to carry out those activities, but may have to pause their activities in hopes of an exemption renewal as part of the next triennial rulemaking process.

Finally, and as mentioned above, the exemption process only applies to subsection 1201(a)(1)'s prohibition on circumventing access controls. The DMCA does not provide for an exemption process for section 1201's bans on manufacturing or trafficking in circumvention tools.[81] The only way to obtain such exemptions would be to amend section 1201, which has never happened. And the limited exemptions already within section 1201 are so narrow as to be mostly meaningless.

Ultimately, violations of section 1201 can result in significant liability. Under section 1203, aggrieved parties may receive injunctive relief, costs, attorney's fees, actual damages, and statutory damages; courts may also impound and destroy any offending devices.[82] Repeat offenders may be subject to treble damages.[83] And statutory damages can grow quickly because an award is available for each "act of circumvention, device, product, component, offer, or performance of service, as the court considers just."[84]

Aside from these civil remedies, section 1204 provides for criminal remedies when parties violate section 1201 "willfully and for purposes of commercial advantage or private financial gain."[85] First-time

78. Lohmann, *supra* note 34.

79. *Id.*

80. Universal City Studios, Inc. v. Reimerdes, 82 F. Supp. 2d 211, 219 (S.D.N.Y. 2000) ("If Congress had meant the fair use defense to apply to such actions, it would have said so.").

81. *Circumventing Copyright Controls*, DIGIT. MEDIA L. PROJECT, https://www.dmlp.org/legal-guide/circumventing-copyright-controls [https://perma.cc/YMB6-UJYA] (last visited Apr. 10, 2024) (stating that the exemption process is for section 1201's anti-circumvention provisions, i.e., subsection 1201(a)(1)).

82. 17 U.S.C. § 1203 (listing the civil remedies available to aggrieved parties).

83. *Id.*

84. *Id.* § 1203(c)(3).

85. *Id.* § 1204(a).

offenders can receive prison sentences up to five years and fines up to $500,000, while repeat offenders face up to ten years in prison and a $1,000,000 fine.[86] With this overview of section 1201 in place, we now turn to our empirical results.

## II. EMPIRICAL RESULTS

### *A. Methodology*

The results of this study come from a broad-based Westlaw search. To capture every possible section 1201 opinion, we searched for each individual subsection of section 1201.[87] Our initial search yielded 337 cases. We then combed through each of these cases to determine whether the court applied section 1201 and reached a decision based on it. Through this process, we eliminated 132 of the cases (false positives—these cases mentioned one of the search terms but did not actually apply any part of section 1201 in reaching the court's decision). Most of the exclusions were clear false positives—these cases included one or more of the search terms, but the court did not apply section 1201 in any sort of way. In other cases, our decision to exclude was more difficult. For instance, some cases concerned the proper scope of damages under section 1203 or the sufficiency of an indictment relating to claims under section 1201. Because these cases did not actually interpret section 1201 or base their rulings on it, we chose to exclude them. This left us with 205 cases. From these 205 cases, we gleaned 209 opinions—that is, four of the cases included multiple opinions that applied parts of section 1201 and reached a decision on the basis of section 1201.

We then went through each of these opinions and extracted information about them. The extracted data include: the court's circuit and level (i.e., district or appellate); whether or not the opinion was published in the *Federal Reporter*; the opinion's procedural posture; the identities of the plaintiffs and defendants; the plaintiff's subject matter, i.e., what kind of copyrighted work was subject to anti-circumvention protections; which section 1201 subsections were mentioned and applied in the opinion; whether the court emphasized cop-

86. *Id.*

87. The specific search we ran was under "All Federal Cases" on Westlaw as follows: adv: "Digital Millennium Copyright Act" or DMCA AND "1201(a)" or "1201(b)" or "1201(c)" or "1201(d)" or "1201(e)" or "1201(f)" or "1201(g)" or "1201(h)" or "1201(i)" or "1201(j)" or "1201(k)." This yielded 337 cases on the date that we conducted the search, January 27, 2022. Note that since the time of our search, the database has almost certainly added cases. We note that some section 1201 opinions might occur where the DMCA is not mentioned. But we feel confident that that is nearly never the case, as courts typically name the DMCA when discussing section 1201 claims. Constructing the search without the term "DMCA" would include too many false positives, as many other statutes include 1201 sections.

yright infringement in making its decision; whether the court discussed and applied fair use or First Amendment doctrines in its decision; which remedies the court granted when the court decided in favor of the plaintiff, if any; which authorities the court cited in applying section 1201; and whether the court decided in favor of the defendant or plaintiff (or both).

At the outset, we note several limitations to this approach. First, researchers have found opinions to be "rare events in the litigation process."[88] As others have noted, "litigated cases are not just a random sample of all filed cases or all potential suit-generating incidents."[89] Instead, it is "widely acknowledged that the process of winnowing disputes for litigation by selective settlement systematically screens out some disputes and allows others to go forward."[90] Courts frequently dispose of issues in cases without writing an opinion for a variety of reasons, with procedural posture being one of the most important factors that influences whether a court issues an opinion.[91] Furthermore, cases often settle, even if earlier litigation events outside of a formal opinion influenced that outcome. Indeed, judges rarely write opinions in cases that settle or result in a jury verdict.[92] Selection effects are thus rampant in litigation, with the primary questions becoming "what kind of selection is taking place and why."[93] We discuss some of these questions in later Sections of this Article.

Hence, even if our data are representative of opinions available through Westlaw, the reality remains that courts and the parties involved frequently dispose of issues in DMCA disputes in ways that our data, with its focus on opinions, fail to capture. Our data may be representative of the thinking that goes into these other types of dispositions. But we have not structured our study to account for them.

Second, while we have canvassed Westlaw in search of all section 1201 opinions, it is possible that we missed some. This may be so because either our search criteria were imperfect or the Westlaw database is. We have a high degree of confidence in our search criteria, having experimented with a number of different parameters. Nonetheless, Westlaw does use discretion in which cases it includes in its

88. David A. Hoffman, Alan J. Izenman & Jeffrey R. Lidicker, *Docketology, District Courts, and Doctrine*, 85 WASH. U. L. REV. 681, 682 (2007).

89. Peter Siegelman & Joel Waldfogel, *Toward a Taxonomy of Disputes: New Evidence Through the Prism of the Priest/Klein Model*, 28 J. LEGAL STUD. 101, 103 (1999).

90. *Id.*

91. Hoffman et al., *supra* note 88, at 682.

92. Allen Redlich, *Who Will Litigate Constitutional Issues for the Poor?*, 19 HASTINGS CONST. L.Q. 745, 766 n.135 (1992) (indicating that judges rarely write opinions in cases that settle or that end in jury verdicts).

93. Siegelman & Waldfogel, *supra* note 89, at 103.

database[94]: it excludes some cases and may never find others.[95] Furthermore, no combination of available databases is likely to change this result because judges simply choose not to make some of their opinions available.[96] Hence, it is worth noting that Westlaw's selection of cases may not be representative of DMCA cases more generally. However, while Westlaw may certainly fail to include all relevant opinions, it seems more likely that they have included the vast majority of, and perhaps all, relevant opinions given that their business model depends on it.

Furthermore, despite these limitations, opinions published through services like Westlaw remain the best indication of how courts define important copyright law doctrines.[97] Though expanding our study to cover non-opinion dispositions in DMCA litigation would undoubtedly reveal additional useful information, we have focused this study on opinions to highlight courts' revealed preferences in resolving DMCA matters. The following Sections examine the results.

### *B. Empirical Results*

#### *1. Overall Metrics*

One of the biggest findings of this study is that there seems to be, quite simply, very limited section 1201 litigation that results in written opinions—either in the district courts or at the appellate level. As mentioned above, we only found 209 opinions overall. Of the 209 opinions, 192 come from district courts, while only seventeen come from appellate courts. Courts within the Ninth Circuit issue far more section 1201 opinions than any other circuit; nearly half of all opinions in our database come from it, with the Eleventh Circuit a distant second. Yet even the Ninth Circuit's numbers are sparse, with only a little less than four opinions annually on average. Notably, the Second Circuit has done very little section 1201 opinion making—it is typically one of the giants in copyright litigation, but in terms of section 1201, it comes in fourth in overall opinion numbers behind the Ninth, Eleventh, and Sixth Circuits. Figures 1 and 2 below provide breakdowns of opinions by court level and by circuit.

94. Ellen Platt, *Unpublished vs. Unreported: What's the Difference?*, 5 PERSPECTIVES 26, 26-27 (1996) (discussing how Westlaw and Lexis choose which opinions go into their databases).

95. *Id.*

96. *Id.* at 27.

97. Neil Weinstock Netanel, *Making Sense of Fair Use*, 15 LEWIS & CLARK L. REV. 715, 733-34 (2011).

**Figure 1: Opinions by Court Level**

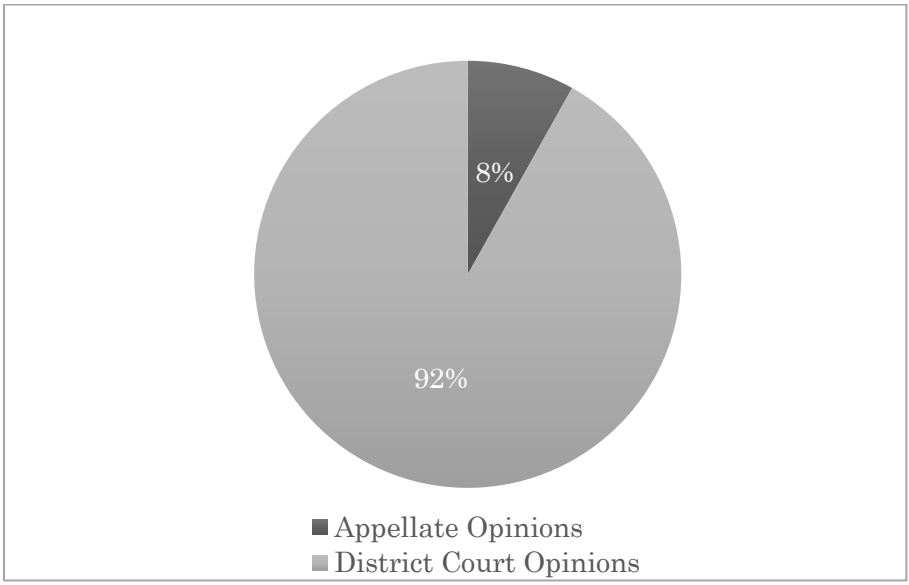
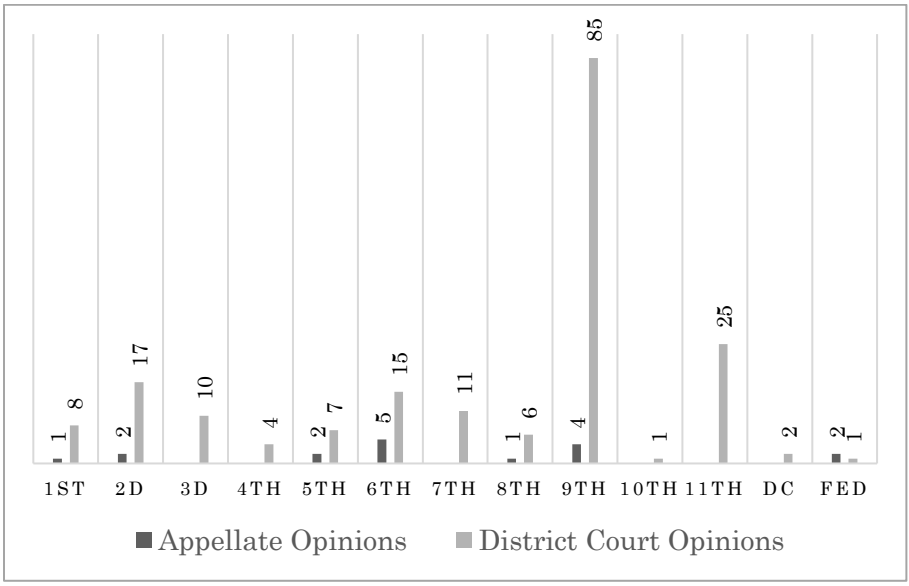



**Figure 2: Opinions by Circuit and Court Level**




The high proportion of district court opinions is relatively normal, even if the proportion is higher than in other studies examining copyright litigation.[98] Generally, most litigation happens in district

98. Clark D. Asay, *An Empirical Study of Copyright's Substantial Similarity Test*, 13 U.C. IRVINE L. REV. 35, 57 (2022) (showing in a representative sample of substantial similarity opinions the breakdown to be 85% district court opinions versus 15% appellate decisions).

courts, with only a small fraction of cases ever being appealed.[99] Be that as it may, it remains stark that in the nearly quarter-of-a-century since Congress enacted the DMCA, there are fewer than twenty appellate decisions applying section 1201. Quite simply, there is little guidance from appellate courts about how to apply section 1201's provisions. Nor is there much district court direction, with an average of about nine district court opinions per year since the law's effective date.[100]

The lack of appellate guidance is particularly true in some circuits. Six circuits have never issued an appellate decision applying section 1201. Included in this group is the Eleventh Circuit—despite coming in second in the overall number of opinions, it has never issued an appellate opinion interpreting section 1201. The circuits with the most appellate guidance are the Sixth and Ninth Circuits, with five and four opinions, respectively. Yet even those numbers are low. The remaining circuits all have between one and two total appellate decisions in the DMCA's nearly twenty-five-year existence. In this group is the Second Circuit, which, despite issuing an important appellate decision early on, has mostly gone dormant since.[101]

Combine this low level of appellate direction with the fact that the Supreme Court has never opined on section 1201, and those wishing to engage in activities that section 1201 implicates are left in a state of some limbo. There are some efforts currently underway to get more interpretive guidance from appellate courts, including a current case challenging section 1201 based on the First Amendment.[102] But as the numbers indicate, these are rare occurrences; on average, there has been less than one appellate decision per year relating to section 1201 since the law's effective date.[103] District court opinions, while more frequent, are also uncommon. As mentioned, on average, district courts have issued a little more than nine section 1201 opinions annually.[104]

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99. Theodore Eisenberg, *Appeal Rates and Outcomes in Tried and Nontried Cases: Further Exploration of Anti-Plaintiff Appellate Outcomes*, 1 J. EMPIRICAL L. STUD. 659, 663 (2004) (providing metrics on this question).

100. Different parts of the DMCA have different effective dates. Subsections 1201(a)(2) and (b)—the antitrafficking provisions—became effective on the date of the DMCA's enactment, October 28, 1998. *See supra* note 27 and accompanying text. Importantly, subsection 1201(a)(1) became effective two years from the law's enactment (so on October 28, 2000). *See* U.S. COPYRIGHT OFF., *supra* note 27, at 17. Even using that later date as a denominator leaves the average number of appellate decisions as less than one per year, while the average number of opinions overall rises less than one opinion more per year to about ten opinions.

101. *See generally* Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) (finding against the defendant on a number of section 1201 grounds).

102. *See* Press Release, Elec. Frontier Found., *supra* note 10.

103. *See* Eisenberg, *supra* note 99, at 663-64.

104. *Id.*

It's difficult to know whether this seemingly low number of opinions is an outlier or the norm without robust comparisons to other, similar types of litigation. While imperfect, a few comparisons help show that section 1201 litigation occurs much less frequently than other types of copyright litigation. For instance, a recent substantial similarity litigation study shows that a random sample of cases between 1998 and 2020 included 777 total opinions, with 113 of these being appellate decisions.[105] That number of appellate decisions is nearly seven times the number of appellate decisions found in the current study, despite the current study including an extra year. And the number of district court opinions in the substantial similarity study is over four times as many section 1201 district court opinions. Furthermore, the substantial similarity study used a sample of opinions rather than examining the entire population.[106] Based on the substantial similarity study's estimates, the actual number of appellate and district court decisions in the entire population of substantial similarity opinions is probably around three times the number of opinions from the sample,[107] making it even more clear that section 1201 opinions, whether from a district or appellate court, are relatively rare in comparison.

Another study examining fair use decisions confirms section 1201's relative absenteeism in the courts. Based on that study's search of Westlaw, between 1998 and early 2017, courts issued 347 fair use opinions, with seventy-four of those coming from appellate courts.[108] Again, this number means that fair use opinions from appellate courts happened over four times as frequently as section 1201 opinions, despite the fair use study ending five years earlier. District courts issued 40% more fair use opinions than section 1201 opinions, despite the fair use study covering five fewer years. Furthermore, the fair use study excluded "non-substantive" decisions, or opinions "in which the court denied a party's motion for dismissal or summary judgment because the court determined that too many outstanding factual issues remained for it to make a substantive determination."[109] The present study, by contrast,

105. Asay, *supra* note 98, at 56-60. The substantial similarity study actually starts earlier than 1998, so the reported numbers in that article are not what we present above. However, because I am the author of the substantial similarity study and have access to the raw data, I was able to remove the years prior to 1998 in order to better compare substantial similarity litigation to section 1201 litigation. The same holds true with respect to the fair use metrics discussed in the next paragraph.

106. *Id.* at 53-54 (explaining the study's methodology).

107. *Id.*

108. Clark D. Asay, Arielle Sloan & Dean Sobczak, *Is Transformative Use Eating the World?*, 61 B.C. L. REV. 905, 928, 931 (2020). For an explanation of how we came up with these numbers, see *supra* note 105.

109. Asay et al., *supra* note 108, at 927.

includes these types of opinions, meaning that the disparity between the number of fair use opinions and section 1201 opinions is even greater than depicted above.

Why do there seem to be so few section 1201 opinions compared to other types of copyright litigation? As discussed, at the time of its passage, many viewed section 1201 as a key means by which to address the feared onslaught of digital piracy.[110] We might thus expect a greater amount of section 1201 litigation resulting in written opinions as a manifestation of that fight playing out. But, as the numbers indicate, that does not seem to have occurred.

A few obvious explanations come to mind. For starters, it might be the case that section 1201 is simply not as important as other copyright doctrines such as fair use and the substantial similarity test (the latter being the primary means by which courts assess whether copyright infringement occurred).[111] Indeed, circumventing access controls and designing technologies for circumvention are, arguably, the province of only a relative few. Conversely, making uses of copyrighted materials, whether as an infringement or a fair use, is relatively simple to do, particularly in this day and age.[112] Consequently, it may come as no surprise that section 1201 litigation is less frequent than other types of copyright infringement litigation, even if the disparity is more significant than we might expect.

Another explanation may be that section 1201 is merely doing its job. By providing strong, clear legal prohibitions against circumventing access controls and trafficking in circumvention devices, section 1201 may simply dissuade many parties from engaging in such activities. Or, to the extent that parties engage in prohibited activities, section 1201's clear prohibitions may persuade many of those parties to stop once copyright owners come calling and to quickly settle any remaining claims. In fact, the influential Priest-Klein theorem may suggest precisely such an outcome.[113] As those authors note, "[i]n litigation, as in gambling, agreement over the outcome leads parties to drop out."[114] Consequently, "[w]here either the plaintiff or defendant has a 'powerful' case, settlement is more likely because the parties are less likely to disagree about the out-

110. *See supra* Part I.

111. Asay, *supra* note 98, at 37.

112. *See generally* JOHN TEHRANIAN, INFRINGEMENT NATION: COPYRIGHT 2.0 AND YOU (2011) (describing the ease with which everyday Internet users commit copyright infringement).

113. George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 17 (1984).

114. *Id.*

come."[115] Hence, the small number of section 1201 opinions may in part result from section 1201's clarity having a strong deterrent effect on an already small population of possible violators.

Furthermore, as discussed above, subsection 1201(a)(1) is subject to a triennial exemption process, whereby the Library of Congress determines whether to grant proposed exemptions to subsection 1201(a)(1)'s anti-circumvention prohibitions.[116] As part of this process, over time, the Library of Congress has granted important exemptions for a variety of activities.[117] Thus, another reason section 1201 litigation is relatively sparse may be because the triennial exemption process has permitted many activities that would otherwise result in section 1201 litigation.

Each of these factors may certainly contribute to the paucity of section 1201 opinions. But we believe there is some basis to question each of these explanations as well. First, while there is almost certainly some truth to the idea that section 1201 violations are more difficult to commit than copyright infringements (at least for the average person), that notion is overly simplistic. For starters, more than just hardcore technologists are capable of circumventing access controls, particularly with how some courts have interpreted that prohibition. For instance, some courts have concluded that access controls can be a username and password, and that using those in contravention of a website owner's wishes to access copyrighted content on the website can constitute a section 1201 violation.[118] Section 1201 thus defines access controls in a way that lends itself to broad interpretations, meaning that even relatively unsophisticated parties might frequently violate section 1201's prohibitions.

Furthermore, while older generations may struggle to dabble in circumvention technologies, younger generations face fewer obstacles in this regard.[119] Digital natives are often savvy with the technologies that befuddle their predecessors, including with respect to circumvention tools.[120] Because of their digital upbringing, they are also often motivated to engage with content in ways that copyright holders may not favor (and which they often try to prohibit with encryption).[121] Hence, while on its

115. *Id.*

116. *See supra* Part I.

117. *Id.*

118. Universal City Studios, Inc. v. Corley, 273 F.3d 429, 435 (2d Cir. 2001) ("The DMCA therefore backed with legal sanctions the efforts of copyright owners to protect their works from piracy behind digital walls such as encryption codes or password protections.").

119. VB Staff, *Report: 54% of Today's 'Ethical Hackers' Are Gen Z*, VENTUREBEAT (Nov. 20, 2021, 6:21 AM), https://venturebeat.com/security/report-54-of-todays-ethical-hackers-are-gen-z/ [https://perma.cc/W8JU-JH53] (discussing the rise of "ethical hackers" and the reality that most come from Gen Z and millennials).

120. *Id.*

121. *See generally* JULIE M. ALBRIGHT, LEFT TO THEIR OWN DEVICES: HOW DIGITAL NATIVES ARE RESHAPING THE AMERICAN DREAM (2019).

face section 1201 may seem to target a smaller group of possible violators, the reality is that population of possible violators is growing daily (and has been for some time).

Finally, because of the expense of litigation, litigants in either copyright or section 1201 litigation tend to be well-resourced parties such as for-profit organizations.[122] Individuals certainly sometimes sue or are sued for either type of offense; we discuss this dynamic more below.[123] But companies tend to predominate in copyright and section 1201 litigation.[124] Collectively, these realities may mean that the population for users and circumventers of copyrighted materials is more similar than meets the eye. And if that is true, then we are still left with at least part of the puzzle as to why section 1201 litigation is so much less frequent than other types of copyright litigation.

This leaves us with the second explanation posited above for why section 1201 litigation is so rare: the statute is clear in its prohibitions, meaning that parties are less likely to litigate disputes because the outcome is nearly always certain in one direction or the other.[125] We think this explanation has some plausibility, though it, too, deserves additional interrogation.

First, as discussed above, there are a number of lingering questions about how section 1201's provisions apply. Some courts require a nexus between copyright infringement and a section 1201 violation, while other courts, notably within the Ninth Circuit, do not.[126] There also remain questions about how the First Amendment intersects with section 1201, as current section 1201 litigation makes clear.[127] Furthermore, a number of definitional questions, including what constitute access controls, continue to inspire differences from one circuit to the other.[128] And it is worth reemphasizing that most circuits have little to no appellate guidance on these questions, meaning that these questions are still in play in most circuits.[129] Hence, while it's possible that section 1201's relative

122. Terrica Carrington, *A Small Claims Court Is on the Horizon for Creators*, COPYRIGHT ALL. (Oct. 4, 2017), https://copyrightalliance.org/small-claims-court-on-the-horizon/ [https://perma.cc/X4LS-M4BN] (noting that the average cost of a federal copyright lawsuit is around $300,000 and, as a result, many resource-constrained parties are less likely to sue).

123. *See infra* Section II.B.5.

124. *See infra* Section II.B.5.

125. Priest & Klein, *supra* note 113, at 17.

126. MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010) (rejecting a nexus requirement).

127. *See* Press Release, Elec. Frontier Found., *supra* note 10; *supra* note 10 and accompanying text.

128. Burroughs Payment Sys., Inc. v. Symco Grp., Inc., No. 1:10-CV-03029-JEC, 2011 WL 13217738, at *4-6 (N.D. Ga. Dec. 13, 2011) (discussing this debate among the circuits).

129. *See supra* notes 100-01 and accompanying text.

clarity weeds out many disputes, there is enough remaining uncertainty to lead us to question whether clarity really is what is keeping section 1201 litigation in check.

Briefly examining section 1201 litigation in the Ninth Circuit may substantiate some of our doubts on this score. As noted above, the Ninth Circuit leads all other circuits—by a wide margin—in the total amount of section 1201 litigation. It boasts nearly half of all section 1201 opinions in our database. Yet it also arguably has one of the clearest standards as to how section 1201 applies: a section 1201 violation requires no nexus to copyright infringement, as Ninth Circuit courts have repeatedly confirmed.[130] This clarity may be borne out by how frequently plaintiffs win in the Ninth Circuit: as we explore more below, plaintiffs in the Ninth Circuit win about 81% of the time in section 1201 disputes, a much higher rate than in other circuits.[131]

One may thus expect Ninth Circuit standards to suppress the number of cases in the Ninth Circuit because outcomes seem predictable. But as mentioned, the Ninth Circuit boasts the highest volume of section 1201 opinions. Of course, perhaps the Ninth Circuit's standards *have* suppressed the volume of section 1201 litigation in the Ninth Circuit—Ninth Circuit opinions may be even more numerous if its section 1201 standards were less clear. Assessing that counterfactual is impossible. But what's noteworthy is that in other circuits where section 1201 standards are less certain than in the Ninth Circuit, we see very little section 1201 litigation. In the Eleventh Circuit, for instance, with no appellate guidance, we have only twenty-five total opinions—all from district courts—over section 1201's nearly quarter-of-a-century lifespan. While that number of opinions puts the Eleventh Circuit in second place overall, the opinion count is still quite low. Naturally, many other factors likely contribute to this low opinion count vis-à-vis the Ninth Circuit, including jurisdiction, overall litigation volume, and the industries located within each respective circuit. But it remains striking that other circuits with less clear section 1201 standards than the Ninth Circuit still inspire so little section 1201 litigation.

As for the triennial exemption process helping reduce section 1201 litigation, there seems to be little doubt that it must help some. But it is important to remember that process is only relevant to subsection 1201(a)(1), which prohibits circumvention of access controls.[132] There is no such exemption process for subsections 1201(a)(2) and 1201(b), which prohibit trafficking in devices that enable circumvention of either access or copy controls. Furthermore, as others have complained, there are plenty of desired activities for which the Library of Congress has denied

130. *MDY Indus.*, 629 F.3d at 950 (rejecting a nexus requirement).

131. *See infra* Section II.B.8.

132. *See supra* Section I.A (summarizing this process).

exemptions.[133] And even for the exemptions the Library of Congress grants, those exemptions are not permanent.[134] Hence, while the exemptions may eliminate some section 1201 litigation, they certainly don't eliminate the bases for a significant amount of litigation that could occur.

Thus, though the paucity of section 1201 litigation almost certainly owes in part to the factors discussed above, for the reasons discussed, we think other factors are in play as well. We briefly consider here one final possibility: that the relevant industries as well as consumers have adopted, over time, a different relationship to encryption technologies. And those emerging attitudes may well provide another reason as to why so little section 1201 litigation happens.

The music industry is an interesting case study for sussing some of this out. As we discuss more below, opinions involving music are rare—we only found two. Yet infringement of music online was one of the more significant narratives pushing passage of the DMCA.[135] Has digital music infringement disappeared since the DMCA's passage? Not at all, according to many, though affordable music streaming services have helped tamp down on infringement.[136] So if digital music infringement is very much a thing, why don't we have more section 1201 opinions relating to it?

One possible reason is that music copyright owners learned over time that using encryption on digital music can be more trouble than it is worth. In one well-chronicled incident, Sony's technical measures on compact discs resulted in serious security and privacy issues on the computers of purchasers.[137] Starting in 2007, major digital music distributors, such as Amazon, began eliminating digital rights management ("DRM") on downloaded music files.[138] And while most music that people consume today is encrypted, including popular streaming services,[139] the

133. Mitch Stolzt, *New Exemptions to DMCA Section 1201 Are Welcome, But Don't Go Far Enough*, ELEC. FRONTIER FOUND. (Oct. 26, 2018), https://www.eff.org/deeplinks/2018/10/new-exemptions-dmca-section-1201-are-welcome-dont-go-far-enough [https://perma.cc/K4K8-E7NM].

134. *See supra* Section I.A (making this point).

135. *See supra* Introduction (highlighting this concern).

136. Murray Stassen, *Music Piracy Has Plummeted in the Past Five Years. But in 2021, It Slowly Started Growing Again.*, MUSIC BUS. WORLDWIDE (Feb. 3, 2022), https://www.musicbusinessworldwide.com/music-piracy-plummeted-in-the-past-5-years-but-in-2021-it-slowly-started-growing-again/ [https://perma.cc/FPD9-F5EX].

137. *See generally* Deirdre K. Mulligan & Aaron K. Perzanowski, *The Magnificence of the Disaster: Reconstructing the Sony BMG Rootkit Incident*, 22 BERKELEY TECH. L.J. 1157 (2007).

138. David Kravets, *Like Amazon's DRM-Free Music Downloads? Thank Apple*, WIRED (Sept. 25, 2007, 12:00 PM), https://www.wired.com/2007/09/drm-part-one/ [https://perma.cc/EA2V-F28L] (chronicling Amazon's move to DRM-free music; Apple followed suit several years later).

139. Bill Rosenblatt, *The Myth of DRM-Free Music, Revisited*, COPYRIGHT & TECH. (Feb. 16, 2017), https://copyrightandtechnology.com/2017/02/16/the-myth-of-drm-free-music-revisited/ [https://perma.cc/4NH5-4L6G] (reviewing the numbers).

paucity of section 1201 music opinions suggests the music industry, by and large, does not depend on section 1201 enforcement as a significant part of its rights protection strategy.

That choice may owe in part to some early litigation that did not ultimately result in a ruling, but which may have affected the music industry's collective DRM psyche. In 2001, Princeton Professor Edward Felten led a team of researchers investigating security vulnerabilities in encryption technologies used to protect copyrighted music.[140] He planned to publish his results, but the Recording Industry Association of America ("RIAA") and the encryption developer threatened him with a section 1201 suit.[141] Felten then sued the RIAA, asking the court to find that the First Amendment protected his research activities.[142] Despite their earlier threats, the RIAA and encryption developer then demurred, telling the court they did not intend to sue Felten or his team.[143] Without a controversy, the court dismissed the case.[144]

It's hard to say which was the chicken and which was the egg: the RIAA, despite its initial aggressiveness, later suggested that aggressiveness was ill-conceived.[145] Hence, it's possible that the Felten matter was a manifestation of where the music industry was already headed in terms of section 1201. But it's also possible that the pushback the RIAA received helped convince the music industry to deprioritize section 1201 enforcement in its rights protection strategy. In any event, the few section 1201 music opinions we found suggest the industry has held true to that position over time.

The music industry's lack of section 1201 enforcement may also stem from consumers' acceptance of encryption technologies over time. Initially, consumers did not take kindly to the encryption technologies that music copyright owners and distributors used, in large part because it made listening to music on a consumer's preferred device more difficult.[146] That consumer opposition seems to have played a role in the industry abandoning DRM on digital downloads early on, as discussed above. Yet as also mentioned, most music today is streamed, and those streams are protected by technological controls. As Justin Hughes notes, consumers appear to have accepted this type of "platform" encryption, perhaps in part because of the greater affordability and access that these platforms

140. *Security Researchers Drop Scientific Censorship Case*, ELEC. FRONTIER FOUND. (Feb. 6, 2002), https://w2.eff.org/IP/DMCA/Felten_v_RIAA/20020206_eff_felten_pr.html [https://perma.cc/3KZZ-X37R].

141. *Id.*

142. *Id.*

143. *Id.*

144. *Id.*

145. *Id.*

146. Hughes, *supra* note 50, at 959-60.

provide.[147] Hence, the lack of section 1201 enforcement in some industries may in part result from both industry and consumer relationships to encryption technologies changing over time.

The software industry is another interesting case study as to why section 1201 inspires so little litigation. Interestingly, software cases are the top subject matter for section 1201 opinions, as we discuss more below.[148] But even that top position isn't terribly lofty; section 1201 opinions, regardless of subject matter, remain rare. Importantly, the DMCA's enactment coincides with the rise of the free and open source software ("FOSS") movement. While the movement has earlier roots, it really began to take off at the turn of the century and thereafter.[149] The FOSS movement eschews restrictions on software reuse and utilizes a number of licenses to bring about its goals of promoting software freedom and ready access to software source code.[150] In fact, one of the major FOSS licenses specifically disallows use of DRM technologies to undermine those freedoms.[151]

Hence, over time software developers, to the extent they adopted open source software solutions, frequently moved away from encryption.[152] Of course, some software vendors haven't abandoned using encryption on their technologies.[153] But the widespread adoption and dominance of FOSS in the software industry means that encryption plays less of a role in the software world than it otherwise would. And that reality may also help explain why section 1201 litigation is so limited.

In conclusion, it appears that the lack of section 1201 litigation owes to a number of interconnected factors. These include a smaller population of violators, section 1201's clear prohibitions and exemption process, and changing norms within the relevant industries and impacted consumer bases. It is worth stressing that these factors are likely to play out differently from one industry to the next. Be that as it may, the end result appears similar across all industries: very little section 1201 litigation.

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147. *Id.* at 957.

148. *See infra* Figure 4.

149. Dave Neary, *6 Pivotal Moments in Open Source History*, OPENSOURCE.COM (Feb. 1, 2018), https://opensource.com/article/18/2/pivotal-moments-history-open-source [https://perma.cc/ELZ9-YLWF].

150. *Id.*

151. Clark D. Asay, *The General Public License Version 3.0: Making or Breaking the FOSS Movement?*, 14 MICH. TELECOMM. & TECH. L. REV. 265 (2008).

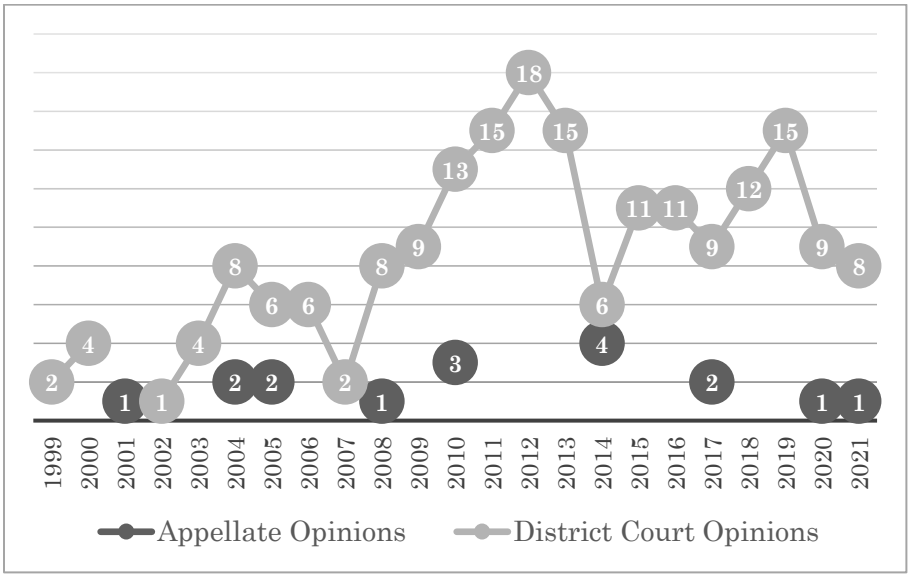
152. Adrian Kingsley-Hughes, *Can Linux on the Desktop and DRM Ever Coexist?*, ZDNET (May 31, 2011, 1:50 AM), https://www.zdnet.com/article/can-linux-on-the-desktop-and-drm-ever-coexist/ [https://perma.cc/D2CM-EUZS] (suggesting that Linux developers are unlikely to allow DRM to be used in conjunction with Linux distributions because of strong norms against DRM).

153. This is true even within the FOSS community. *Id.*

*2. Distribution Over Time*

Another point of interest is the extent to which section 1201 litigation has changed over time. Figure 3 below provides a visual depiction of section 1201 litigation between 1998 and early 2022.

**Figure 3: Distribution of Opinions Over Time**




Unsurprisingly, appellate opinions over time have been relatively flat, with many years since the DMCA's enactment including no appellate decisions at all. District court opinions appear to have been slightly more volatile, with a rise starting around 2009 and peaking in 2012. Since then, the district court opinion numbers have come down some, though they remain at higher levels than early in the DMCA's lifetime.

However, the seeming paucity of section 1201 district court opinions in the early years likely owes to the fact that courts were not required to post their opinions online until 2005 under the E-Government Act.[154] We can see subsequent to 2005 first a dip and then a steady rise in district court opinions available through Westlaw, which almost certainly owes to Westlaw having greater access to such opinions because of the E-Government Act.[155] The likelihood is that district court opinions have been mostly stagnant over time, though it is impossible to say without access to opinions prior to the E-Government Act. Most section 1201 appellate decisions are

154. U.S. GOV'T ACCOUNTABILITY OFF., GAO-05-12, ELECTRONIC GOVERNMENT: FEDERAL AGENCIES HAVE MADE PROGRESS IMPLEMENTING THE E-GOVERNMENT ACT OF 2002, at 31 (2004), https://www.gao.gov/assets/gao-05-12.pdf [https://perma.cc/6FBE-473J].

155. *Id.*

reported, meaning that Westlaw would have had access to them from the DMCA's beginning, regardless of whether they were otherwise posted online.[156]

This seeming lack of significant spikes or dips in section 1201 litigation is interesting in that external factors such as technological developments, including streaming, have not seemed to affect the number of section 1201 opinions.[157] Of course, without employing more sophisticated statistical methods to better isolate trends and potential causal factors, it is difficult to say. But on its face, the stagnant nature of section 1201 litigation is telling—technological and industry shifts do not seem to have changed the amount of section 1201 litigation over time.

Interestingly, none of the leading appellate decisions seem to have resulted in a significant change in the amount of section 1201 litigation, either. For instance, as discussed above, several appellate decisions have pushed back against other courts' interpretations and held that a section 1201 violation is independent of copyright infringement.[158] Some have worried that such an interpretation would open the litigation floodgates because without that nexus requirement, section 1201 claims would be frequent and without (copyright-related) merit.[159] Yet the relative lack of section 1201 litigation over time suggests, at least on its face, that such fears never materialized.

Of course, counteracting any such effect may be those decisions requiring a nexus to copyright infringement or highlighting any number of other unresolved section 1201 questions. Furthermore, the factors discussed above also appear to have tamped down on section 1201 litigation resulting in opinions. Whatever the case may be, section 1201 litigation resulting in opinions appears to have been rather sluggish over the DMCA's lifespan.

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156. Of our seventeen appellate decisions, for instance, fourteen are published/reported.

157. Brooks Barnes, *The Streaming Era Has Finally Arrived. Everything is About to Change.*, N.Y. TIMES, https://www.nytimes.com/2019/11/18/business/media/streaming-hollywood-revolution.html [https://perma.cc/2BD6-BXUY] (Nov. 19, 2019) (discussing the rise of streaming technologies).

158. *See, e.g.*, MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010) (discussing different approaches and rejecting a nexus requirement).

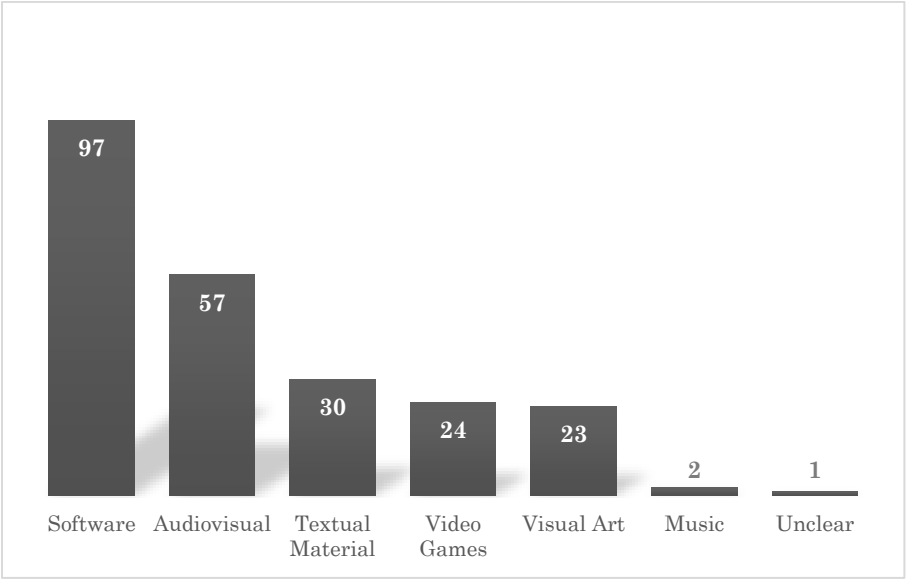
159. Mike Masnick, *Copyright Office Admits That DMCA Is More About Giving Hollywood 'Control' than Stopping Infringement*, TECHDIRT (June 27, 2017, 10:41 AM), https://www.techdirt.com/2017/06/27/copyright-office-admits-that-dmca-is-more-about-giving-hollywood-control-than-stopping-infringement/ [https://perma.cc/WD6S-GURH] (pointing to this interpretation as allowing for non-meritorious claims unrelated to copyright infringement).

*3. Subject Matter*

In the runup to the DMCA's passage, lobbyists and legislators alike expressed grave concerns about digital piracy.[160] Without additional protections, they argued, pirates would overwhelm copyright owners' ability to stop the onslaught of digital piracy.[161] These pirates would steal digitized movies, music, visual art, software, and literature with impunity.[162] As discussed above, Congress responded by providing copyright owners with new protections under section 1201.[163]

Which types of subject matter have most frequently appeared in section 1201 opinions? By far and away, the answer is software. Of the 209 opinions, nearly half, or ninety-seven of the opinions, involve plaintiffs asserting rights in their copyrighted software products. In second place come audiovisual works, appearing in fifty-seven of the opinions. As noted above, we could only find two opinions where the section 1201 claims concerned music, constituting the least popular subject of section 1201 litigation. Figure 4 below provides a visual depiction of the most and least popular subject matter types in section 1201 disputes.

**Figure 4: Most and Least Popular Subject Matter Types**




160. Nimmer, *supra* note 2, at 681-90 (discussing these concerns).

161. *Id.* at 683-84.

162. *Id.* at 683.

163. *Id.* at 681-90.

It is somewhat curious that software disputes result in section 1201 opinions so much more frequently than any other subject matter type. Software was certainly part of the discussion leading up to the DMCA's enactment—indeed, significant parts of section 1201, and the DMCA more broadly, deal specifically with software issues.[164] These include excusing from copyright infringement claims when computers automatically make copies of software as well as several exemptions to section 1201's prohibitions for enabling interoperability and reverse engineering.[165]

Yet much of the discussion surrounding the DMCA centered on protecting more traditional types of copyrighted works, such as music, literature, and movies.[166] And while some opinions have been issued relating to movies and literature, almost none exist for music. We discussed above reasons why that may be.[167] Furthermore, while we have separated out video games as their own category, these also might be categorized as software programs, which would further the gulf between software programs and other types of subject matter in section 1201 litigation.

That software is the most frequent subject matter of section 1201 disputes may drive home some of the more significant critiques surrounding section 1201 and the DMCA more broadly. For instance, some have worried that section 1201 extends copyright beyond its natural contours, derisively referring to section 1201 protections as a form of "paracopyright."[168] The concern, in short, is that section 1201 protections provide copyright owners with powers beyond what copyright law should give.[169] As discussed throughout, some courts have validated this fear by holding that section 1201 violations require no nexus to instances of copyright infringement.[170]

These concerns about paracopyright may be even more salient in the software context. Software, by its nature, is functional, and some courts have held that software's functional nature reduces the scope of protection available for software programs.[171] Many functional elements of software programs are thus fair game under copyright law,

164. *Id.* (discussing software piracy).

165. *See supra* notes 70-72 and accompanying text.

166. Nimmer, *supra* note 2, at 681-90.

167. *See supra* Section II.B.1.

168. *See generally* Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095 (2003).

169. *Id.*

170. MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010) (discussing different approaches and rejecting a nexus requirement).

171. *See generally* Pamela Samuelson, *Functionality and Expression in Computer Programs: Refining the Tests for Software Copyright Infringement*, 31 BERKELEY TECH. L.J. 1215 (2016) (reviewing much of the primary case law and judicial tests dealing with this issue).

whether under the fair use doctrine or some other copyright limitation.[172] The Supreme Court only recently held in a landmark decision that fair use protected Google's reuse of functional parts of Oracle's Java software program in connection with Android.[173]

Hence, to the extent that section 1201 grants copyright owners new rights divorced from traditional copyright law limitations, software copyright owners may enjoy a particular windfall under the DMCA. To be sure, copyright owners of other types of subject matter enjoy the same rights under section 1201, too. But the reduced scope of copyright protection in software may mean section 1201's premium for software copyright owners may be even more pronounced than in other contexts.

In fact, legislators recognized some of the concerns surrounding granting too broad of rights in software programs by crafting several exemptions to section 1201 that centered on software programs.[174] Subsection 1201(f), for instance, provides an exemption to circumventing access controls when doing so is necessary for achieving interoperability between software programs.[175] Subsection 1201(g) provides an exemption to section 1201 for purposes of encryption research, while subsection 1201(j) allows for circumvention without liability when security testing software programs.[176] Section 1201 itself thus recognizes the need for certain exemptions for software to section 1201's prohibitions, even if these statutory exemptions have mostly proved futile, as discussed more fully below.[177]

That so many section 1201 disputes focus on software also helps explain why the Ninth Circuit, home of many technology companies, is the leader in section 1201 opinions.[178] Meanwhile, the Second Circuit, home of many music and literature copyright owners (and traditionally a hotbed of copyright litigation as a result), is a relatively small player in section 1201 litigation.[179] The fact that literature

172. *Id.*

173. *See* Google LLC v. Oracle Am., Inc., 593 U.S. 1 (2021).

174. *See supra* notes 70-72 and accompanying text.

175. 17 U.S.C. § 1201(f)(2) (exempting certain reverse engineering activities from subsections 1201(a)(2) and (b)).

176. *Id.* § 1201(g)(4) (exempting certain research activities from section 1201(a)(2)); *id.* § 1201(j).

177. *See infra* Section II.B.6.

178. *See supra* Figure 2. California and Washington are both within the Ninth Circuit, and both are often considered technology hubs. Stateline, *Tech Hubs in California, Washington, and Texas Thrived in the Pandemic, New Data Shows*, FAST CO. (Dec. 15, 2022), https://www.fastcompany.com/90824709/tech-hubs-in-california-washington-and-texas-thrived-in-the-pandemic-new-data-shows [https://perma.cc/5PRG-3TBM] (discussing tech hubs in California and Washington thriving during the COVID-19 pandemic).

179. New York, located within the Second Circuit, is the home of many publishing companies and record labels. *See, e.g.*, *A Brief Overview of the US Music Market*, MUSIC

and music so infrequently make their way into section 1201 opinions helps explain the Second Circuit's relative absence from section 1201 disputes.

It is worth briefly considering why software cases are so frequent when compared to more traditional types of subject matter, such as movies, music, and literature.[180] One reason might be that software owners often rely on section 1201 to pursue objectives beyond simply thwarting copyright infringement. For instance, software copyright owners have at times attempted to use technological measures on their software and hardware products to prevent third parties from competing with them. In one important section 1201 decision, the manufacturer of garage door openers asserted section 1201 violations when a third party circumvented the garage door openers' technological protections to make their own products compatible with the manufacturer's.[181] In another, the producer of printers and printer cartridges asserted section 1201 against a third party that circumvented its technological protections to make its own printer cartridges work in connection with the first party's printers.[182] In both cases, the copyright owner asserted rights in their software under section 1201 to try to thwart market competition, not to protect their copyrighted software, a fact that at least in some cases has undermined the software copyright holder's claims.[183]

This type of section 1201 use does not show up in other contexts because other types of copyrighted works typically are not as utilitarian as software. Because software is used in so many modern products and services, circumvention of its technological protections for a variety of reasons is much more likely than with other subject matters. With other subject matters, usually circumvention pertains to the copyrighted work itself, rather than some other end, such as building compatible products. In short, section 1201 claims in the software context may be more frequent in part because software is in

EXP. DEN. (Mar. 1, 2016), https://mxd.dk/mxd-viden/a-brief-overview-of-the-us-music-market/ [https://perma.cc/V45F-YKD9].

180. Note that audiovisual works, while fewer in number than software, still about double the number of literature and videogame cases. *See supra* Figure 4. However, a significant number of these audiovisual cases, or about half, are from one litigant, Dish Network. This is not to say that cases dealing with audiovisual works are less significant because of Dish Network's dominance in this space. But it is to note that Dish Network's section 1201 litigiousness may skew the audiovisual works numbers some. Without Dish Network in the picture, the number of audiovisual works cases looks about the same as other categories such as literature, video games, and visual art.

181. Chamberlain Grp., Inc. v. Skylink Techs., Inc., 381 F.3d 1178, 1183 (Fed. Cir. 2004).

182. *See* Lexmark Int'l, Inc. v. Static Control Components, Inc., 387 F.3d 522, 528-29 (6th Cir. 2004).

183. *Chamberlain Grp.*, 381 F.3d 1178; *Lexmark Int'l*, 387 F.3d 522.

everything in the modern world,[184] and third parties frequently wish to circumvent protections pertaining to the software to pursue a variety of objectives that are not relevant in other contexts.

To illustrate: if someone wishes to circumvent protections relating to an audiovisual work, their goal in doing so almost certainly pertains to the copyrighted audiovisual work itself—they wish to watch it, copy it, modify it in some way, or make it available to others. It seems unlikely, in most cases, that someone would wish to circumvent protections to an audiovisual work to achieve some other end. With software, however, that is not the case. Someone may wish to circumvent protections on a software product in order to build compatible products, as the above cases illustrate. Or someone may wish to circumvent software protections to better understand how the software operates.[185]

Hence, one reason section 1201 software cases occur so much more frequently than other types of subject matter might be because software is in everything, and circumventing its protections can serve many more purposes than just exercising copyright rights in the underlying work. This reality underscores a primary concern, discussed previously, with section 1201 more generally: that it can lend itself to causes of action that have nothing to do with protecting typical copyright interests.

### *4. Most Frequent Procedural Postures*

Another item of interest among scholars and practitioners is the section 1201 opinions' predominant procedural postures.[186] Other recent empirical copyright work has noted an upward trend over time of courts resolving copyright disputes early on in a case's lifecycle, including by way of motions to dismiss and motions for summary judgment.[187] Do these trends hold true with respect to section 1201 litigation? And are other trends apparent in the section 1201 context?

As Figure 5 below shows, motions to dismiss are the most frequent procedural postures in our database. Unsurprisingly, opinions accompanying trials, whether bench or by jury, almost never occur. Motions for summary judgment, another early-stage procedure, also oc-

184. Jeetu Patel, *Software Is Still Eating the World*, TECHCRUNCH (June 7, 2016, 3:00 PM), https://techcrunch.com/2016/06/07/software-is-eating-the-world-5-years-later/ [https://perma.cc/9BQC-93DF].

185. Congruent Sols., *Value of Reverse Engineering*, CONGRUENT SOLS. (Aug. 2, 2017), https://www.congruentsolutions.com/blogposts/value-of-reverse-engineering/ [https://perma.cc/Z67R-G2WH] (spelling out some of the value of reverse engineering).

186. *See generally* Daryl Lim, *Saving Substantial Similarity*, 73 FLA. L. REV. 591 (2021) (discussing the rise of early stage motions in copyright litigation).

187. *See id.* at 628-29; Asay, *supra* note 98, at 65 (noting a rise in motions to dismiss over the years in copyright litigation).

cur relatively frequently in the section 1201 context. One possible surprise is the frequency with which plaintiffs bring default judgment motions. As we will explore in a later subsection, relatively high statutory damages against individuals often accompany these default judgments.

**Figure 5: Popular Procedural Postures**

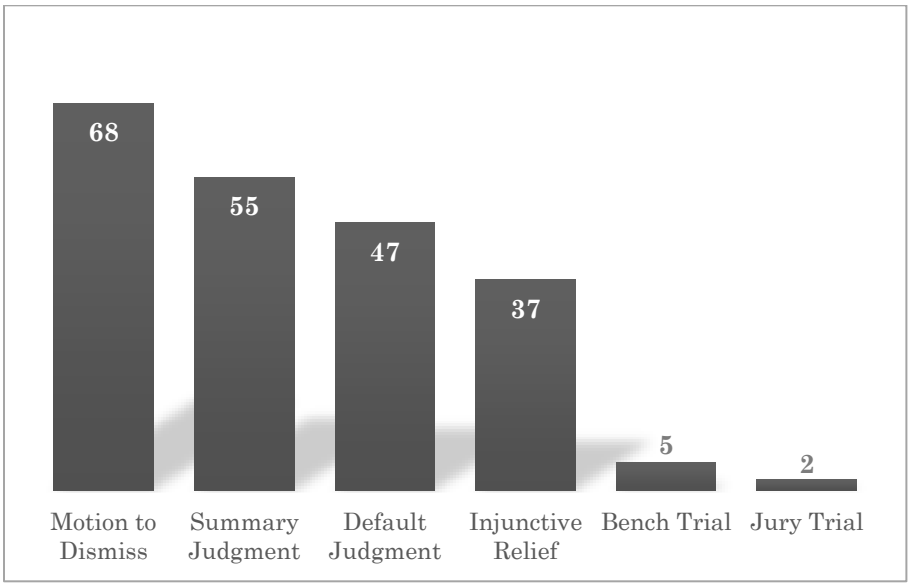
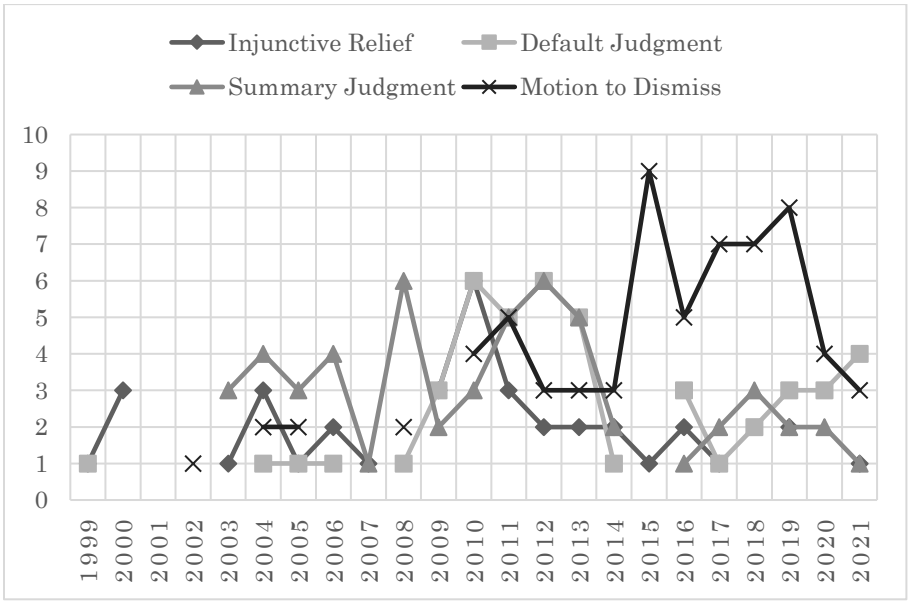



Figure 6 below shows the four most common procedural postures as charted over time.

**Figure 6: Procedural Postures Over Time**



Perhaps the most interesting thing about Figure 6 is its relative chaos. That chaos is in part a product of the paucity of section 1201 opinions—indeed, the gaps between some of the lines result from there being no cases with a particular procedural posture occurring in those years.

A few things are notable, though. One prominent trend is the increase in motions to dismiss in section 1201 litigation. That increase can clearly be seen starting around 2010. And it is almost certainly attributable to the U.S. Supreme Court's decisions in *Ashcroft v. Iqbal* and *Bell Atlantic Corp. v. Twombly*.[188] In *Twombly*, the Supreme Court held that complaints must go beyond simply reciting the elements of a cause of action.[189] Instead, they must also include enough factual material that, if taken as true, would support the legal theory underlying the complaint.[190] In *Iqbal*, the Supreme Court elaborated on its decision in *Twombly*, holding that whether a complaint is plausible "turns not on whether the alleged conduct is unlikely, but on whether the complaint contains sufficient nonconclusory factual allegations to support a reasonable inference that the [complained of] conduct occurred."[191]

These two decisions effectively raised pleadings standards and thus made motions challenging the pleadings' sufficiency, including motions to dismiss, much more likely. For defendants, motions to dismiss are particularly attractive because, if successful, they avoid the high costs of discovery that come in later stages of litigation. The Supreme Court's decisions on this front thus seem to have increased defendants' proclivity of challenging plaintiffs' claims through motions to dismiss.

Something else to reiterate is that access to unreported decisions increased subsequent to 2005, when the E-Government Act required courts to post all of their opinions, whether published or not, online.[192] Prior to the Act, most available opinions were those that courts had designated for publication in a federal reporter.[193] Hence, Figure 6 above reflects some of this—what might seem like an increase in opinions under various procedural postures is almost certainly due to an increase in access to unreported decisions. However, note that access to unreported decisions did not lead to motion to

188. Ashcroft v. Iqbal, 556 U.S. 662 (2009); Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007).

189. Ashcroft v. Iqbal*: The New Federal Pleading Standard*, JONES DAY, https://www.jonesday.com/en/insights/2009/06/iashcroft-v-iqbali-the-new-federal-pleading-standard [https://perma.cc/MFZ8-243U] (last visited Apr. 10, 2024).

190. *Id.*

191. *Id.*

192. Hoffman et al., *supra* note 88 (providing an overview); *see supra* Section II.B.2.

193. Hoffman et al., *supra* note 88; *see supra* Section II.B.2.

dismiss opinions immediately increasing. Instead, that increase largely occurred starting in 2010, suggesting that the Supreme Court's *Twombly*/*Iqbal* is the better explanation for much of that rise.

Motions for summary judgment seem to have fallen some over time. That reduction may be the result of more parties pursuing motions to dismiss, though it is impossible to say if one procedural posture is replacing the other. Other than that, looking at procedural postures over time does not seem to tell us much. The bigger takeaway is that with so few decisions over that time, trends are difficult to pinpoint.

A final item to note is the relative frequency of default judgments in section 1201 litigation. A little over 22% of the opinions involved motions for default judgment, the vast majority of which were granted. This percentage seems high, though we lack robust data for comparison purposes to confidently say that it is. But we do have some data on this score. For instance, in studies involving other types of copyright litigation, motions for default judgments are a relative rarity, occurring in only about 5% of opinions.[194] Why might motions for default judgment occur more frequently in section 1201 litigation than in others?

One possibility is that copyright owners sue the parties most likely to default—relatively unsophisticated individual infringers—more frequently in the section 1201 context than in others. Why would that be? There are several possible reasons. First, in the copyright infringement context, going after individual infringers has often proved to be a public relations debacle. The music industry tried this tactic early in the digital age, but it quickly pivoted away from that approach as the public relations implications of its suits became clear.[195] Since then, the industry has largely steered clear of litigation against individual infringers, even if such suits still sometimes occur.[196]

The section 1201 context is different. Everyone listens to music, for instance, and that reality may increase the chances of the public sympathizing with music copyright infringers (even when the lawsuit is otherwise justifiable under copyright law). But relatively speaking, as discussed earlier, fewer people regularly circumvent DRM, let alone distribute tools for doing so.[197] The possible public relations consequences of suing individuals for violating section 1201 are thus much more limited. Indeed, the general public may not be sympa-

194. Asay, *supra* note 98, at 64 fig.6.

195. *See* David Silverman, *Why the Recording Industry Really Stopped Suing Its Customers*, HARV. BUS. REV. (Dec. 22, 2008), https://hbr.org/2008/12/why-the-riaa-stopped-suing [https://perma.cc/2623-BNWR] (discussing the public relations disaster that the music industry's suits against individuals effected).

196. *Id.*

197. *See supra* Section II.B.1.

thetic to those that "hack" digital content at all, as that term often carries with it negative connotations.[198] In short, suing individuals for listening to music or reading books is much more likely to inspire the public's ire than suing individuals for hacking digital controls (or distributing tools for doing so).

Of course, some section 1201 suits do inspire the public's wrath. When the music industry (briefly) went after security researchers, for instance, it faced significant backlash.[199] And security researchers are currently pursuing a suit to have section 1201 ruled unconstitutional, a position with which at least some subset of society sympathizes.[200] But even if important, these cases are less likely to inspire widespread societal sympathy simply because they concern relatively niche activities.

Second, copyright law has a number of prominent defenses to claims of infringement, including fair use and the idea-expression dichotomy.[201] These well-established defenses may dissuade some copyright owners from pursuing claims in many cases, even against unsophisticated individuals, for fear that their efforts could prove futile.

The section 1201 context lacks similar protections for defendants. Section 1201 does include several statutory exemptions, as discussed above.[202] But they are so narrowly defined as to be mostly irrelevant, as we describe more below. And while fair use is mentioned in the statute, some courts have interpreted section 1201 as to make it inapplicable to section 1201 claims.[203] Hence, section 1201's lack of clear defenses also seems to embolden at least some parties to pursue claims against relatively unsophisticated individuals, thereby increasing the chances of default.

Finally, the damages available under copyright law against unsophisticated individuals may simply be inadequate to motivate many copyright owners to bring suits. Statutory damages are available under copyright law, meaning that copyright owners can obtain between $750 and $30,000 for infringement of a work (or up to $150,000 for willful infringement).[204] But it seems likely that courts

198. *Are All Hackers Bad?*, MCAFEE (Sept. 2, 2014), https://www.mcafee.com/blogs/privacy-identity-protection/are-all-hackers-bad/ [https://perma.cc/YLV5-EWP6] (attempting to push back some against the narrative that hackers are bad).

199. *See supra* notes 140-44 and accompanying text.

200. *See* Press Release, Elec. Frontier Found., *supra* note 10.

201. Hiro Senda, Note, *Hope or Nope—Is "Obama Hope" Protected by Idea/Expression Dichotomy, Fair Use Doctrine, & First Amendment?*, 10 CHI.-KENT J. INTELL. PROP. 65 (2010) (reviewing these defenses).

202. *See supra* notes 70-72 and accompanying text.

203. MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010).

204. 17 U.S.C. § 504(c).

would choose the lower end of the spectrum where the infringer is an unsophisticated individual who perhaps unknowingly engaged in copyright infringement. Without more in the way of potential damages, the lawsuit becomes irrational to pursue, meaning that copyright owners are unlikely, in many cases, to pursue claims against such individuals. And that unlikelihood means fewer suits against the types of parties most likely to default.

Contrast that situation with the section 1201 context. Statutory damages are also available for violations of section 1201, ranging from $200 to $2,500 for *each* violation.[205] While the range is lower than for copyright infringement, copyright owners can stack damages awards in the DMCA context more readily than in plain-old-vanilla copyright infringement, where the award pertains to *each infringed work*.[206] Unsophisticated individuals in the copyright context are, in many cases, unlikely to be in the business of infringing many works, meaning likely statutory damages awards remain low. In the section 1201 context, in contrast, individuals either circumventing technological controls or distributing such tools are more likely to commit multiple violations. In fact, in our review of the default judgment opinions, we discovered very significant awards calculated in this manner, sometimes reaching into the tens of millions of dollars.[207]

That reality also underlines an important point related to our previous discussion: the parties most likely to default, relatively unsophisticated individuals generally, may be more likely to get sued in the section 1201 context than in the copyright context because they are, in fact, sophisticated—at least with respect to technological controls. Otherwise, they couldn't circumvent them or help others do so. Copyright infringement, on the other hand, is relatively easy to commit, with very little technical prowess necessary. This measure of sophistication in the section 1201 context also means that judges may be less sympathetic to defaulters in calculating damages awards—as we discussed before, hackers are often characterized in a negative light, including within the judiciary.[208] Hence, it seems plausible that copyright owners are more likely to go after relatively unsophisticat-

205. *Id.* § 1203(c)(3) ("At any time before final judgment is entered, a complaining party may elect to recover an award of statutory damages for each violation . . . in the sum of not less than $200 or more than $2,500 per act of circumvention, device, product, component, offer, or performance of service, as the court considers just.").

206. *Id.* § 504(c) ("[T]he copyright owner may elect, at any time before final judgment is rendered, to recover, instead of actual damages and profits, an award of statutory damages for all infringements involved in the action, with respect to any one work . . . in a sum of not less than $750 or more than $30,000 as the court considers just.").

207. *See infra* Section II.B.9.

208. *See, e.g.*, Whalen v. Michael Stores Inc., 153 F. Supp. 3d 577, 578 (E.D.N.Y. 2015) (associating hackers with malicious software).

ed individual hackers than copyright infringers, for all the reasons discussed above. And that reality may contribute to the higher percentage of defaults in the section 1201 context than in others.

*5. Identities of the Litigants*

We also tracked the identities of the parties involved in each opinion. We categorized both plaintiffs and defendants as either for-profit entities, non-profit entities, individuals, or a combination thereof. Combinations resulted in some cases because parties qualified for multiple categories simultaneously. For instance, in many cases defendants counted as both individuals and for-profit entities because plaintiffs sued parties in their individual capacities as well as an associated for-profit entity (which the sued individual often solely owned). Or other times, there were multiple defendants (or plaintiffs), with some of those defendants (or plaintiffs) counting as individuals, some as for-profit entities, and some as non-profit groups.

We made these categorizations primarily based on information we found in the opinions. Typically, identifying individuals was straightforward; more often than not, an individual's name simply showed up as either a named defendant or plaintiff. For-profit entities were typically simple to recognize, too—a company name, followed by an "LLC" or the like, was often the giveaway. In a few cases, where we weren't certain as to the litigant's status, we conducted additional research outside of Westlaw to verify the status of a particular plaintiff or defendant.

Unsurprisingly, the vast majority of plaintiffs were for-profit entities, with 89% of our opinions including a for-profit entity as a plaintiff. We say this result is unsurprising because the high costs of litigation to some extent dictate this result: well-resourced parties are the most typical protagonists in our litigation system.[209] Only a little over 2% of our opinions included non-profit entities as plaintiffs, while a little over 11% of our opinions included individual plaintiffs.

On the defendant side of things, for-profit entities were also frequent litigants, with about 76% of our opinions including some type of for-profit entity as a defendant. Importantly, over 57% of our opinions explicitly included an individual as a defendant, manifesting a significant discrepancy between who sues and who gets sued in the section 1201 context. Indeed, we think this percentage of individual defendants is likely even understated some because, as mentioned

209. *See* Scott Alan Burroughs, *Copyright Litigation: Now More Expensive and with More Delay Than Ever Before!*, ABOVE L. (Mar. 13, 2019, 11:14 AM), https://abovethelaw.com/2019/03/copyright-litigation-now-more-expensive-and-with-more-delay-than-ever-before/ [https://perma.cc/FAX7-NNEC] (detailing the high costs of copyright litigation).

above, many of the for-profit defendants are primarily individuals who act as the sole owner of a for-profit entity. For instance, while many of our opinions name a for-profit entity as the defendant (without otherwise naming an individual defendant), some of those same opinions then primarily discuss the actions of a single individual when assessing the section 1201 claim.[210] Furthermore, over 43% of the opinions where a for-profit entity is named also name an individual defendant. We think these realities mean that individual defendants are actually more frequent in section 1201 litigation than the already high percentages suggest.

This high prevalence of individuals as defendants seems abnormal. We don't have robust comparisons to other contexts, unfortunately, so it's possible that the high rate of suits against individuals is more typical than we think. But as discussed previously, defaults seem more likely against individuals than corporations, and other types of copyright litigation see far fewer default judgments than section 1201 litigation.[211] We thus have some reason to believe that our intuition here is correct.

Assuming that individuals do get sued more in the section 1201 context than in other areas of copyright litigation, why would that be? We believe the possible reasons relate to our previous discussion regarding why default judgments are relatively more common in section 1201 litigation than in other types of litigation: the ease of stacking damages against relatively unsympathetic "hackers," all without significant public relations problems and little likely resistance, seems to motivate at least some parties to bring section 1201 claims against individual defendants (and/or their shell corporations).[212]

On its face, there is nothing inherently wrong with this outcome. But it is worth scrutinizing given that lawsuits (and default judgments) against individuals may not be the norm in other copyright—or other—contexts. We have explored why such suits against individuals might be more frequent in this context than others.[213] Here we briefly consider whether that is normatively desirable.

On the one hand, some might argue that this outcome is justified—even socially beneficial—in light of the DMCA's purposes, which include giving copyright owners more tools in the digital age to tamp down on digital copyright infringement.[214] In providing these tools, for instance, copyright owners may feel greater security in their

210. *See, e.g.*, Microsoft Corp. v. Pronet Cyber Techs., Inc., No. 1:08CV434, 2008 WL 11517434, at *1 (E.D. Va. 2008) (listing the defendant as a for-profit corporation but then discussing an individual as the sole owner of that corporation).

211. *See supra* Sections II.B.1, B.4.

212. *See supra* Section II.B.4.

213. *See supra* Sections II.B.1, B.4.

214. *See supra* notes 40-43 and accompanying text.

creative efforts and thereby have greater incentives to keep creating for society's benefit.[215] Section 1201 may thus be serving its purposes by enabling copyright owners to eliminate digital pirates and their enablers more effectively, all in a way that, overall, lubricates the creative ecosystem. If renegade, individual hackers happen to be the ones committing many of the offenses, so be it.

It remains concerning, however, when individuals, particularly in isolation, are pitted against well-resourced entities in the litigation process. It may be true that all those defaulting individuals are defaulting precisely because they are in the wrong and they know it. And it may be true that the extra tools that section 1201 provides copyright owners against offenders, including individuals, gives those owners additional incentives to create socially beneficial things. But it could also be the case that such a high percentage of individual defendants default primarily because the court system is intimidating for the uninitiated, to say nothing of the high costs.[216] Furthermore, even those that fight the claims may often have to do so with little or no significant legal backing. And while pro bono attorneys may sometimes help individuals to push back against claims against them, that kind of assistance is often in short supply.[217]

Hence, while the DMCA may simply be serving its purpose, it may also be the case that many individual defendants, for a variety of reasons, are not seeing their day in court. And given section 1201's relative ambiguity on certain key questions, particularly given the lack of section 1201 caselaw, in some cases those deficits may be less about section 1201 proving effective and more about a litigation system that poorly serves those without the resources to navigate it.

### *6. Anatomy of a Section 1201 Claim*

Another point of interest concerns which section 1201 subsections plaintiffs rely on the most frequently. As discussed previously, section 1201 includes subsections (a)-(k).[218] Subsections 1201(a)-(b) cover the prohibited activities; subsection 1201(c) clarifies that section 1201 neither enlarges nor diminishes longstanding defenses to copy-

215. Jeanne C. Fromer, *An Information Theory of Copyright Law*, 64 EMORY L. J. 71, 73 (2014) ("The dominant American theory of copyright law is utilitarian . . . .").

216. Paula Hannaford-Agor, *Measuring the Cost of Civil Litigation: Findings from a Survey of Trial Lawyers*, VOIR DIRE, Spring 2013, https://www.ncsc.org/__data/assets/pdf_file/0035/27989/measuring-cost-civil-litigation.pdf [https://perma.cc/9E3X-JUSP] (describing some of the high costs and complexities of navigating a civil litigation).

217. Cate Galbally, *A Plea to Lawyers: Come Back to Pro Bono*, SUPPORT CTR. FOR CHILD ADVOCS. (Apr. 18, 2022), https://sccalaw.org/a-plea-to-lawyers-come-back-to-pro-bono/ [https://perma.cc/XD7S-Z7AB] (discussing how the COVID-19 pandemic resulted in less pro bono assistance nationwide).

218. *See supra* Part I.

right infringement—including fair use—nor does it affect rights under the First Amendment; and subsections 1201(d)-(k) include a number of exemptions to the prohibitions specified under subsections (a) and (b).[219]

Given that subsections 1201(a)-(b) identify the prohibited activities, one would expect those provisions to show up the most frequently in section 1201 litigation. Our data confirm this intuition: subsection 1201(a)(1), which prohibits circumventing access controls, was litigated in 57% of the opinions, making it the most commonly litigated section 1201 subsection. This is so despite subsection 1201(a)(1)'s effective date being two years after that of the other prohibitions.[220] Subsection 1201(a)(2), which prohibits trafficking in tools enabling circumvention of access controls, was litigated in 55% of the opinions, coming in a close second. Interestingly, subsection 1201(b), which prohibits trafficking in tools that enable circumventing copy controls, was only litigated in about 22% of our opinions, making it a distant third in terms of the most popular section 1201 subsections. Note that we only coded a provision as being litigated if the court actually attempted to apply the provision or at least interpret it; we also recorded when a court simply mentioned a subsection, but we did not include those totals in the percentages above.

These relatively high percentages regarding subsections 1201(a)-(b) stand in stark contrast to the limitations and exemptions specified in section 1201, which, our numbers indicate, almost never make their way into opinions. Courts only interpreted subsection 1201(c), which exempts fair use and other First Amendment rights from section 1201's ambit, in eight of our opinions (or about 4%). The number of opinions that actually discuss fair use, often without mentioning subsection 1201(c), is actually higher, though, standing at about 11% of the opinions. The number of opinions that address a First Amendment challenge is also somewhat higher, standing at a little over 5% of the opinions. Yet even these higher percentages are relatively low, particularly in light of how often commentators debate fair use and the First Amendment in the DMCA context.[221]

Other exemptions to subsections 1201(a)-(b)'s prohibitions are essentially statutory deadweight, as they almost never make their way into opinions in section 1201 litigation. Only about 7% of our opinions analyze any of the exemptions listed in subsections 1201(d)-(k); that is a cumulative percentage, meaning that courts interpret most of the individual exemptions even less frequently. Subsection 1201(f), which

219. *See supra* Part I.

220. *See supra* note 100 and accompanying text.

221. For some early treatments, see Dan L. Burk & Julie E. Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J.L. & TECH. 41 (2001); Paul Goldstein, *Fair Use in a Changing World*, 50 J. COPYRIGHT SOC'Y U.S.A. 133 (2003).

exempts certain reverse engineering activities from subsections 1201(a)-(b)'s prohibitions, is the most frequently litigated exemption, matching the cumulative percentage at around 7%. From there, the frequency with which courts interpret the statutory exemptions plummets: courts interpret subsections 1201(g) and (j), which exempt certain activities relating to encryption research and security testing, respectively, in a little under 2% of the opinions. Subsection 1201(d), an exemption for nonprofit libraries, archives, and educational institutions, made its debut in a 2004 opinion. But so far, it's been a one-hit wonder. Several of the other exemptions have never found their way into an available opinion.

We surmise that these exemptions are almost never litigated in significant part because they are drafted so narrowly. Indeed, several are so specific as to be essentially useless. For instance, subsection 1201(j) exempts parties from liability for circumventing access controls for the purposes of security testing. "Security testing" is defined to mean accessing a computer or computer system or network "solely for the purpose of good faith testing, investigating, or correcting, a security flaw or vulnerability, with the authorization of the owner or operator" of the technology.[222] Yet much security testing—perhaps even ideally—occurs without a system owner's authorization or approval.[223] Indeed, it seems strange that this exemption even exists—why provide one when authorization is a prerequisite? That authorization requirement essentially means the exemption is none at all, since obtaining authorization means a statutory exemption is entirely superfluous. The lack of litigation around this exemption thus comes as no surprise.

The subsection's requirement that the testing be in "good faith" is also limiting, in a way that makes litigation disputes around the subsection unlikely. The term is not defined, though there are several clues in the subsection about what Congress likely meant. For instance, the requirement that testers obtain permission first suggests that it would not be in good faith to proceed without it. Yet as mentioned above, arguably much good faith security testing occurs without owners' approval, including by so-called "gray-hat" hackers.[224] Later in the subsection, subsection 1201(j) indicates that courts should take into account whether the party used the information derived from their testing solely for the owner's benefit, as well as

222. 17 U.S.C. § 1201(j)(1).

223. *Black Hat, White Hat, and Gray Hat Hackers—Definition and Explanation*, KASPERSKY, https://www.kaspersky.com/resource-center/definitions/hacker-hat-types [https://perma.cc/XH3V-LLJT] (last visited Apr. 10, 2024) (providing a definition of "gray hackers" and discussing the value they may provide).

224. *Id.*

whether the party shared the information with the system's owner.[225] This all seems to suggest that the security testing exemption is limited to a particular type of scenario—a highly controlled environment approved by the technology owner. As our data confirm, that type of situation is unlikely to trigger section 1201 litigation.[226] Other exemptions in section 1201 are similar in their narrow scope.

Of course, much of what appears in opinions is the result of whatever the parties brief—if a party does not argue one of the subsections in the briefing, for instance, then a court is unlikely to address it in a written opinion. But again, we think that parties probably do not brief many of these subsections with much frequency precisely because their narrowness means they are simply out of the question (or extremely unlikely to succeed).

The more meaningful exemptions to section 1201's prohibitions come about as part of the Library of Congress's triennial rulemaking process, whereby the Register of Copyrights makes recommendations of specific activities to exempt from subsection 1201(a)(1)'s proscriptions.[227] But that process, as others have detailed, has limitations.[228] For starters, the process only allows for exemptions to subsection 1201(a)(1), circumvention of access controls.[229] Hence, beyond the narrow statutory exemptions, there is no process for obtaining exemptions to the prohibitions on trafficking in circumvention technologies. Furthermore, the Librarian of Congress has complete discretion in either granting or denying any proposed exemptions.[230] Finally, the exemptions are not permanent—even once granted, the Librarian must renew them or they expire.[231]

As we discuss below, we believe section 1201's prohibitions should be more explicitly subject to traditional copyright doctrines, including fair use. As it currently stands, section 1201 is too untethered from traditional copyright law and policy despite its purported purpose of securing copyright owners' rights in the digital age.

Indeed, we believe the relative lack of litigation surrounding subsection 1201(b) provides some evidence in support of this claim. Recall that subsection 1201(b), which prohibits trafficking in technologies allowing for circumvention of copy controls, is litigated relatively infrequently compared to the provisions dealing with access controls.

225. 17 U.S.C. § 1201(j).

226. There are other limitations to the exemption as well, including language that indicates the exemption does not apply to the extent the activity is proscribed by the Computer Fraud and Abuse Act, a notoriously broad statute.

227. *See supra* notes 23-26 and accompanying text.

228. *See supra* notes 75-76 and accompanying text.

229. *See supra* notes 77-79 and accompanying text.

230. *See supra* notes 75-76 and accompanying text.

231. *See supra* notes 75-79 and accompanying text.

One reason for this result might be that subsection 1201(b) prohibits trafficking in copy controls—or technology that prevents another from exercising a copyright right—while subsections 1201(a)(1)-(2) prohibit activities relating to access controls—or technology that prevents another from accessing a copyrighted work. The latter type of control has no explicit connection to copyright infringement, i.e., someone can circumvent an access control without infringing a copyright right. Copy controls, on the other hand, are seemingly inextricably connected to copyright infringement—if one circumvents a copy control, that party's purpose is more likely to be engaging in copyright infringement unless they have a fair use defense or otherwise under copyright law.

Hence, one hypothesis is that litigants pursue subsection 1201(a) claims more frequently than subsection 1201(b) claims in part because there is less of a risk that a court will require copyright infringement as a prerequisite to a violation of subsection 1201(a). To be sure, some courts, particularly in the Ninth Circuit, have stated that copyright infringement is not a prerequisite for violation of any of the section 1201 subsections.[232] Yet other courts have argued that copyright infringement is such a prerequisite.[233] Given that subsection 1201(b) prohibits trafficking in technologies enabling circumvention of copy controls, it seems likely that courts would be more sympathetic to that kind of argument in the subsection 1201(b) context than in the subsection 1201(a) one. Thus, it may be that plaintiffs prefer the statutory route least tethered to traditional copyright law. And we believe that result provides some evidence in support of the contention that section 1201 may have lost its way.

### *7. Section 1201 Authorities*

In other copyright contexts, courts rely on opinions from the Ninth Circuit and Second Circuit the most frequently in interpreting copyright law.[234] In the DMCA context, we see some similarities. Ninth Circuit opinions are the most cited authority overall, with cases from that circuit appearing in over 56% of our opinions. Of course, that high percentage is inflated some because of the high number of Ninth Circuit opinions in the dataset. But even when excluding opinions from the Ninth Circuit, other courts cite Ninth Circuit authorities in

232. MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010) (rejecting a nexus to copyright infringement requirement).

233. Chamberlain Grp., Inc. v. Skylink Techs., Inc., 381 F.3d 1178 (Fed. Cir. 2004) (requiring a section 1201 violation to have a nexus to copyright infringement).

234. Asay, *supra* note 98, at 57 (finding that the Ninth and Second Circuits are the most heavily cited circuits in the substantial similarity context); Asay et al., *supra* note 108, at 937-38 (finding that the Ninth and Second Circuits are the most heavily cited circuits in the fair use context).

45% of the remaining opinions. Table 1 below provides overall citation rates and rates when excluding self-citations for each circuit. It also specifies how frequently courts cite Supreme Court decisions, other authorities (such as treatises, law review articles, and legislative history), or no authority at all.

**Table 1: Citation Rates**

| Circuit | Overall Citation Rate | Excluding Self-Citations |
|---|---|---|
| 1st Circuit | 12.40% | 12% |
| 2d Circuit | 40% | 37% |
| 3d Circuit | 10% | 7% |
| 4th Circuit | 3.80% | 3.40% |
| 5th Circuit | 6.70% | 6.10% |
| 6th Circuit | 27% | 24% |
| 7th Circuit | 9.60% | 6.10% |
| 8th Circuit | 5.30% | 5.50% |
| 9th Circuit | 56.50% | 45% |
| 10th Circuit | 0.50% | 0.50% |
| 11th Circuit | 12% | 7.10% |
| D.C. Circuit | 9.60% | 9.10% |
| Fed. Circuit | 24% | 23% |
| Supreme Court | 14.40% | N/A |
| Other | 19.60% | N/A |
| N/A | 19.60% | N/A |

The Second Circuit is also frequently cited in our dataset's opinions, showing up in about 40% of opinions. That percentage goes down some when excluding Second Circuit opinions to about 37%. As previously discussed, the Second Circuit is not a significant venue for section 1201 litigation, at least in overall volume. But its caselaw remains a significant source of authority for courts in other circuits when interpreting section 1201.

Unlike in other copyright contexts, the Federal Circuit is a significant authority in applying section 1201.[235] Its opinions show up in 24% of opinions overall, and only drop to about 23% when excluding its own opinions, of which there are only three. We believe this rela-

235. Asay, *supra* note 98, at 97-98 (finding that the Federal Circuit is rarely cited in the substantial similarity context); Asay et al., *supra* note 108, at 938-39 (finding that the Federal Circuit is rarely cited in the fair use context).

tively high citation rate owes to the fact that the Federal Circuit has led the way in articulating the position that section 1201 violations need a nexus to copyright infringement,[236] to which other circuits frequently cite.

Perhaps somewhat surprising is the Eleventh Circuit's lack of fanfare: its opinions are only cited in about 12% of the opinions, and that percentage drops to around 7% when excluding self-citations. It boasts the second highest number of opinions in the dataset, yet courts outside of the Eleventh Circuit have not typically relied on it as an important source of section 1201 authority. We surmise this probably owes to the fact that the Eleventh Circuit has never issued an appellate decision on section 1201, and outside courts are more likely to cite appellate decisions from other circuits than district court decisions. In fact, the Sixth Circuit has issued the most section 1201 appellate decisions, and its citation rate in outside circuits—24%—is relatively high.

Some circuits see so little section 1201 action that their citation rates actually climb slightly when excluding self-citations. For instance, our dataset includes one Tenth Circuit opinion and one opinion that cites Tenth Circuit caselaw in applying section 1201. However, the two opinions do not overlap—the sole Tenth Circuit opinion did not bother citing case law from its own circuit. The only Tenth Circuit citation comes from a Seventh Circuit court. The Eighth Circuit's citation rates similarly rise slightly when excluding self-citations because the Eighth Circuit, in its seven total opinions, never cited to its own case law. Instead, other circuits found section 1201 guidance in Eighth Circuit case law in eleven instances.

In about 20% of the opinions, courts cited to some "other" source, typically a treatise, law review article, or legislative history. This relatively high percentage is not surprising given how little appellate or Supreme Court guidance exists. Yet, despite the Supreme Court having never issued a section 1201 opinion, lower courts still cited to authority from it in a little over 14% of the opinions.

Courts also relatively frequently—in about 20% of the opinions—cited to no authority at all in issuing their section 1201 opinions. A chunk of these opinions, or a little over quarter, are default judgments, where courts typically spend little time interpreting section 1201 or discussing case law. Yet in many other opinions, courts simply applied section 1201 without relying on external authorities, instead interpreting the statute on their own. Given the dearth of appellate decisions on section 1201, this result is perhaps unsurprising.

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236. *Chamberlain Grp., Inc.*, 381 F.3d 1178 (requiring a section 1201 violation to have a nexus to copyright infringement).

*8. Win Rates*

Overall, plaintiffs do well in section 1201 decisions. They earned a "win" in nearly 69% of the opinions.[237] Note that for purposes of calculating this percentage, a win includes both procedural and substantive decisions. For instance, if the plaintiff was able to defeat a defendant's motion for summary judgment, we counted that as a win for the plaintiff, even if that victory is not complete. After all, the court may have also rejected the plaintiff's summary judgment motion in the same opinion because the court deemed that a decision on the merits in the plaintiff's favor was premature—a trial would be needed instead. These types of procedural victories mean that, in some opinions, both the plaintiff and defendant may have earned a win for purposes of calculating our percentages. However, the plaintiff and defendant both earned such procedural victories in the same opinion in only six opinions in our dataset overall.

Compared to plaintiffs, defendants fare poorly in section 1201 litigation. Defendants emerged victorious in a little over 34% of our dataset's opinions. Why such a disparity between the fortunes of defendants and plaintiffs in section 1201 litigation? Mainstream theory regarding litigant win rates would not predict such a result—typically, win rates should be closer to 50-50.[238] One reason might be the high prevalence of default judgment motions in section 1201 litigation. As previously discussed, default judgment motions occur relatively frequently in the section 1201 context (in about 22.5% of the cases). We have discussed why plaintiffs may fare particularly well in such cases.[239] When default judgment motions are excluded from our calculations (which are essentially always in favor of plaintiffs, or 98% of the time), the win rates for plaintiffs and defendants come closer to what we might expect. Plaintiffs still win about 60% of the time, compared to a 43.5% win rate for defendants. Hence, excluding opinions that include motions for default judgment results in a nearly 10% swing for both plaintiffs and defendants.

Despite this swing, plaintiffs still appear to have considerable advantages vis-à-vis defendants. We suspect a significant reason for this is that many courts take the position that a section 1201 violation need not have a connection to copyright infringement. Importantly, the Ninth Circuit, whose high volume of opinions exerts a significant impact on our overall results, has adopted exactly that

237. This percentage was calculated by dividing the 143 opinions in which the court ruled in favor of the plaintiff on a motion by 208, the number of opinions in which the court issued a section 1201 ruling. There was one opinion excluded from the denominator because it was a copyright infringement case. The reason it is included in the dataset is that the defendant raised a subsection 1201(f) defense to the copyright infringement claim.

238. Priest & Klein, *supra* note 113, at 17-20.

239. *See supra* Section II.B.4.

position.[240] And when excluding Ninth Circuit opinions from overall win rates for defendants and plaintiffs, some interesting results become manifest. Outside the Ninth Circuit, the win rate for plaintiffs is 59% when including default judgment motions but falls to 49.5% when excluding them. Win rates for defendants outside the Ninth Circuit climb to 42% when including default judgment motions and rise even further to nearly 53% without them. Hence, outside of the Ninth Circuit, defendants actually fare better than plaintiffs when excluding default judgment motions. And even when including these types of opinions, there is nearly a 10% swing between the fortunes of plaintiffs and defendants in section 1201 litigation.

What do the Ninth Circuit's numbers tell us? Plaintiffs win section 1201 decisions in that Circuit in nearly 81% of our opinions. Even when excluding default judgment motions, plaintiffs' win rates remain high, at about 76% of the opinions. Conversely and unsurprisingly, defendants don't do well in section 1201 litigation within the Ninth Circuit. They only saw success in about 24% of our dataset's opinions. When excluding default judgment motions, that percentage rises some, to around 30%. But even with that increase, a defendant's chances within the Ninth Circuit are poor.

While we may not completely understand why these disparities exist, we suspect that the Ninth Circuit's strong position that section 1201 violations need no nexus to copyright infringement likely has much to do with them. Without that nexus as a requirement, section 1201 can be read very broadly to cover all sorts of activities. We think that strong position is in error, at least from a policy standpoint, as we discuss in greater detail below.

### *9. Typical Remedies*

Section 1201 includes a number of remedial options. Civil remedies include injunctive relief, impoundment and destruction of offending devices, actual damages, statutory damages, costs, and attorney's fees.[241] Criminal penalties—up to $1,000,000 and ten years in prison—are also available for willful violations for the "purposes of commercial advantage or private financial gain."[242]

Our dataset only includes three opinions in which criminal penalties were in play. This is not to say that prosecutors do not levy criminal penalties against section 1201 violators more frequently. After all, plea bargaining is a common feature of the criminal justice system, and that type of activity is unlikely to result in a written opin-

240. MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010) (rejecting a nexus to copyright infringement requirement).

241. 17 U.S.C. § 1203 (specifying civil remedies available for section 1201 violations).

242. *Id.* § 1204(a) (specifying criminal remedies available for section 1201 violations).

ion.[243] Furthermore, there were at least a few criminal opinions that we excluded from the dataset because the opinions focused on whether the prosecution had met the relevant indictment standards, not on whether section 1201's requirements were satisfied. Nonetheless, the paucity of opinions that focus on criminal remedies makes any meaningful analysis on that topic difficult. Hence, our discussion here focuses only on civil remedies.

The dataset includes 140 civil opinions in which the court ruled in favor of the plaintiff. The most popular remedy in those cases was some form of injunctive relief. Nearly 53% of the opinions granted victorious plaintiffs injunctive relief under the DMCA. The next most typical form of relief was statutory damages—about 37% of the opinions granted statutory damages under the DMCA. Next was attorney's fees, with about 15% of plaintiffs qualifying for them. Interestingly, in none of our dataset's opinions did plaintiffs receive actual damages.

The above percentages, however, understate the number of plaintiffs obtaining these types of remedies for at least two reasons. First, in many opinions, the plaintiff elected to pursue these remedies under some other statute, such as the Communications Act or Copyright Act, presumably because those statutes provided a preferable route in some important respect.[244] This reality does not explain the lack of plaintiffs pursuing actual damages, however: we did not find plaintiffs pursuing actual damages under a different statute in any of the dataset opinions.

The second reason the above percentages understate the number of plaintiffs obtaining different remedies is that about 39% of opinions did not involve the victorious plaintiff receiving any sort of remedy. The primary reason for this outcome is that many of the opinions came at early phases of the litigation process. For instance, a court may deny a defendant's motion to dismiss—resulting in a victory for the plaintiff—without fully adjudicating the matter. Instead, the victory simply means the plaintiff's case against the defendant will live to see another day. In other cases, a court may rule in favor of the plaintiff while saving the remedies discussion for another ruling.

In fact, when excluding opinions in which the victorious plaintiffs received no remedies from the denominator, the above percentages

243. William Ortman, *When Plea Bargaining Became Normal*, 100 B.U. L. REV. 1435, 1437 (2020) ("In American criminal justice, plea bargaining is ubiquitous. The vital statistic is familiar—around 95% of criminal convictions are based on guilty pleas, most of which are the result of plea bargains.").

244. Dish Network, L.L.C. v. Alejandri, No. 10-2064(CVR), 2012 WL 3095326, at *7-8 (D.P.R. July 30, 2012) (providing attorney's fees and statutory damages under the Communications Act).

rise significantly. Plaintiffs earned some type of injunctive relief in 87% of such opinions, while they obtained statutory damages in 60% of them. Attorney's fees also rose about ten percentage points to just under 25%. And again, even these higher percentages still understate how many plaintiffs received these types of remedies because sometimes plaintiffs pursued and received them under a different statute.

One of the most interesting findings when culling the remedies data was the frequency with which courts levied high statutory damages amounts against individuals. For instance, we found a number of opinions in which courts awarded statutory damages against individuals in the tens of millions of dollars.[245] In one case, the court awarded statutory damages against an individual and a company the individual founded and principally owned in excess of $200 million.[246] In other cases, courts showed more leniency. One individual filed a document titled "A Plea for Mercy," which the court generously construed as a motion of opposition.[247] The court then vacated the default judgment against that particular party and gave him an additional opportunity to address the claims against him.[248] In several other cases, courts significantly reduced the amounts against individuals from what the statute allowed, opining that those lower amounts were sufficient to deter the wrongdoing.[249] As discussed earlier, many of these dispositions came as part of default judgments.[250]

We think the wide range of statutory damages that individuals may be subject to under the DMCA is problematic. Much seems to depend on a particular judge's disposition. And while that factor may always play a role in a wide range of legal matters, our data suggests that the DMCA lends itself to significant volatility on this score.

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245. *See, e.g.*, UMG Recordings, Inc. v. Kurbanov, No. 1:18-CV-957(CMH/TCB), 2021 WL 6492907, at *13 (E.D. Va. Dec. 16, 2021) (recommending the award of $82 million in statutory damages against an individual defendant); Dish Network L.L.C. v. Ward, No. 8:08-CV-590-T-30TBM, 2010 WL 11507693, at *7-8 (M.D. Fla. Jan. 8, 2010) (awarding over $51 million in statutory damages against an individual defendant for violations of section 1201).

246. EchoStar Satellite LLC v. ViewTech, Inc., No. 07CV1273BEN(WVG), 2011 WL 1522409, at *3-4 (S.D. Cal. Apr. 20, 2011) (awarding over $215 million in statutory damages).

247. Proxima Beta Pte. Ltd. v. Martin, No. CV21-02056-MWF(EX), 2021 WL 6103356, at *1 (C.D. Cal. Nov. 10, 2021).

248. *Id.* at *3-4.

249. *See, e.g.*, Craigslist, Inc. v. Doe 1, No. C09-4739SI(BZ), 2011 WL 1897423, at *5-6 (N.D. Cal. Apr. 25, 2011) (rejecting the plaintiff's plea for an award between $575 million and $7.2 billion, instead granting around $1 million in statutory damages in part because the judge concluded that such an amount was enough to deter future wrongdoing); Craigslist, Inc. v. Kerbel, No. C-11-3309EMC, 2012 WL 3166798, at *17 (N.D. Cal. Aug. 2, 2012) (granting a statutory damages award of $200,000 rather than one near $2 million in part because the lower amount would provide an individual defendant with sufficient deterrence).

250. *See supra* Section II.B.4.

Often, the rationale behind statutory damages is that without them, parties may not have incentive to enforce their rights under a particular statute because actual damages are too difficult to prove.[251] For instance, an aggrieved party may not be a regular market participant, so it is unclear how much actual damages they suffered from a violation of their rights.[252] Statutory damages can also be punitive in nature—they may help deter wrongdoing under the statute.[253] For example, the actual damages resulting from some copyright infringement—say, fifty dollars for illegally copying fifty copyrighted songs—may not be enough to incentivize the copyright holder(s) to enforce their rights. Statutory damages step in to help deter these types of infringements.

But whether the primary purpose is compensatory or punitive, statutory damages under the DMCA seem troubling. Part of the trouble arises because the statute gives courts significant discretion in constructing awards: courts may choose a number anywhere between $200 and $2,500 for each violation.[254] This range may seem narrow when compared to the broader range for statutory damages under the Copyright Act.[255] Yet the existence of a broader range elsewhere does little to diminish the reality that an award on the upper end of the spectrum under the DMCA is over ten times higher than one on the lower end.

Furthermore, the DMCA grants separate awards per violation.[256] Consequently, if a third party makes available some circumvention technology that thousands of other parties download, one reading of the DMCA is that each download is a section 1201 violation and eligible for a separate statutory damages award. Hence, awards under the DMCA become even more volatile because the "per violation" language allows courts to stack awards in ways that can result in damages calculations reaching into the billions of dollars.[257] While some

251. Pamela Samuelson & Tara Wheatland, *Statutory Damages in Copyright Law: A Remedy in Need of Reform*, 51 WM. & MARY L. REV. 439, 446 (2009).

252. *Id.* at 446 n.22.

253. *See, e.g.*, On Davis v. Gap, Inc., 246 F.3d 152, 172 (2d Cir. 2001) ("The purpose of punitive damages—to punish and prevent malicious conduct—is generally achieved under the Copyright Act through the provisions of 17 U.S.C. § 504(c)(2), which allow increases to an award of statutory damages in cases of willful infringement.").

254. 17 U.S.C. § 1203(c)(3).

255. *Id.* § 504(c) (providing a range between $750 and $30,000 for each infringed work and increasing that range up to $150,000 for willful infringement).

256. *Compare id.* § 1203(c)(3) (providing statutory damages standards under the DMCA), *with id.* § 504(c) (providing statutory damages standards under the Copyright Act).

257. Craigslist, Inc. v. Doe 1, No. C09-4739SI(BZ), 2011 WL 1897423, at *5-6 (N.D. Cal. Apr. 25, 2011) (rejecting the plaintiff's plea for an award between $575 million and $7.2 billion, instead relying on a different calculation to reach a $1 million award); Stockwire Rsch. Grp., Inc. v. Lebed, 577 F. Supp. 2d 1262, 1267 (S.D. Fla. 2008) (interpreting the "per

courts have found such interpretations of the statute nonsensical, even they have acknowledged that those interpretations have some basis in the statute.[258]

While this broad range of statutory damages may have been intentional to accommodate a wide spectrum of violators, we think reining them in some can help better promote justice. First, as some courts have opined, Congress could better define the "per violation" language so that absurd results are not even possible.[259] While most courts may avoid such results on their own, it is better that the statute itself forbid them. Congress could do so, as some courts have suggested, by defining "per violation" under the statute as "each violative act performed" by the defendant rather than some (typically) larger number determined by how many end users ultimately gain access to an infringing device or work.[260]

Second, courts should seek to align statutory damages awards as closely as possible to the actual damages a plaintiff has suffered. Courts often already do this, and other courts should follow suit.[261] While actual damages can be difficult to determine, typically there is at least some basis for assessing what they might be. As parties provide evidence as to what actual damages the plaintiff may have suffered, that evidence can then help inform whatever statutory damages award the court chooses to grant. Of course, sometimes courts may wish to award statutory damages in excess of actual damages to better deter future wrongdoing. But even loosely tethering statutory damages to actual damages helps ensure that statutory damages do not become too punitive in nature.

## III. IMPLICATIONS AND CONCLUSION

We have already discussed several possible implications of our study when analyzing the data above. Here we briefly summarize and expand on some of those implications.

First, the relative scarcity of section 1201 opinions may mask some troubling aspects of section 1201 in practice. Some might argue that the paucity of section 1201 litigation is a good thing: that pauci-

violation" language in a way that granted a lower statutory damages award than an alternative interpretation would have).

258. *Craigslist, Inc.*, 2011 WL 1897423, at *5 (rejecting the plaintiff's plea for an award between $575 million and $7.2 billion, in part because such a result would "lead to absurd results" (quoting Arista Recs. LLC v. Lime Grp. LLC, No. 06CV5936(KMW), 2011 WL 832172, at *3 (S.D.N.Y. 2011))).

259. *See* McClatchey v. Associated Press, No. 3:05-CV-145, 2007 WL 1630261, at *5 (W.D. Pa. June 8, 2007).

260. *Id.* at *6.

261. *See, e.g.*, *Craigslist, Inc.*, 2011 WL 1897423, at *5 (assessing whether the statutory damages award had a "plausible relationship" to actual damages).

ty might mean that section 1201 is working well because, as discussed above, section 1201's relative clarity deters parties from the prohibited behavior or fighting things out in court. That is, parties are less likely to engage in the banned activities or go to court when the outcome is clear beforehand. The triennial rulemaking process has also almost certainly helped limit section 1201 litigation by allowing for exemptions to subsection 1201(a)(1). Overall, then, the relative lack of section 1201 litigation may mean that statute is working as intended.

But to the extent these factors are helping limit section 1201 litigation, they may be doing so in an unideal way. Simply because a statute is clear in its prohibitions in a way that deters litigation does not mean that deterrence is socially desirable. After all, the state might clearly forbid any number of things that we think should be permitted.

To use a concrete example from the section 1201 context, subsection 1201(a)(2) might be clear in its prohibition against trafficking in technologies that enable the circumvention of access controls. And that clarity might help deter trafficking in such technologies and litigation about them. But we might reasonably believe that society would be better off if others could share these types of technologies more widely, particularly to facilitate activities for which the Librarian of Congress has granted exemptions to subsection 1201(a)(1)'s prohibitions under the triennial rulemaking process. After all, those exemptions are an acknowledgment that certain activities that subsection 1201(a)(1) would otherwise ban are, overall, socially beneficial.[262]

This is not to suggest that more section 1201 litigation would necessarily benefit society. That is a counterfactual that is impossible to answer. Instead, it is merely to point out that the lack of section 1201 litigation, to the extent that lack is attributable to relatively clear statutory prohibitions, may not be ideal to the extent that those prohibitions prevent socially desirable activities.

The chances of section 1201 prohibiting socially desirable behavior are high when section 1201 violations are not tethered to copyright infringement. That outcome may often be the case in the Ninth Circuit, where courts have clearly stated that section 1201 violations need no nexus to copyright infringement—a section 1201 violation is

262. Bill Rosenblatt, *Fair Use and the DMCA Triennial Rulemaking*, COPYRIGHT & TECH. (July 29, 2010), https://copyrightandtechnology.com/2010/07/29/fair-use-and-the-dmca-triennial-rulemaking/ [https://perma.cc/EM65-QQM9] ("The purpose of the triennial rulemaking is to help ensure that the DMCA stays relevant to new technologies and enables actual uses of copyrighted works that are fair and that the public demonstrates are significant.").

an independent violation.[263] The Federal Circuit's approach, which does require a section 1201 violation to have a nexus to copyright infringement,[264] more closely aligns with the point of enacting section 1201: to help address fears of rampant digital copyright infringement.[265] To the extent that section 1201 is deterring activities beyond copyright infringement, including fair uses of copyrighted materials, it is missing the mark.

Of course, tethering section 1201 violations to copyright infringement might lead to more section 1201 litigation, as parties fight over whether the trafficked technologies or circumvented access controls ultimately resulted in copyright infringement. Again, this is not to say that more section 1201 litigation is inherently a good thing. But more litigation on this question might mean that section 1201 is closer to serving the purposes for which Congress enacted it.

The triennial exemption process has also almost certainly helped tamp down on section 1201 litigation. But again, the paucity of litigation that this process has helped bring about does not mean that the process is flawless. For starters, the granted exemptions should be permanent by default. Otherwise, those taking advantage of the exemptions must always wait to see if the exemptions are regranted every three years. The Librarian of Congress typically regrants exemptions, so this change may seem trivial. But as the former Register of Copyrights has suggested, creating a presumption in favor of automatic renewal absent meaningful opposition would "lessen the burden on proponents [while] also allow[ing] for a more streamlined rulemaking process."[266] The case for a presumption of permanency may be particularly strong because, typically as part of the initial grant, "proponents have [already] made a strong case" in favor of the exemption.[267]

Another obvious means by which to make the exemptions permanent would be to include them as part of the statute itself. We discussed above how the current list of statutory exemptions is mostly statutory bloat—the data show that very few litigants rely on them, and even when they attempt to, litigants basically never succeed. The

263. MDY Indus., LLC v. Blizzard Ent., Inc., 629 F.3d 928, 950 (9th Cir. 2010) (rejecting a nexus to copyright infringement requirement).

264. Chamberlain Grp., Inc. v. Skylink Techs., Inc., 381 F.3d 1178, 1203-04 (Fed. Cir. 2004) (requiring a section 1201 violation to have a nexus to copyright infringement).

265. *See* S. REP. NO. 105-190, at 2-8 (1998) (identifying a primary motivation behind the law as combatting digital piracy); H.R. REP. NO. 105-551, pt. 1, at 9 (1998) (same); H.R. REP. NO. 105-551, pt. 2, at 23 (1998) (same).

266. U.S. COPYRIGHT OFF., SECTION 1201 RULEMAKING: SIXTH TRIENNIAL PROCEEDING TO DETERMINE EXEMPTIONS TO THE PROHIBITION ON CIRCUMVENTION 4 (2015), https://cdn.loc.gov/copyright/1201/2015/registers-recommendation.pdf [https://perma.cc/NN7V-F93X].

267. *Id.*

primary reason the current set of statutory exemptions is irrelevant is that they are so narrowly crafted as to be meaningless. Congress would do well to reconsider the statutory exemptions in light of their overall futility and decades of rulemaking exemptions. It is beyond the scope of this Article to suggest specific exemptions for enshrinement in the statute. But an obvious starting point would be the triennial exemptions, some of which have been in effect for decades.

Another obvious issue with the current rulemaking process is that there is no exemption procedure for subsections 1201(a)(2) and 1201(b). Nearly a decade ago, the former Register of Copyrights suggested Congress may wish to consider allowing third parties to assist those engaging in permitted activities under subsection 1201(a)(1).[268] And Congress has, in limited circumstances, enacted laws to that end.[269] But an expanded means by which to better enable a broader range of permitted uses of circumvention technologies seems warranted.

Another important finding from this study is the wide range of statutory damages that individual defendants frequently face. We discussed above some ways by which to decrease the volatility of statutory damages awards, including through legislative clarifications and by loosely tying statutory damages awards to actual damages.[270] We think addressing this volatility is important because without doing so, the distinction between civil remedies and criminal ones begins to break down. As mentioned earlier, criminal remedies range from five to ten years in prison and fines between $500,000-$1,000,000.[271] While statutory damages awards obviously don't include jail time, imposing hundreds of millions of dollars on individuals is so punitive in some cases as to look more like a criminal remedy than a civil one. Section 1201 provides the means by which courts can essentially transform civil remedies into quasi-criminal ones, a result that Congress should change.

Finally, it is worth reemphasizing the need for additional empirical work on section 1201. As discussed, this study focuses on written opinions issued as part of a formal litigation. That focus has a number of benefits, including discovery of many of the trends discussed above. But studying legal claims—which often don't mature into written opinions—and other parts of the litigation process can yield

268. *Id.*

269. *Id.* at 5 (describing the Unlocking Consumer Choice and Wireless Competition Act).

270. *See supra* Section II.B.9.

271. 17 U.S.C. § 1204(a)(1)-(2) (specifying criminal remedies available for section 1201 violations).

useful information as well. Furthermore, empirical work on section 1201 more generally, including societal attitudes about it and the use of encryption, are needed. Future researchers, it is hoped, will expand on this study's results in examining these and other section 1201 questions.